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ISSUES IN MEASURING THE EFFECTS OF DIVORCE ON CHILDREN

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The divorce rate in the United States has been increasing steadily for the last century, from 7% of first marriages in 1880 to over 50% in recent decades (Weed, 1980). Even though the divorce rate leveled off in the 1980s, current estimates indicate that nearly two-thirds (64%) of all first marriages will end in divorce or permanent separation (Martin & Bumpass, 1989). Currently, more than one million children experience parental divorce every year in this country (U.S. Bureau of the Census, 1989, p. 92). This increase in the likelihood of marital disruption, and the large number of children involved, has generated public concern about the consequences of divorce for children's well-being.

People who hold traditional attitudes believe that a two-parent family is necessary to ensure children's successful socialization and development. Consequently, traditionalists see any departure from the two-parent family as necessarily being problematic. Several observers have criticized this perspective, referred to as a "family deficit model," as being simplistic (Demo, 1992; Marotz-Baden, Adams, Buech, Munro, & Munro, 1979). They point out that alternative family

forms, such as single-parent families, can serve as successful environments for children's development. In recent years, ideological debates over divorce and single-parent families have appeared in both the popular press and academic journals (see Etzioni, 1992, for a discussion).

Nevertheless, in spite of the debate at the ideological level, good reasons exist for assuming that parental divorce has the potential to create problems for many children.

First, both mothers and fathers are important resources for children. Research has consistently shown that a high level of parental support and a moderate level of parental control and supervision promote children's development and well-being (Maccoby & Martin, 1983; Rollins & Thomas, 1979). As such, the departure of one parent— usually the father—from the household following marital dissolution represents the loss of a potentially important resource for children. Furthermore, for a period of time following divorce, custodial mothers tend to be less affectionate toward their children and punish them more severely and less consistently than do married mothers (Hetherington, Cox, & Cox, 1982). Divorce also exposes children to high levels of interparental conflict—both prior to and following marital disruption. Not surprisingly, research shows that interparental conflict is associated with deficits in children's well-being, regardless of family type (Emery, 1982). In addition, children living with custodial mothers are likely to experience economic hardship (Weitzman, 1985). Finally, divorce initiates a series of life changes (such as moving and changing schools) that may be stressful to children. Any of these factors—parental loss, poor quality parenting, interparental conflict, economic hardship, and stressful life changes—might place children of divorce at increased risk for a variety of problems.

During the last three decades, psychologists, sociologists, and other social scientists have carried out a large number of studies dealing with the impact of divorce on children. Several scholars have reviewed this literature in a qualitative fashion (e.g., Emery, 1988; Demo & Acock, 1988). More recently, Bruce Keith and I carried out a meta-analysis of 92 of these studies (Amato & Keith, 1991a). Our meta-analysis showed that children of divorce, compared with children in continuously intact two-parent families, score slightly but significantly lower on measures of academic ability, conduct, psychological adjustment, self-esteem, and social competence. Divorce is also associated with poorer quality mother-child and father-child relationships.

These results would appear to indicate that divorce has broad negative implications for children's functioning and well-being.

However, as we noted in the meta-analysis, many of these studies contain serious methodological limitations. To assess how methodological factors might affect study results, we created a simple index of study quality based on the following criteria: (a) a random selection of children, (b) a large sample size (defined as being greater than the median), (c) the use of appropriate control variables in analyses (or the matching of subjects on relevant variables), and (d) the use of multiple- rather than single-item measures of outcomes. Curiously, we found a tendency for methodologically weak studies to show stronger effect sizes than methodologically strong studies—at least in relation to measures of academic achievement and conduct (Amato & Keith, 1991a).

I attribute this finding to the "publish if significant" effect. Assume that journal editors accept manuscripts for publication if they are methodologically strong *or* if they show significant effects, all things being equal. If this is the case, then methodologically strong manuscripts may be published even if they show small or nonsignificant differences between groups. On the other hand, methodologically weak manuscripts get accepted for publication only if they show a relatively large and significant difference between groups. As a result of this process, across a large number of studies, poorer quality studies will show more deleterious effects of divorce, on average, than better quality studies.

Unfortunately, most studies of divorce cluster near the lower end of our study quality index. To illustrate this point, I used the 92 studies from the meta-analysis and added another 37 studies based on samples of divorced children only (studies not included in the meta-analysis). Of these studies, 92 (71%) have scores of 0, 1, or 2. Correspondingly, 26 studies (20%) have a score of 3 and only 11 studies (9%) have a perfect score of 4. This suggests that there is room for additional work on this topic—work that improves methodologically on studies conducted thus far.

In this chapter, I discuss issues in measuring the impact of divorce on children. Some of my comments deal with traditional measurement problems, such as reliability and validity. However, it is not realistic to separate measurement issues from other general problems that arise in study design and data analysis, so my discussion touches on a variety of topics. My intention in discussing measurement and other methodological issues is to increase researchers' awareness of some common problems in this area and to provide suggestions for improving our ability to estimate more accurately the effects of divorce on children.

I begin by considering problems associated with the selection of dependent variables and how researchers go about measuring these. In particular, I argue that (a) the selection of dependent variables is rarely guided by theory, (b) few researchers have attempted to measure beneficial outcomes of divorce, and (c) we know little about *adjustment to divorce*, as opposed to other kinds of child outcomes. After this I discuss the merits of various sources of data on children: children's self-reports, parents' reports, teachers' reports, and direct observation. Finally, I discuss the importance of using causal models to guide data analysis. As I argue, the failure to use adequately specified causal models leads to a considerable degree of confusion among researchers in estimating the effects of divorce on children.

TWO RESEARCH APPROACHES: EFFECTS OF DIVORCE VERSUS ADJUSTMENT TO DIVORCE

Researchers often refer to the "effects of divorce on children" or to "children's adjustment to divorce" as if the two phrases mean the same thing. But this practice reflects a certain conceptual carelessness. The first conceptualization refers broadly to any consequences that parental divorce might have for children's functioning and quality of life, whereas the second refers specifically to how children have coped with divorce-related stress.

These two conceptualizations reflect different research strategies. To study the effects of divorce, researchers compare a sample of children in divorced families with a sample of children living in continuously intact two-parent families. Through matching or the use of covariates, the two samples are "equated" on variables that are likely to be related to both parental divorce and children's outcomes (such as parents' education and race). Children in both samples are then measured on some outcome, and it is assumed that observed differences between the samples are due to divorce. In other words, to estimate the extent to which divorce brings about certain effects, it is necessary to adopt a quasi-experimental design with a "control" group of children from nondivorced families.

On the other hand, to assess children's adjustment to divorce, it is necessary to examine a sample of children who have *all* experienced parental marital dissolution. Researchers administer some instrument that measures how well children have coped with divorce-related stress. Researchers then correlate scores on this measure with other variables (such as time since divorce or parental income) to see what factors promote children's adjustment. In other words, studying

children's adjustment to divorce does not require a comparison group of children from intact families; indeed, calculating "divorce adjustment" scores for such a group makes no sense.

