

PREDICTORS OF CHILDREN'S POSTDIVORCE ADJUSTMENT

Neil Kalter, Ph.D., Amy Kloner, Ph.D., Shelly Schreier, Ph.D., Katherine Okla, M.A.

Six hypotheses to explain how divorce may affect the trajectory of child development were tested using standardized measures and sociodemographic data. Correlational and multiple regression analyses revealed that the parent adjustment hypothesis received the strongest support. Boys appeared sensitive to events and behavior in their mothers' lives, while girls seemed attuned to mothers' internal states.

Over the past 15 years, clinicians and social scientists have increasingly turned their attention to examining the potential effects of divorce on children. Though there is still controversy over the extent and duration of negative sequelae of divorce for youngsters, a consensus appears to be emerging. Investigators representing diverse conceptual frameworks and methodological approaches agree that most children initially experience their parents' divorce as stressful and display disruptions in social, emotional, and cognitive development (Furstenberg & Allison, 1985; Guidubaldi & Perry, 1984; Hetherington, Cox, & Cox, 1979; Wallerstein & Kelly, 1980). After the first two years following their parents' separation, many youngsters appear to regain their developmental stride and progress well. However, a significant minority either continue to manifest divorce-related difficulties for years after the disruption of their parents' marriage, or develop, long after the marital separation, behavioral and social-emotional problems that appear to have been stimulated by the vicissitudes of the extended divorce process (Guidubaldi & Perry, 1985; Hetherington,

Cox, & Cox, 1985; Kalter, 1984, 1987; Kalter & Rembar, 1981; Wallerstein, 1985; Wallerstein, Corbin, & Lewis, 1988; Wallerstein & Kelly, 1980).

In the course of describing and trying to understand the ways in which children react and adjust in the long run to their parents' divorce, investigators have proposed several theories to account for why divorce can be so painful and developmentally debilitating for a substantial number of youngsters, while the majority appear to fare well. Typically, these attempts have been piecemeal so that they have not been directly compared. The aim of the study reported here was to distill, from the clinical and research literature, the major explanatory concepts that have been advanced, and to test them within a single sample.

A review of the literature regarding children's adjustment to divorce reveals six prominent hypotheses for the ways in which divorce may affect children. These are: 1) father absence; 2) economic distress; 3) multiple life stresses; 4) interparental hostility; 5) parent adjustment; and 6) short-term crisis. Here, each of these frameworks is briefly described.

This paper was prepared for inclusion in this special section. Authors are at the Center for the Child and the Family, University of Michigan, Ann Arbor.

1. Among the earliest models for understanding how divorce may affect children is the father absence hypothesis. Although for years this model did not differentiate among the reasons for a father being absent (divorce, death, and extended absence due to military service or occupational activities were often lumped together), it has been used to explain the effects of divorce on children, especially boys. The notion is that boys need a regular, ongoing, positive relationship with their father in order to develop a valued sense of masculinity, internalize controls over behavior, achieve appropriate development of conscience, and perform up to their abilities academically (see Biller [1981] for a comprehensive review of the father absence literature). Failures in these developmental accomplishments are seen as being in large measure responsible for aggressive acting out of behavior problems, poor academic work, and social isolation from peers—common findings for boys in the divorce literature (Guidubaldi & Perry, 1984, 1985; Hetherington, Cox, & Cox, 1979; Wallerstein & Kelly, 1980). Recently, it has been argued that father absence may have deleterious effects on female development, too, especially in adolescence and young adulthood (Kalter, 1984; Kalter, Riemer, Brickman, & Chen, 1985; Wallerstein, 1985).

2. Another hypothesis, early to emerge and still influential, is the economic distress model. It argues that divorce brings substantial economic deprivation to post-divorce, mother-headed households, and that it is poverty (or at least a dramatic fall in the family's economic resources) that accounts for the troubles of many children of divorce (Brandwein, Brown, & Fox, 1974; Herzog & Sudia, 1973). Thus, the lack of economically based advantages and the sociocultural factors associated with being economically disadvantaged may themselves account for poor academic performance and for antisocial, undercontrolled behavior problems, quite apart from other effects of divorce.

3. The multiple life stress view encompasses economic distress and adds to it other possible sources of stress such as residential shifts, deaths in the family, loss of a job, and parental remarriage. Initially, this drew on the early work on the relationship between stressful events and the development of mental or physical health problems (Holmes & Rahe, 1967). More recently, it has been argued that single traumatic events rarely cause lasting psychiatric problems and that it is the aggregation of multiple stressful life circumstances that results in enduring psychopathology (Rutter, 1980). Therefore, a divorce characterized by numerous psychosocial stressors would be more likely to cause adjustment problems in children than one in which stressors were minimal.