Researchers, however, often confuse these two strategies. For example, imagine a researcher who selects a sample of children in divorced and intact families and administers measures of teacher-rated school grades and popularity with classmates. Suppose that the researcher finds no significant difference between the two groups of children on either measure. Would the researcher be justified in concluding that the children in this sample have adjusted to divorce satisfactorily? This would not be correct, for the children may be within the normal range in terms of school grades and popularity but poorly adjusted to specific aspects of the divorce itself (for example, feeling resentment toward one or both parents or longing for a parental reconciliation). Similarly, suppose that the researcher finds that children of divorce score significantly lower on these outcomes. Could the researcher conclude that these children are poorly adjusted to the divorce? Not necessarily, for the children might be well-adjusted to the divorce itself (for example, holding positive feelings toward parents and accepting the permanence of the separation), and the differences could be due to other factors brought about by divorce, such as a decrease in household income or a change of schools.

A corresponding error is made by many researchers who carry out within-group analyses of children of divorce. Researchers often correlate measures of children's functioning, such as school grades and popularity, with variables such as family income or the quality of parent-child relationships. If the correlations are positive and significant, the researcher may conclude that high family income and good parent-child relationships promote children's adjustment to divorce. But this conclusion is misleading. Income and the quality of parent-child relationships may be similarly associated with children's functioning in intact families; as such, these correlations tell us little about how children adjust to the particular difficulties surrounding parental divorce. To understand what factors promote children's adjustment to divorce, it is necessary to measure divorce adjustment directly.

In short, I argue that studies of children's *adjustment to divorce* are different in nature from those that address the *effects of divorce* on children. Adjustment to divorce cannot be studied with a between-group design; this makes no more sense than comparing single and

married individuals on a measure of marital adjustment. Furthermore, adjustment must be measured directly; measures of academic achievement, psychological well-being, and social relations are not the same as adjustment to divorce. Measures of these more general constructs may be related to adjustment to divorce, but this is an empirical question. Both kinds of studies are useful, but they provide us with different types of information.

In the discussion below, I consider the two types of studies separately. I begin by addressing some issues in measuring the effects of divorce on children. After this, I discuss issues relating to adjustment to divorce.

MEASURING THE EFFECTS OF DIVORCE ON CHILDREN

Previous studies have used a variety of outcomes to assess the effects of divorce on children. In our meta-analysis (Amato & Keith, 1991a), we collapsed these outcomes into eight categories. *Academic achievement* included scores on standardized achievement tests, school grades, teachers' ratings of children's achievement, and parents' reports of school success. *Conduct* was based on measures of aggression, behavior problems, and delinquency. *Psychological adjustment* involved measures of depression, anxiety, and happiness/satisfaction. *Self-concept* included self-esteem, perceived competence, and internal locus of control. *Social adjustment* was based on measures of popularity, loneliness, or cooperativeness. *Mother-child relations* and *Father-child relations* included any references to the quality of the parent-child relationship. We also used a residual *Other* category.

The extent to which these categories are represented in the literature can be seen in Table 1. Columns 1 and 2 contain the number and percent of studies that utilized a particular outcome. In other words, 33 studies reported group comparisons of academic achievement, and this represented 35.8% of all published studies. (These percentages add to more than 100 because many studies used multiple outcomes.) The third column shows the number of independent samples relevant to a particular outcome. A single study reported data on more than one independent sample, if, for example, analyses were conducted separately for boys and girls or for blacks and whites. For example, the 33 studies included a total of 39 separate tests of the hypothesis that children in divorced and intact samples differ in academic achievement. The fourth column shows percentages based on the total number of comparisons. In other words, out of all comparisons made between children in divorced and intact samples, academic achievement was the outcome 13.7% of the time.

Table 1. Frequency of Outcomes Appearing in Studies of Children of Divorce and Mean Effect Size for Each

Type of Outcome	Studies		Comparisons		$\overline{X}$ Effect Size
	N	%	N	%	
Academic achievement	33	35.8	39	13.7	-.16*
Conduct/behavior	42	45.7	56	19.7	-.23*
Psych adjust	37	40.2	50	17.6	-.08*
Self-concept	28	30.4	34	12.0	-.09*
Social adjustment	30	32.6	39	13.7	-.12*
Mother/child relations	20	21.7	22	7.7	-.19*
Father/child relations	17	18.5	18	6.3	-.26*
Other	18	19.6	26	9.2	.06
Total studies	92	244.5			
Total comparisons			284	99.9	

* $p < .001$.

For interested readers, I also present the mean effect size for each category of outcome. The effect sizes are calculated as the difference in means between children in divorced and intact families on the dependent variable, divided by the within-group standard deviation. Negative signs indicate that children in the divorced group exhibited a lower level of functioning or well-being than did those in the intact group.

Table 1 tells us that the 92 studies included data on a total of 225 child outcomes, or between two and three per study. The most common outcome was conduct, which appeared in nearly one-half of all studies (45.7%). Similarly, of all comparisons, measures of conduct represented about one-fifth (19.7%) of all dependent variables. Psychological adjustment was the second most common outcome; it was included in 40% of all studies and represented 18% of all dependent variables. Compared with the more individualistic outcomes represented in the first five categories, measures of mother-child and father-child relationships are less common and appear in only 22% and 18.5% of all studies, respectively.

These results indicate that available studies cover a range of child outcomes. Furthermore, the data in column 2 reveal that it is common for studies to mix outcomes from more than one domain of child functioning. Overall, these results suggest that social scientists have cast a broad net in attempting to document the effects of divorce on children. Readers will also note that the effect sizes are uniformly

negative and significant, with the exception of the Other category. This suggests that the consequences of divorce for children are consistent across a variety of domains of functioning. However, the effect sizes are also generally weak. Across all outcomes, the median effect size represented .14 of a standard deviation difference between groups.

Should we conclude then, that the effects of divorce on children are broadly negative but weak? Unfortunately, the data in Table 1 must be interpreted in the light of three common problems in the selection of outcomes. These problems involve (a) the theoretical relevance of outcomes, (b) the reliability and validity of measures, and (c) the absence of outcomes that might reflect strengths acquired through divorce.

Theoretical Relevance Of Outcomes

In relation to the first point, studies often include measures of dependent variables that have only a tenuous theoretical link to divorce. A perusal of this literature reveals that authors rarely provide a theoretical rationale for the selection of outcomes. Although cynical, it seems likely that some researchers include multiple outcomes in the hope that at least a few will show statistical significance. When all of these measures are lumped together across studies, the average effect size is weak. If researchers were to include dependent variables with closer theoretical connections to divorce, the average effect sizes might be larger than those in Table 1.

Furthermore, researchers often fail to define constructs (either nominally or operationally) with enough specificity to capture the probable effects of divorce. For example, research suggests that divorce may have some undesirable consequences for aspects of children's self-concept. According to Wallerstein and Kelly (1980), young children, because they are egocentric, sometimes blame themselves for their parents' divorce. This tendency is exacerbated by the fact that many parents do not discuss the reasons for divorce with their children, especially when children are young. Also, interparental conflict tends to interfere with the closeness of the parent-child relationship, both prior to and following divorce (Grych & Fincham, 1990; Hetherington, Cox, & Cox, 1982). Because children may shoulder some of the responsibility for interparental conflict, and because they receive less positive feedback from parents around the time of parental separation, they may come to see themselves as troublemakers in the family who are undeserving of parental love.

Many studies use self-concept as a dependent variable, which is an appropriate starting point. But rather than delineate those aspects of the self-concept most relevant to children's divorce experiences, most researchers simply rely on a measure of global self-esteem, such as the Piers-Harris Children's Self-Concept Scale. (For examples, see Berg & Kelly, 1979; Cooper, Holman, & Braithwaite, 1983; and Stephens & Day, 1979.) Consider the item content of this scale. The Piers-Harris contains 80 statements that yield a total self-esteem score. (It is also possible to calculate subscale scores, but researchers have rarely reported data on these.) Examples of items include "I am smart," "I am strong," "I am good at making things with my hands," "I have nice hair," and "I have lots of pep" (Piers & Harris, 1969). It is not clear why children of divorce should differ from other children in their self-ratings for these items. Not surprisingly, studies that employ self-esteem as a dependent variable tend to yield weak effect sizes (see Table 1).

In contrast, other items on the Piers-Harris scale seem especially relevant to children of divorce, such as "I cause trouble to my family," "I am an important member of my family," and "My family is disappointed in me." A scale based on items similar in content to these might yield larger differences between children in disrupted and intact families than scales that measure broader constructs. In other words, the specific effects of divorce are likely to "wash out" when researchers employ global measures as dependent variables. Consequently, researchers should utilize or develop measures of constructs that are more closely related to children's divorce experiences. Until researchers develop more explicit links between parental divorce and measures of dependent variables, most studies will probably continue to find small differences between groups.

Reliability and Validity of Measures

Another problem in the literature on children of divorce has to do with the reliability and validity of instruments used to measure child outcomes. A large number of studies use measures that have unknown reliability and validity. Across the 92 studies of children of divorce that we examined for our meta-analysis (Amato & Keith, 1991a), authors provided information on reliability only 36% of the time. Even fewer authors presented information on validity.

Of those studies that reported reliability coefficients for measures of dependent variables, the mean was .79, the standard deviation was .10, and the median was .81. This indicates that the average reported reliability was at an acceptable level. However, one-half of all

coefficients were .80 or less, and 43 percent were .75 or less. This indicates some room for improvement. Furthermore, it is reasonable to assume that scale reliability was lower in studies that did not report this information than in studies that did.

Because the assessment of dependent variables in this area of research is often crude, a good deal of random measurement error is present. This means that the effect sizes reported in Table 1 are likely to be underestimates of the true effect size. Better estimates of effect sizes will emerge when researchers use more reliable indicators of child outcomes. Before carrying out a study, researchers should be more vigilant in searching for theoretically relevant instruments with established reliability and validity. As a general rule, researchers should create their own instruments only when they are reasonably certain that an appropriate one does not exist for their purpose.

Problems with measurement error are bound up with two styles of research represented in the literature on children of divorce. Some studies are based on small convenience samples of children but employ multiple-item measures with good reliability and validity. But although strong on measurement, the small and nonrandom nature of the samples means that the results cannot be generalized beyond the study itself. On the other hand, survey researchers generally work with large and randomly selected, representative samples. But because of the great expense of carrying out large-scale surveys, researchers usually attempt to include as many variables as possible so that the data set can be used for a variety of purposes. Consequently, surveys frequently employ short scales or single-item indicators of constructs. Because scale reliability increases with the number of items, all things being equal, short scales tend to have low reliability. And unless information on test-retest reliability is available (which is usually not the case), single-item indicators have unknown reliability. For these reasons, studies based on survey data, compared with other studies, tend to report lower reliability coefficients and are more likely to report no information at all. In other words, studies with the best generalizability tend to have the poorest quality measurement—a frustrating situation.

The obvious solution to this problem is to combine the best of the two research strategies within a single study. One can envision a study based on a large and representative sample of children that includes relevant measures of child outcomes with a sufficient number of items to attain high reliability. (Instruments, of course, should be valid as well as reliable.) However, decreasing measurement error requires cutting down on the total number of variables in the study.

This means that the survey could not be multi purpose; it would have to be designed with the specific purpose of measuring the consequence of divorce for children. Such a study would represent a distinct advance on previous survey research on this topic, because virtually all analyses have been carried out using data sets constructed for other purposes. Of course, it would be costly to carry out a large scale survey concentrating on only a single topic. Nevertheless, social concern about this issue would appear to be a sufficient justification for funding.

Problem-Oriented View of Divorce

Another measurement issue in assessing the effects of divorce on children has to do with the fact that researchers have tended to adopt an exclusively problem-oriented view of divorce. Underlying most of this research is the assumption that divorce is a major stressor for children, and as such, is likely to lead to behavioral, psychological, or academic problems. This is a reasonable assumption. However, researchers have rarely considered the other side of the coin, that is, the possibility that experiencing divorce may provide children with certain benefits.

Based on qualitative data, Weiss (1979) argued that children in single-parent families "grow up a little faster." Many single parents have full-time jobs as well as the major responsibility for household management and child care. Not surprisingly, these single parents often experience role overload. Consequently, children in these households must learn to do many things for themselves, such as cooking, cleaning, or washing clothes. Older children often assume a major share of household responsibility, and in a sense, become co-managers of the household. Although these responsibilities may represent a burden if they are excessive or if children are too young, other children may experience enhanced maturity, autonomy, and self-confidence.

Two other qualitative studies support Weiss's (1979) thesis. Reinhard (1977) found that adolescents from divorced families were especially likely to describe themselves as self-reliant. Similarly, Dunlop and Burns (1988) found that adolescents believed that they had acquired strengths and a sense of responsibility from living in a single-parent family. Overall, these studies suggest that the effects of divorce on children are not entirely negative, and that positive outcomes are also common.

In an attempt to test Weiss's (1979) thesis, Gay Ochiltree and I used a measure of everyday life skills (Amato & Ochiltree, 1986; 1987a). Because this is one of the few quantitative studies that searched

for positive outcomes of divorce, I will discuss it in some detail. To develop this measure, we presented a sample of Australian children between the ages of 8 and 16 with a list of 40 everyday activities. We first asked if children knew how to perform the task; if they responded positively, we then asked how often they performed each. The purpose of the pretest was to identify items relevant to children in these age groups and to omit items with little variance. For example, "cleaning shoes" appeared to be out-of-date, because few children reported ever cleaning their shoes. We also retained items that reflected an equal number of traditionally male and female activities. The final instrument was based on 20 items including: make a bed, wash the dishes, sweep or vacuum, use a washing machine, iron clothes, make a simple meal, hammer a nail, mow a lawn, wash a car, and replace a light globe.

We included the instrument in a survey of 402 children, selected randomly from schools in the state of Victoria in Australia. The sample was constructed so that half of the children lived in single-parent families (most of these formed through divorce) and half lived in continuously intact two-parent families. Both the child and one of his or her parents responded (separately) to the 20 questions about life skills. The alpha reliability coefficient for this instrument was .83 for children and .87 for parents. The correlations between parents' and children's reports were .38 for younger children and .48 for adolescents (both $p < .001$). We were able to confirm that children of divorce benefit in at least one important way: They have a greater knowledge and performance of everyday skills than do children raised in traditional two-parent families. This difference was only slightly smaller among older adolescents than among younger children, suggesting that children do not lose the advantage as they grow older (Amato & Ochiltree, 1987a).