4. A more recent and currently popular idea is that of interparental hostility as the key factor in negative divorce sequelae for children (Camara & Resnick, 1988; Emery, 1982; Peterson & Zill, 1983). Parents who engage in acrimonious battles and mutual derogation stimulate anxiety and anger in their children, who love both parents. Further, parents who fight are inadvertently modeling aggression as a way of resolving interpersonal conflicts and frustration (Kalter, 1987). The aggressive behavior problems so commonly seen among children of divorce may be the result of anger, conflicted loyalties, or learned aggression stemming from exposure to high levels of interparental conflict.

5. The parent adjustment hypothesis suggests that when parents, especially the primary custodial parent, can adjust well to adversity, they can continue to provide effective care, guidance, and support for their children. It is the continuity of effective parenting that is seen as facilitating healthy child development. Further, a supportive parent-child relationship is seen as buffering the youngster from divorce-related stresses. Wallerstein and Kelly (1980) have been the strongest proponents of this view. When the custodial parent is distraught and

is not able to continue as an effective parent, the child's developmental progress may be compromised and mental health problems are more likely to emerge.

6. The short-term crisis view, while not so conceptually based as the first five hypotheses, has been an influential model for understanding children's reactions to divorce. In this view, children's initial difficulties stemming from their parents' separation dissipate over time (Hetherington, Cox, & Cox, 1979). Implicit in this perspective is the idea that the shock and turmoil of the initial marital disruption gradually diminish, and a new equilibrium is achieved.

Other factors, too, have been proposed to account for variations in children's levels of postdivorce adjustment. The child's gender (Hetherington, 1979) and developmental level (Wallerstein, Corbin, & Lewis, 1988; Wallerstein & Kelly, 1980), as well as the postdivorce custodial arrangements (Santrock & Warshak, 1979; Steinman, Zimmelman, & Knoblauch, 1985) have been considered. In the present study, the child's gender and developmental level are treated as mediating rather than potentially causal factors; gender is controlled via separate statistical analyses, and developmental level by restricting the sample to latency age, elementary school children. Only children in maternal custody are examined, as this is still by far the most common postdivorce arrangement and a comparable sample of youngsters in joint physical custody or paternal custody is hard to come by in most regions of the United States.

METHOD

This study is part of a larger investigation of stress and coping in families following divorce. Here, the subject recruitment, predictor variables, and child adjustment criterion measures used in this part of the study are described in turn.

Subjects

Subjects were recruited in four elementary schools located in southeastern Michi-

gan. A packet of information about the proposed research project and a parent consent form were sent home with every child in grades two through five in each school. Sixty-four families initially agreed to participate. A comparison of school records and teacher knowledge of the families of children in their classrooms who had returned consent forms indicated that 45% of families in which a divorce had occurred had agreed to participate. This return represents a good consent rate for in-depth studies of children of divorce (Stolberg & Garrison, 1985).

The final sample consisted of 56 Caucasian women who had been divorced, together with one child per family in one of the grades sampled. This number was less than the original 64 due to several factors, including families moving away during the course of the project, elimination of one non-Caucasian family, and parents changing their minds about participating. Of the 56 women in the final sample, 37 had been divorced and were currently single, while 19 had remarried. The women ranged in age from 29 to 46 years ($M=35.25$, $SD=3.95$). The duration of their marriages prior to divorce was between 2 and 16 years ($M=9.04$, $SD=3.92$), with the time since divorce ranging from 7 months to 11.5 years ($M=5.19$ yrs, $SD=2.93$). The children were between 7.4 and 11.6 years old ($M=9.7$, $SD=1.95$). Their age at the time of divorce ranged from 8 months to 11 years ($M=6.0$ yrs, $SD=3.16$). There were 27 boys and 29 girls.

Procedure

Child self-report measures were collected in school during school hours, in individual sessions with each child. Advanced undergraduate students, trained in administering these questionnaires, read the items aloud to the younger children in the sample and to older children who showed that they could not easily read the questions.

Data were gathered from the mothers in their homes. Graduate students administered all parent questionnaires and demographic information forms.