Other research has suggested additional advantages that may accrue to children of divorce. Single mothers usually increase their participation in the paid labor force, either following or in anticipation of marital dissolution. Numerous studies have shown that children of employed mothers have less stereotyped views about the roles of men and women than do other children (Spitze, 1988). In addition, daughters of employed mothers have higher occupational expectations than do daughters of nonemployed mothers (Spitze, 1988). These effects may be reinforced by seeing mothers in the role of chief decision maker in the family. In a society that is becoming more egalitarian, and in which most women are employed, one can argue that these outcomes are beneficial. To the extent that divorce moves mothers into the paid labor force and places them in a position of power in the household,

divorce may have a positive effect on children—especially daughters. However, relatively little research has examined these notions, and the available studies yield contradictory results (Barber & Eccles, 1992).

Overall, few researchers have searched for possible strengths that children might acquire as a result of parental divorce. To gain a more balanced view, future studies should attempt to conceptualize and measure characteristics of children that might be enhanced through experiencing parental divorce and life in a single-parent family. Qualitative studies of children and divorce may be useful for gaining insights into what these beneficial outcomes might be.

MEASURING ADJUSTMENT TO DIVORCE

In contrast to the large number of studies that have searched for broad effects of divorce on children, relatively few have concerned themselves specifically with how children adjust to divorce itself. In an early piece of research that followed this approach, Kelly and Berg (1978) used a projective Family Story Test to generate children's emotional and attitudinal reactions to parental separation and divorce.

One of the most thorough research efforts along these lines was carried out by Kurdek and his colleagues (Kurdek & Berg, 1983; Kurdek, Blisk, & Siesky, 1981; Kurdek & Siesky, 1980). Because this is one of the few comprehensive efforts to measure adjustment to divorce, I will describe their efforts in some detail. The authors give slightly different accounts of the instruments in different publications, so the descriptions below are based on Kurdek and Berg (1983).

One of the scales that emerged from this program of research was entitled, Children's Attitudes Toward Parental Separation Inventory (CAPSI). The CAPSI contains 60 items with a "yes" and "no" (or agree/disagree) response format. The scale contains six subscales with 10 items each: peer ridicule and avoidance, fear of abandonment, hope of reunification, paternal blame, maternal blame, and self-blame. Kurdek and Berg (1983) do not provide reliability coefficients for the subscales, but Cronbach's alpha for the entire scale is .78. A parallel version of this instrument is also completed by parents, and this yields a reliability coefficient of .79. The parent and child forms correlate at .41.

Understanding the Divorce is a nine-item questionnaire. The items refer to children's understanding of the meaning of divorce, acceptance of the parents' divorce, hopes of parental reconciliation, attributions of blame for the divorce, parent personalities, and friends' reactions to the divorce. The questions are open-ended and the

interviewer records children's responses verbatim. Questions include "What does it mean when two people get divorced?" and "Why don't your Mom and Dad live together anymore?" The researcher then assigns a point for each answer that represents "adjustment." For example, this would include responses indicating (a) that parents don't live together because they are incompatible, (b) that the parents will not live together again, (c) that the child does not blame him/ herself for the separation, and (d) that the child has told friends about the divorce. The sum of points across all items forms a total score. Independent coders agree at 96% on whether a point should be allocated for a particular answer; however, Cronbach's alpha for the scale is only .50.

Children's Emotional Reactions to the Divorce is a measure of parents' perceptions of the extent to which children display a variety of positive and negative feelings *following the separation*. Items include personal growth and self-knowledge, increased happiness, independence and responsibility, relief from conflict, loneliness, sadness, helplessness, confusion, guilt or self-blame, and nervousness. After negatively-worded items are reverse coded, items are summed to provide a total score reflecting positive adjustment; Cronbach's alpha for this scale is .81.

Research conducted by Kurdek and Berg (1983) with these measures revealed a number of significant associations. Age was positively correlated with children's CAPSI scores and with parent-rated children's emotional reactions. Girls scored higher than boys on both the Children's CAPSI and on parent-rated children's emotional reactions. In addition, both measures were positively associated with mother's divorce adjustment and negatively associated with the degree of interparental conflict.

In general, children's specific divorce adjustment was positively related to more global measures of behavioral adjustment. Overall, the pattern of correlations provides evidence for the construct validity of the CAPSI and the emotional reactions measure. The Understanding the Divorce scale, however, yielded few significant correlations with other variables, possibly because of problems with internal consistency.

The work of Kurdek and his colleagues is noteworthy because it represents a serious effort to measure children's *adjustment to divorce* as opposed to adjustment in general. Nevertheless, several limitations of this work are evident. First, the internal consistency reliability of the Understanding Divorce scale is low, suggesting either that the number of items is too small to form a reliable estimate, or that the scale is not unidimensional.

Second, and more importantly, it is not clear whether these three scales tap the full meaning of the "adjustment to divorce" construct. In other words, the content validity of these measures is not well established. To establish content validity, it is necessary to enumerate the various dimensions implicit in the construct of adjustment to divorce. Perhaps the best sources for this purpose are in-depth, qualitative studies of children of divorce. Researchers have carried out relatively few such studies; yet, these studies yield a number of insights into the particular problems that divorce generates for children and how children deal with these (Amato, 1987; Kurdek & Siesky, 1979; Mitchell, 1983; Wallerstein & Kelly, 1980; Wallerstein & Blakeslee, 1989; Weiss, 1979).

Based on these studies, a list of the main challenges that divorce poses for children would include the following:

1. *Understanding the reason for the parents' decision to divorce.* Many parents do not tell their children the reasons for separation; this results in a considerable degree of confusion— especially for younger children.
2. *Dealing with anger toward parents.* Children often blame one or both parents for the divorce. "Forgiving" parents for the divorce is necessary for maintaining positive parent-child relationships.
3. *Feelings of being abandoned by the noncustodial parent.* Because the noncustodial parent has left, children may feel rejected. Children need to accept that the departure of the noncustodial parent is not a reflection of the parent's feelings for the child. Children must also come to grips with situations in which the noncustodial parent visits infrequently or not at all.
4. *Fearing abandonment by the custodial parent.* Young children may fear that their custodial parent will leave one day, just as the noncustodial parent did. They may also worry about who will take care of them if their custodial parent dies.
5. *Dealing with feelings of self-blame and guilt.* Because young children are egocentric, they may believe that they are somehow responsible for the divorce. For example, they might think that if they had behaved better, the divorce could have been avoided.
6. *Feelings of embarrassment or shame.* Children may fear ridicule, especially from other children. For this reason, they may lie about their parents' status to other children.
7. *Hopes of parental reconciliation.* Accepting the permanence of divorce if often difficult but necessary if children are to adapt

to a new life in a single-parent family. False hopes can also interfere with the acceptance of stepparents.

8. *Feelings of guilt for choosing to live with one parent rather than the other.* Children may express a wish to live with one parent, either before or after the separation. They may feel remorse for having "rejected" the other parent, particularly if both parents want custody.

9. *Dealing with feelings of sadness and loss of parental attention.* For children who understand that parental reconciliation is unlikely, a period of mourning for the intact family may occur.

10. *Preoccupation with the divorce.* Some children may ruminate on the divorce to the extent that it interferes with school and peer activities. Children need to concentrate on their own lives.

11. *Feelings of powerlessness and fatalism.* Divorce and the life changes that follow are generally beyond the control of children. Consequently, children may feel that nothing they do makes a difference.

12. *Feeling anxious about future intimate relationships.* Adolescents, in particular, may worry that they, like their parents, will be unable to have a successful long-term intimate relationship.

13. *Accepting parental dating.* Children may find it difficult to see their parents dating. This may also involve acknowledging that parents are sexual beings.

Children must deal with most of these challenges following divorce. Presumably, a well-adjusted child is one who has mastered each. Of course, some children may successfully cope with some of these tasks but not with others.

From reviewing this list, it is clear that some of these challenges are covered in the measures developed by Kurdek and his colleagues, such as dealing with anger toward parents, self-blame, hopes of reconciliation, feelings of abandonment, and embarrassment around other children. However, other dimensions of divorce adjustment are not represented in Kurdek's measures, such as guilt over custody arrangements, accepting parental dating, and anxiety about intimate relationships.

In principle, it should be possible to construct an instrument that measures each of these dimensions of adjustment. Multiple items could be written for each dimension, and a factor analysis could confirm the underlying dimensionality. A researcher could administer such an instrument in an interview format for younger children,

whereas a self-administered questionnaire might be appropriate for adolescents. Given that children may be more successful at meeting some challenges than others, subscale scores as well as a total adjustment score are necessary. Needless to say, such an instrument would have clinical as well as research applications. Given the potential usefulness of such an instrument, it is curious that so little work has been done in this direction.

SOURCES OF DATA

A central issue in attempting to determine the effects of divorce on children, or children's adjustment to divorce, is the appropriate source of data. Previous studies have relied primarily on four sources: children's self-reports (or scores on standardized tests), parents' reports, teachers' reports, and direct observation by researchers.

Frequency of Use of Various Sources

All four sources of data are popular among researchers studying children of divorce. Table 2 provides data on how often researchers have used each, depending on the type of outcome in question. These data are taken from our meta-analysis of 92 studies described above (Amato & Keith, 1991a). The last row in Table 2 indicates that across all outcomes, the child was the most common source (54%), followed by parents (18%), researchers (17%), and teachers (12%). However, the frequency of sources varies with the choice of dependent variable.

For studies of academic achievement, the child is the most common source. Not surprisingly, given the domain of interest, teacher's views are also frequently sought out. Researchers may tend to avoid parent's reports because they assume that parents are biased favorably toward their children (i.e., parents may be reluctant to report that their children are doing poorly at school). Studies of children's conduct, in contrast, are most likely to rely on parents' reports or the direct observation of behavior by researchers. Actually, for this outcome, all four sources appear regularly in the literature. Psychological adjustment is based most often on questioning of children, although parents' reports, teachers' reports, and direct observation are also commonly used. Studies of self-concept usually rely on self-reports; given the nature of the domain, this seems inevitable. Social adjustment is most often measured by questioning children themselves, although all sources are represented in the literature with some frequency.

Children's reports clearly dominate studies of mother- and father-child relations. Presumably, researchers tend to avoid parental ratings

Table 2. Frequency and Percentage of Comparisons Based on Data
From Four Sources

		Child	Parent	Teacher	Researcher	Total
Academic achievement	n	21	4	8	6	39
	%	(54)	(10)	(21)	(15)	(100)
Conduct	n	13	16	11	15	55
	%	(24)	(29)	(20)	(27)	(100)
Psych adjustment	n	22	13	5	10	50
	%	(44)	(26)	(10)	(20)	(100)
Self-concept	n	30	2	0	2	34
	%	(88)	(6)	(0)	(6)	(100)
Social adjustment	n	17	8	5	8	38
	%	(45)	(21)	(13)	(21)	(100)
Mother-child relations	n	17	2	1	2	22
	%	(77)	(9)	(5)	(9)	(100)
Father-child relations	n	17	0	0	1	18
	%	(94)	(0)	(0)	(6)	(100)
Total	n	137	45	30	44	256
	%	(54)	(18)	(12)	(17)	(101)

because they are likely to be contaminated by social desirability.
(How many parents will admit that they have a poor relationship
with their children?) And although teachers may be good judges of
what goes on in the classroom, they probably do not have enough
information to be good judges of parent-child relationships. However,
it is surprising that so few studies of parent-child relationships are
based on direct observation by researchers.

Advantages and Disadvantages of Various Sources

Each source has certain advantages and disadvantages. Children
may be the best source to report on their own feelings. On the other
hand, young children may have a difficult time understanding
questions or responding articulately. Furthermore, their limited reading
ability constrains the use of self-report questionnaires. Amato and
Ochiltree (1987b) found that children as young as 8 years of age could
respond lucidly to interview questions dealing with divorce and that
the resulting data quality was reasonably high; however, traditional
interview methods did not work well for children younger than this.

Parents know their own children better than anyone else does. As such, they can report on children's behavior over a long time span and across a variety of situations. Furthermore, they can report on the behavior of very young children for whom self-report data are not possible. However, social desirability is a problem: As suggested above, many parents are probably reluctant to say negative things about their children—especially parents who may be feeling guilty for having obtained a divorce. In addition, parents may not be aware of many of their children's behaviors—especially those that occur outside the home.

Teachers have the advantage of being relatively "objective" outsiders. Furthermore, they know children in a different context from that of parents: school as opposed to home. On the other hand, some researchers have suggested that teachers are biased against children of divorce. In a study by Santrock and Tracy (1978), student teachers viewed a videotape of a boy at home and in peer interaction. Those who believed that the child was from a divorced family rated him lower in happiness, emotional adjustment, and ability to cope with stress than did other teachers. In a similar study conducted by Ball, Newman, and Williams (1984), teachers read about a child identified as living in either an intact or a divorced family. Compared with the child from an intact family, teachers expected the child from a divorced family to have more problems at school and not to perform as well in the classroom. These studies suggest that if teachers know the family background of their students, their ratings may reflect expectations as much as reality.

Behavioral ratings based on direct observation can attain a relatively high level of objectivity, especially if the raters are blind to the family type of the child. Furthermore, researchers using this method observe actual behavior, rather than reports of behavior. However, it is possible to observe behavior for only a short time period in a specific situation. Behaviors with low base rates, as well as covert behaviors, are difficult to observe. Furthermore, children may know that they are being observed, thus generating problems of reactivity. Observational studies are also relatively expensive, which makes them impractical for many researchers.

Studies that use multiple sources to measure dependent variables are preferable to those that use a single source, all things being equal. Correlations between children's, parents', teachers', and observers' ratings of children's behavior tend to be low (Achenbach, McConaughy, & Howell, 1987). For this reason, using two or more sources can compensate for the disadvantages of each and provide a more rounded

assessment of divorce effects. If two sources lead to the same conclusion (say, that children of divorce exhibit more behavior problems than other children), researchers will have more confidence in their findings than if only a single source were used. Similarly, if all sources generate consistently null findings, then researchers can be reasonably confident about the findings.