Predictors

The potential predictors of child adjustment were drawn from the six hypotheses outlined earlier. They were operationalized by using demographic as well as standardized questionnaire measures.

The father absence hypothesis was assessed by the amount of time since the marital separation and by mothers' reports of the frequency of fathers' postdivorce visitation.

The economic distress hypothesis was measured by the Hollingshead (1972) Index of Socioeconomic Status (SES) for the child's current household and by mothers' reports of total household income.

The multiple life stress hypothesis was assessed in the narrowest sense by the Negative Change scale of the Life Experiences Survey (LES) (Sarason, Johnson, & Siegel, 1978). The LES is a 47-item self-report measure filled out by adults. It includes subjects' ratings of the desirability/undesirability and personal impact of each event, as well as of its occurrence/nonoccurrence. Test-retest reliability for the Negative Change score is .88 over six weeks. Negative Change is related to several stress measures (Sarason et al.). A broad-gauged way of operationalizing multiple life stresses is to assess how necessary are several other predictors (e.g., father absence, economic distress) in order to account for variations in child adjustment.

The interparental hostility hypothesis was measured directly, using the Coparenting Questionnaire (CPQ) (Ahrons, 1981) filled out by the custodial mother. We used four scales of the original 76-item (CPQ): coparental conflict, coparental support, anger, and attitudes toward one's former spouse as a parent. Internal consistency correlations for these subscales are .87, .78, .91, and .82, respectively. We also used time since divorce as an indirect measure of interparental hostility, based on the common observation that conflict between parents tends, on the average, to wane over the years after the divorce.

The parent adjustment hypothesis was measured by three standardized questionnaires to assess the adjustment of the custodial mothers. The Brief Symptom Inventory (BSI) is a 53-item self-report symptom checklist which yields a Global Severity index as well as several other scales (Derogatis & Spencer, 1982). Internal consistency for Global Severity is over .80 and good convergent validity with the MMPI has been demonstrated (Derogatis & Spencer). The second measure of parent adjustment is the Social Adjustment Scale (SAS), a 42-item self-report questionnaire that measures expressive or instrumental role performance in six major domains of life (Weissman & Bothwell, 1976). Internal consistency is reported to be .74 and test-retest reliability (interval not reported) is .80. Evidence for validity is also reportedly good, with the SAS distinguishing various psychiatric samples from a nonpsychiatric one, and SAS self-report correlating well with ratings done by relatives (Weissman & Bothwell; Weissman, Prusoff, Thompson, Harding, & Myers, 1978). The third measure of parent adjustment is the Self-Esteem Inventory (SEI), a 10-item self-report measure which assesses feelings of self-worth and personal adequacy (Rosenberg, 1965). Internal consistency is reported to be .76 and test-retest reliability over a two-week interval is .85. Comparisons with other measures of self-esteem result in good evidence for validity, with correlations ranging from .56 to .83 (Silber & Tippett, 1965). The BSI and SEI are focused on perceptions of feelings and ideas about the self. The SAS is intended to measure one's view of effectiveness of actual performance across roles such as parent, worker, and member of one's extended family, while the BSI assesses psychiatric problems.

The short-term crisis hypothesis was assessed via the time that had elapsed since the marital separation.

Child Adjustment Measures

Child adjustment was assessed by parent report and child self-report using standardized instruments. The Child Behavior Check-

list (CBCL) is a 113-item symptom checklist (Achenbach & Edelbrock, 1983) which was filled out by the custodial mothers. This measure has been extensively tested, and separate norms are available for boys and girls. It yields a Total Problems score, two broad band scales (Internalizing and Externalizing Problems), and several narrow band scales (e.g., Aggression, Depression). Test-retest reliability is reported as .87 and correlations with other indices of adjustment suggest good validity (Achenbach & Edelbrock).

The Children's Depression Inventory (CDI) is a 27-item, self-report measure (Kovacs, 1983). Normative data are available for clinical and nonclinical samples, and the validity of the CDI is in part demonstrated by its capacity to differentiate between these two types of samples. In addition, the CDI is correlated negatively with self-esteem and positively with anxiety (Kovacs).

The State-Trait Anxiety Inventory (STAI) consists of 40 self-report items (Spielberger, 1973). Twenty items measure children's current levels of anxiety (State) and 20 items assess enduring, consistent patterns of anxiety in everyday life (Trait). Test-retest reliability over an eight-week period for Trait

anxiety is .65 for boys and .71 for girls. Stability coefficients for State anxiety are, as would be expected, substantially lower (Spielberger). Significant correlations have been reported between STAI and other measures of anxiety (Ollendick & Herson, 1984).