Although multiple sources are desirable in studies that examine the effects of divorce on children, problems arise when the two sources yield discrepant results. What if data based on teachers' reports yield significant differences but data based on parents' reports do not? Should the researcher conclude that the parents' data are biased and that the teacher data are more objective? Or should the researcher conclude the reverse? Similar dilemmas emerge for any pair of methods. Within any particular study, therefore, it is difficult to reconcile diverging results based on different sources. Meta-analytic methods of accumulating results across a large number of studies may provide clearer information on this issue.

Source and Mean Effect Size

These considerations raise the question of whether the choice of source affects the results of the study. Do some sources reveal stronger effects of divorce, on average, than others? Table 3 provides data relevant to this question. This table presents the mean effect sizes from our meta-analysis (Amato & Keith, 1991a), based on whether data came from children, parents, teachers, or direct observation. I omitted data for self-concept, mother-child relations, and father-child relations because almost all of these studies are based on children's reports.

Table 3 reveals a certain degree of consistency. For all outcomes, regardless of source, the effect sizes are negative; this indicates that

Table 3. Mean Effect Size By Source of Data

	Child	Parent	Teacher	Observation
Academic Achievement	-.17***	-.06	-.04	-.24***
Conduct	-.24***	-.18***	-.17***	-.32***
Psychological Adjustment	-.18***	-.06*	-.08	-.03
Social Adjustment	-.19***	-.04	-.14**	-.14**

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

children in divorced families scored more poorly on these measures than did children in continuously intact two-parent families. Nevertheless, variations in the magnitude of mean effect sizes are apparent, and some attain significance whereas others fail to attain significance. To explore this issue further, I carried out significance tests for each outcome to see if mean effect sizes differed across sources at higher than chance levels. These tests involved the Hedges and Olkin (1985) H statistic for effect sizes. All four tests were significant ($p < .05$ for academic achievement, and $p < .001$ for conduct, psychological adjustment, and social adjustment).

Studies based on parents' reports generally found small differences between children from divorced and intact families, and in two out of four cases, as Table 3 indicates, the mean effect size was not significant. This is consistent with the notion, noted above, that parents are reluctant to admit that their children are doing poorly. Such a tendency on the part of parents would lower the variance of the dependent variable and obscure differences between groups. This suggests that researchers should probably avoid using parents as the sole source of data on children's outcomes, with the possible exception of studies that focus on conduct.

It is also interesting to note that in two out of four cases, mean effect sizes based on data provided by teachers are low and nonsignificant. As noted above, studies by Santrock and Tracy (1978) and Ball, Newman, and Williams (1984) found evidence that teachers are biased in their evaluation of children from divorced families. However, the results from Table 3 indicate that effect sizes based on teachers' ratings tend to be weaker than those based on data obtained from children themselves—especially for measures of academic achievement and psychological adjustment. This result provides little support for the notion that teachers stereotype children of divorce and exaggerate the differences between them and children from intact families. It is possible that teachers hold relatively low expectations for children of divorce but assess them in ways that minimize the differences between them and other children. This would occur if, in an attempt to be fair, teachers use different assessment criteria for children from divorced families. Teachers may rate a given level of performance for a child in a single-parent family higher than the same level of performance for a child in an intact two-parent family; they may allocate grades on the same basis. To the extent that teachers are aware of children's family types, this would blur the distinctions between them, resulting in low effect sizes. Although this notion is intriguing, it has never been tested empirically.

Table 3 also shows that questioning children themselves and directly observing children's behavior are the approaches that yield the largest and most consistent differences between groups. The one exception is that observational studies of children's psychological adjustment do not produce significant differences between groups. Given that the dependent variable is intrapsychic, this is not surprising. Overall, these results suggest that researchers working in this area should avoid using parents or teachers as their only sources of data on children's outcomes.

Multiple Sources and Studies of Children's Divorce Adjustment

Multiple sources of information are also useful in studies dealing with factors that influence children's divorce adjustment. Unfortunately, these studies often rely on the same source for information on both the independent and dependent variables. For example, some studies have tested the hypothesis that the custodial mother's psychological adjustment facilitates children's divorce adjustment. However, if data on both the mother's and the child's adjustment come from the mother (the most common situation), then a significant association may reflect either a causal association between variables or *same-source bias*.

Not surprisingly, studies that measure mothers' and children's well-being independently tend to find weaker associations between variables (and hence weaker support for the hypothesis) than do studies that use the same source (Huntley, Phelps, & Rehm, 1987; Kalter, Kloner, Schreier, & Okla, 1989). Nevertheless, same-source bias cannot account for the entire pattern of findings, because a few studies that used independent sources also supported this hypothesis (e.g., Kanoy, Cunningham, White, & Adams, 1984). Clearly, studies of divorce adjustment that use different sources for independent and dependent variables provide more certainty in conclusions than do studies based on a single source.

CAUSAL MODELS OF THE EFFECTS OF DIVORCE ON CHILDREN

As noted above, researchers who study the effects of divorce on children adopt a quasi-experimental design involving a comparison group of children from intact two-parent families. But because researchers cannot randomly assign children to divorced and nondivorced groups, it is difficult to know whether observed differences between groups are due to divorce or some factor associated

with divorce. For example, couples who divorce tend to be of lower social class, on average, than couples who do not divorce (White, 1990). Parental social class is also known to be inversely associated with a number of academic and behavioral problems in children (White, 1982). Consequently, some or all of the differences between children in divorced and intact families may be due to social class rather than divorce.

Studies that fail to use appropriate control variables to statistically "equate" groups generally overestimate the effects of divorce on children. In our meta-analysis (Amato & Keith, 1991a), we calculated mean effect size separately for studies that did and did not use control variables. (We considered the matching of children to be equivalent to using control variables.) In relation to measures of academic achievement, the mean difference between children in divorced and intact families was -.25 of a standard deviation ($p <.001$) for studies that did not use control variables (that is, only reported zero-order differences between groups), and -.10 ($p <.01$) for studies that used control variables. The difference between coefficients was significant ($p <.001$), indicating that studies that do not use control variables tend to show bigger "effects" of divorce on children's academic achievement than do other studies. A similar pattern was apparent for two other dependent variables: self-concept and mother-child relations.

The use of control variables is not as common in this body of studies as one might hope. In our sample of studies, out of 284 comparisons, only 78 (27%) involved statistical controls or the matching of children. More recent studies were more likely to use control variables than were earlier studies, but the general failure to address this problem is disheartening.

Unfortunately, even researchers who employ control variables often use them incorrectly, resulting in a great deal of conceptual confusion. In particular, there is little attempt to separate control variables that precede and follow divorce in time; often researchers lump them together and add them to the regression equation in a single step. (Alternatively, in analysis of covariance designs, researchers treat them all simultaneously as covariates.) This practice makes it impossible to interpret the resulting statistics.

It is useful to think about this issue in traditional path analytic terms. The zero-order difference between children in divorced and intact families on some outcome (that is, the simple difference in means between groups) is represented by the unstandardized regression coefficient with no control variables in the model. Let us say that the standard deviation for some dependent variable is 20 and

the unstandardized regression coefficient is 10; this means that the effect size is .5. The regression coefficient (or the effect size) reflects the *total association* between parental divorce and the dependent variable.

To estimate the causal impact of divorce, it is necessary to control for variables that precede both parental divorce and the measurement of children's outcomes, because they could be a cause of both. For example, as noted above, parental social class precedes both parental divorce and children's well-being. As such, some or all of the association between parental divorce and children's well-being is likely to be spurious. Other variables that precede divorce and children's outcomes and may affect both include parental age (or year of birth), parental race, parental employment status prior to divorce, child age (or year of birth), and child sex. When we add these variables to the regression equation, the resulting partial unstandardized regression coefficient for divorce can be thought of as an estimate of the *total effect* of parental divorce on children. Let us say that the partial unstandardized coefficient is 5, which is equivalent to the adjusted mean difference between groups. The effect size, based on the original standard deviation, is now .25. This means that half of the original association between divorce and the dependent variable was spurious. Note that the accuracy of this estimate depends on having all of the necessary control variables in the model.

At this point another question arises: Is the effect of divorce on children direct, or is some of its effect mediated by other variables? For example, divorce often results in a number of life changes that may be stressful for children, such as moving and changing schools (Hodges, Buchsbaum, & Tierney, 1984). To determine the extent to which stressful life changes mediate the impact of divorce on children, a measure of this variable (such as a total score from a stressful life events schedule) could be added to the regression equation with all predivorce control variables in the model. Imagine that the partial unstandardized regression coefficient (or the adjusted mean difference) drops to 3, and the corresponding effect size is .15. These statistics now reflect the estimated *direct effect* of divorce on children. This also tells us that 40% of the total effect of parental divorce is indirect, that is, mediated by stressful life events (i.e., ((5-3)/5) X 100).

Path analytic procedures allow us to decompose the original association between parental divorce into total, direct, and indirect estimated effects. To do this, however, requires that one have a theory that allows variables to be ordered in some manner. Unfortunately, researchers often violate this logic. For example, many studies employ

household income as a control variable (see Guidubaldi, Cleminshaw, Perry, & McLoughlin, 1983). This is based on the knowledge that divorce often results in a dramatic decline in standard of living for custodial mothers and their children (Weitzman, 1985). However, this procedure is confusing because, to a large extent, current income reflects earlier (predivorce) income. Therefore, when we control for current income, it is not clear whether we are testing for spuriousness or whether we are assessing the extent to which income mediates the impact of divorce on children. Suppose we find that a significant zero-order association between divorce and a dependent variable no longer is significant with current income in the equation. Does this mean that divorce has no effect on children because low income both causes divorce and lowers children's well-being? Or does it mean that low income explains why divorce lowers children's well-being, that is, that income *mediates* the impact of divorce on children? Theoretically, these are entirely different interpretations, but we cannot tell which is correct from the analysis. (Incidentally, matching children on income results in the same confusion.)

This problem could be solved by including a measure of earlier (predivorce) household income in the regression model. Variables could be added in the following steps: (a) control variables and Time 1 (predivorce) household income, (b) parental divorce, and (c) Time 2 (postdivorce) income. Because Time 1 income is in the model, the regression coefficient for Time 2 income would reflect the *change* in income over the time period of the study. Such a model would allow one to estimate the extent to which income at Time 1 causes both divorce and child outcomes, and the extent to which a decline in income at Time 2 mediates the impact of divorce on children. Although this example is couched in terms of multiple regression, more advanced techniques, such as LISREL modelling, follow the same logic.

An analysis like the one described above might involve longitudinal data. Alternatively, it could rely on retrospective data on household income. Presumably, both divorced and nondivorced parents could be asked about household income in a specific reference year, provided that the reference year preceded all cases of marital dissolution for the divorced group. Unfortunately, no study has carried out such an analysis, to my knowledge.

The main point here is many researchers fail to employ control variables in a theoretically meaningful way. As a result, their assessments of the effects of divorce on children are often uninterpretable.

SUMMARY AND CONCLUSION

At this time, we know a great deal about the effects of divorce on children. We know, for example, that children in divorced families, compared with children in continuously intact families, score slightly but significantly lower across a range of measures of general functioning and well-being. We also know something about the factors that are associated with better or poorer outcomes among children of divorce. For example, children appear to do better when they have close relationships with both parents, when mothers and fathers are psychologically well adjusted and provide competent parenting to children, when post-divorce conflict between parents is minimal, when levels of household income are adequate, and when post-divorce life changes are few (see Amato, in press, and Emery, 1988 for reviews). Interestingly, we also know that adults who experienced parental divorce as children score lower than other adults, on average, on a variety of measures of well-being, including socioeconomic attainment, psychological adjustment, and marital quality (Amato & Keith, 1991b). This indicates that the gap between children from divorced and continuously intact families persists well into adulthood.

However, measurement and other methodological problems are common in this area of research. Firmer knowledge about the consequences of parental divorce for children's lives will become available when researchers address some of these limitations. In summary, I provide a list of common problems and suggestions for dealing with these below.

1. Researchers often include dependent variables with little theoretical relevance to the topic of divorce. Researchers should develop and use measures of child outcomes based on what we know about the ways in which divorce affects children's lives.
2. Researchers often employ measures with modest or unknown reliability and validity. Researchers should use established measures with proven reliability and validity whenever possible. Survey researchers should increase scale length to improve reliability, even though this decreases the number of variables included in survey questionnaires.
3. Few studies have searched for positive outcomes of divorce. Researchers should use or construct measures of dependent variables that provide a more balanced view of the consequences of divorce for children.

4. Few studies have specifically addressed children's adjustment to divorce itself. Additional work is required to produce multidimensional measures of divorce adjustment that have good content validity and a sufficient number of items to attain an adequate level of reliability.

5. Most studies are based on a single source of data. Studies should employ multiple sources of data whenever possible. In particular, researchers should avoid relying on parents or teachers as the sole source of data on children, as these studies rarely yield significant results. In studies dealing with factors that influence children's divorce adjustment, it is necessary to use different sources to measure independent and dependent variables.

6. Researchers frequently fail to use control variables or use them incorrectly. Researchers should include all variables in statistical models that are likely to be causes of both divorce and children's outcomes to rule out the possibility of spurious associations. Researchers should enter variables that mediate the effect of divorce on children (that is, variables that follow divorce in time) in statistical models only *after* checking for spuriousness (that is, after estimating the total effect of divorce on children).

REFERENCES

Achenbach, T.M., McConaughy, S.H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin, 101*, 213-232.

Amato, P. R. (1987). Children's reactions to parental separation and divorce: The views of children and custodial mothers. *Australian Journal of Social Issues, 22*, 610-623.

Amato, P. R. (in press). Children's adjustment to divorce: Theories, hypotheses, and empirical support. *Journal of Marriage and the Family.*

Amato, P. R., & Keith, B. (1991a). Parental divorce and the well-being of children: A meta-analysis. *Psychological Bulletin, 110*, 26-46.

Amato, P. R., & Keith, B. (1991b). Consequences of parental divorce for adult well-being, A meta-analysis. *Journal of Marriage and the Family, 53*, 43-58.