RESULTS

The report of results is divided into three sections. First, the sample is described with respect to all predictor and child adjustment measures, and compared to available norms. Second, correlations between the child adjustment measures and each of the predictors are given. Finally, multiple regression analyses are presented, using all potential predictors, to assess the predictive efficiency of the six hypotheses with respect to each of the child adjustment measures.

Sample

TABLE 1 displays sample means and standard deviations (and, in two instances, percentages) for all predictor variables. It is noteworthy that although the SES for this sample is high, the household income is not. It appears that the sample is well-educated but not well-to-do. It is also striking that moth-

Table 1

STUDY SAMPLE AND COMPARISON TO NORMATIVE DATA FOR PREDICTOR VARIABLES

MEASURE	SAMPLE (N) ^a	NORM. DATA	SIGNIFICANCE
Years Since Divorce	<i>M</i> = 5.19; <i>SD</i> = 2.93 (52)	—	—
Father Visits			.001
Weekly or more	23% (12)	16.4% ^b	
1-3/month	42% (22)	16.7%	
Several per year	17% (9)	15.2%	
None last year	19% (10)	51.8%	
SES Class			
I	11% (6)	—	—
II	57% (30)	—	—
III	21% (11)	—	—
IV	11% (6)	—	—
Household Income	<i>M</i> = \$23,000; <i>SD</i> = \$8,600 (56)	—	—
LES-Negative Events	<i>M</i> = 7.75; <i>SD</i> = 7.42 (53)	<i>M</i> = 5.64; <i>SD</i> = 6.43	.05
CPQ	<i>M</i> = 2.50; <i>SD</i> = 0.97 (54)	—	—
BSI-Global Severity	<i>M</i> = 0.43; <i>SD</i> = 0.35 (56)	<i>M</i> = 0.30; <i>SD</i> = 0.31	.01
SAS ^c	<i>M</i> = 1.82; <i>SD</i> = 0.32 (56)	<i>M</i> = 1.61; <i>SD</i> = 0.34	.001
SEI	<i>M</i> = 32.51; <i>SD</i> = 4.69 (55)	<i>M</i> = 32.33; <i>SD</i> = 3.61	NS

SES = Socioeconomic Status Index; LES = Life Experiences Survey; CPQ = Coparenting Questionnaire; BSI = Brief Symptom Inventory; SAS = Social Adjustment Scale; SEI = Self-Esteem Inventory.

^a Variations due to incomplete data for several variables.

^b Based on a national survey (Furstenberg, Nord, Peterson, & Zill, 1983).

^c Higher score = greater difficulty in adjustment.

ers in this sample report significantly more negative life events, more difficulty in their social adjustment, and greater psychopathology compared to available norms.

To further explore this finding, we divided the sample according to the mother's current marital status (i.e., single versus remarried). Single and remarried mothers did not differ on a host of sociodemographic variables including age, number of children, duration of former marriage, years since divorce, and SES. Nor were they different with respect to the negative life events they had experienced. However, single mothers had significantly lower incomes ($M = \$42,000$ for remarried and $\$14,000$ for single mothers, $p < .001$), lower self-esteem ($p < .05$), more psychiatric problems ($p < .05$), and greater difficulty in social adjustment ($p < .01$). In fact, all of the significant differences between mothers in our study sample and normative data, reported in TABLE 1, were due to the difficulties of the single mothers. Remarried mothers were no different from the norms with respect to LES-Negative Events, BSI-Global Severity, SAS, or SEI, while single mothers were significantly discrepant from the norms on every one of these measures and, in all cases, in a direction indicating greater difficulties.

Similar descriptive data and comparison to norms are presented in TABLE 2 for the child adjustment measures. The child-reported instruments (CDI and STAI) reveal no differences between the children in the study sample and available norms. Nor are girls in our sample significantly different with respect to normative data on the parent report scales (CBCL). Only the boys in the sample appear less well-adjusted, and only on the mother-reported CBCL scales. That these daughters of divorce appear to be well-adjusted, by self-report as well as by mother report, is no surprise; this finding has been reported by many investigators for elementary school-age girls (Guidubaldi & Perry, 1984, 1985). However, the discrepancy in adjustment for boys between self-report and mother report is puzz-

ling; apparently the boys see themselves as doing well while their mothers do not.