Amato, P. R., & Ochiltree, G. (1986). Children becoming independent: An investigation of children's performance of practical life-skills. *Australian Journal of Psychology, 38*, 59-68.

Amato, P. R., & Ochiltree, G. (1987a). Child and adolescent competence in intact, one-parent, and stepfamilies: An Australian study. *Journal of Divorce, 10,* 75-95.

Amato, P. R., & Ochiltree, G. (1987b). Interviewing children about their families: A note on data quality. *Journal of Marriage and the Family, 49,* 669-675.

Ball, D. W., Newman, J. M., & Williams, J. S. (1984). Teachers' generalized expectations of children of divorce. *Psychological Reports, 54,* 347-353.

Barber, B. L., & Eccles, J. S. (1992). Long-term influence of divorce and single parenting on adolescent family- and work-related values, behaviors, and aspirations. *Psychological Bulletin, 111,* 108-126.

Berg, B., & Kelly, R. (1979). The measured self-esteem of children from broken, rejected, and accepted families. *Journal of Divorce, 2,* 363-369.

Cooper, J. E., Holman, J., & Braithwaite, V. A. (1983). Self-esteem and family cohesion: The child's perspective and adjustment. *Journal of Marriage and the Family, 45,* 153-160.

Demo, D. H. (1992). Parent-child relations: Assessing recent change. *Journal of Marriage and the Family, 54,* 104-117.

Demo, D. H., & Acock, A. C. (1988). The impact of divorce on children. *Journal of Marriage and the Family, 50,* 619-648.

Dunlop, R., & Burns, A. (1988). *'Don't feel the world is caving in.' Adolescents in divorcing families.* Melbourne, Australia: Australian Institute of Family Studies.

Etzioni, A. (1992, Oct. 7). Point of view. *Chronicle of Higher Education,* 48.

Emery, R. E. (1982). Interparental conflict and the children of discord and divorce. *Psychological Bulletin, 92,* 310-330.

Emery, R. E. (1988). *Marriage, divorce, and children's adjustment.* Newbury Park, CA: Sage.

Grych, J. H., & Fincham, F. D. (1990). Marital conflict and children's adjustment: A cognitive-contextual framework. *Psychological Bulletin, 108,* 267-290.

Guidubaldi, J., Cleminshaw, H. K., Perry, J. D., & McLoughlin, C. S. (1983). The impact of parental divorce on children: Report of the nationwide NASP study. *School Psychology Review, 12,* 300-323.

Hedges, L. V., & Olkin, I. (1985). *Statistical methods for meta-analysis.* San Diego, CA: Academic Press.

Hetherington, E. M., Cox, M., Cox, R. (1982). Effects of divorce on parents and children. In M. Lamb (Ed.), *Nontraditional families: Parenting and child development* (pp. 233-288). Hillsdale, NJ: Lawrence Erlbaum.

Hodges, W. F., Buchsbaum, H. K., & Tierney, C. W. (1984). Parent-child relationships and adjustment in preschool children in divorced and intact families. *Journal of Divorce, 7,* 43-57.

Huntley, D. K., Phelps, R. E., & Rehm, L. P. (1987). Depression in children from single-parent families. *Journal of Divorce, 10,* 153-162.

Kalter, N., Kloner, A., Schreier, S., & Okla, K. (1989). Predictors of children's postdivorce adjustment. *American Journal of Orthopsychiatry, 59,* 605-618.

Kanoy, K. W., Cunningham, J. L., White, P., & Adams, S. J. (1984). Is family structure that critical? Family relationships of children with divorced and married parents. *Journal of Divorce, 8,* 97-106.

Kelly, R., & Berg, B. (1978). Measuring children's reactions to divorce. *Journal of Clinical Psychology, 34,* 215-221.

Kurdek, L. A., and Berg, B. 1983. Correlates of children's adjustment to their parents' divorces. In L. A. Kurdek (Ed.), *Children and divorce* (pp. 47-60). San Francisco: Jossey-Bass.

Kurdek, L. A., Blisk, D., & Siesky, A. E. (1981). Correlates of children's long-term adjustment to their parents' divorce. *Developmental Psychology, 17,* 565-579.

Kurdek, L. A., & Siesky, A. E. (1979). An interview study of parents' perceptions of their children's reactions and adjustment to divorce. *Journal of Divorce, 3,* 5-17.

Kurdek, L. A., & Siesky, A. E. (1980). Children's perceptions of their parents' divorce. *Journal of Divorce, 3,* 339-378.

Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In E. M. Hetherington (Ed.), *Handbook of child psychology, Vol. IV: Socialization, personality and social development* (pp. 1-101). New York: Wiley.

Marotz-Baden, R., Adams, G. R., Buech, N., Munro, B., & Munro, G. (1979). Family form or family process? Reconsidering the deficit family model approach. *The Family Coordinator, 28,* 5-14.

Martin, T. C., & Bumpass, L. L. (1989). Recent trends in marital disruption. *Demography, 26,* 37-51.

Mitchell, A. K. (1983). Adolescents' experiences of parental separation and divorce. *Journal of Adolescence, 6,* 175-187.

Piers, E. V., & Harris, D. B. (1969). *Manual for the Piers-Harris Children's Self-Concept Scale.* Counselor Recordings and Tests, Nashville, TN.

Reinhard, D. W. (1977). The reactions of adolescent boys and girls to the divorce of their parents. *Journal of Clinical Child Psychology, 6,* 21-23.

Rollins, B. C., & Thomas, D. L. (1979). Parental support, power, and control techniques in the socialization of children. In W. R. Burr,

R. Hill, F. I. Nye, & I. L. Reiss (Eds.), *Contemporary theories about the family* (pp. 317-364). NY: The Free Press.

Santrock, J. W., & Tracy, R. L. (1978). Effects of children's family structure status on the development of stereotypes by teachers. *Journal of Educational Psychology, 70,* 754-757.

Spitze, G. (1988). Women's employment and family relations. *Journal of Marriage and the Family, 50,* 595-618.

Stephens, N., & Day, R. H. (1979). Sex role identity, parental identification, and self-concept of adolescent daughters from mother-absent, father-absent, and intact families. *The Journal of Psychology, 103,* 193-202.

U.S. Bureau of the Census. (1992). *Statistical abstract of the United States: 1989.* (112th ed.). Washington, DC: Author.

Wallerstein, J. S., & Kelly, J. B. (1980). *Surviving the breakup: How children and parents cope with divorce.* London: Grant McIntyre.

Wallerstein, J. S., & Blakeslee, S. (1989). *Second chances: Men, women, and children a decade after divorce.* NY: Ticknor and Fields.

Weed, J. A. (1980). National estimates of marriage dissolution and survivorship. *Vital and Health Statistics* (Ser. 3, No 19 IV). Washington, DC: U.S. Department of Health and Human Services.

Weiss, R. (1979). *Going it alone: The family life and social situation of the single parent.* New York: Basic Books.

Weitzman, L. J. (1985). *The divorce revolution.* NY: The Free Press.

White, L. K. (1990). Determinants of divorce: A review of research in the eighties. *Journal of Marriage and the Family, 52,* 904-912.

White, K. R. (1982). The relation between socioeconomic status and academic achievement. *Psychological Bulletin, 91,* 461-81.