Correlations Between Predictors and Child Adjustment

The correlations between the predictors and the child adjustment measures are displayed in TABLE 3. Because the literature regarding children of divorce suggests that there are gender differences in children's adjustment to divorce, especially for elementary school-age youngsters, correlations are reported for the boys and girls separately, as well as for the full sample.

Examination of TABLE 3 reveals that the father absence, interparental hostility, and short-term crisis hypotheses receive no support in this sample. That is, time since divorce (related to the short-term crisis hypothesis, as well as to the father absence and interparental hostility hypotheses), frequency of father visits (which addresses the father absence hypothesis), and the coparenting relationship (related to the interparental hostility hypothesis) are all essentially uncorrelated with any of the child adjustment measures.

The correlations bearing on the economic distress hypothesis yielded conflicting results. SES, though nearly always negatively related to child adjustment as predicted, showed no statistically significant association with any of these outcomes. However, the failure to achieve statistical significance may have been due to the relatively small sample size. Similarly, family income was negatively related to girls' adjustment for almost every child outcome measure, as expected, but again these associations did not reach statistical significance. For boys, however, family income was *positively* correlated with adjustment (i.e., higher income was associated with *greater* problems) and for three of the eight child adjustment measures, statistical significance ($p < .05$) was reached. This is a puzzling result. Since there is a large and statistically significant difference in family income between single and remarried households in our sample (see TABLE 1), we correlated mothers' current mar-

Table 2
STUDY SAMPLE AND COMPARISON TO NORMATIVE DATA FOR CHILD ADJUSTMENT MEASURES

MEASURE	SAMPLE			NORM. DATA		SIGNIFICANCE
	M	SD	N ^a	M	SD	
CBCL						
Boys						
Total problems	59.77	6.75	24	51.70	4.70	.001
Externalizing	57.74	11.11	24	51.00	9.30	.01
Internalizing	57.08	10.10	24	51.20	9.10	.01
Aggression	61.58	9.73	24	57.10	4.80	.05
Depression	61.96	7.78	24	57.30	4.40	.01
Girls						
Total problems	53.66	11.56	27	50.60	9.50	NS
Externalizing	54.55	11.02	27	51.00	9.40	NS
Internalizing	54.38	10.70	22	51.30	9.10	NS
Aggression	59.52	8.28	27	57.40	4.70	NS
Depression	59.79	8.76	27	57.20	4.50	NS
STAI						
Boys						
State	29.68	6.56	25	31.00	5.71	NS
Trait	35.24	7.28	25	36.70	6.32	NS
Girls						
State	29.35	6.76	29	30.70	6.01	NS
Trait	37.72	8.77	29	38.00	6.68	NS
CDI	8.96	8.67	54	9.28	7.30	NS

CBCL = Child Behavior Checklist; STAI = State-Trait Anxiety Inventory; CDI = Children's Depression Inventory.

^a Variations due to incomplete data for some measures.

ital status with each of the child outcome measures to see if this factor was responsible for the family income findings for boys' adjustment. However, mothers' current marital status was not at all correlated with child adjustment; correlation coefficients ranged from $-.12$ to $+.06$ across the eight child adjustment measures. Another possibility is that high family income is related to being in a remarried household and having both parents working outside the home. Boys may fare less well when their remarried mother (who does not *have* to work, from a boy's perspective, as a single mother does) works outside the home.

The multiple life stress hypothesis receives support, but only for boys' adjustment. LES-Negative Change is positively correlated with all eight child adjustment measures for boys, and reaches significance for three of them. Whether more than one or two stressors significantly figure into predicting child adjustment (what we have been calling the broad-gauged version of the multiple life stress hypothesis) will be explored using multiple regression analyses.

Clearly, the parent adjustment hypothesis has by far the greatest support in this sample. BSI-Global Severity is positively correlated with all eight child outcome measures for boys and with six for girls. Many of these are statistically significant, as can be seen in TABLE 3. Similarly, SAS is positively correlated with all child adjustment measures for boys and with seven for girls, with many of these correlations statistically significant (see TABLE 3). For both BSI-Global Severity and SAS, the higher the score, the poorer the mother's adjustment, so positive correlations indicate the expected relationship. The SEI is negatively correlated (i.e., high mother self-esteem is associated with fewer child problems), as expected with all outcome measures for boys and girls. Of these 16 correlations, eight outcome measures for boys and eight for girls, four are significant at or beyond .05.

Although the findings from these correlational analyses most strongly support the parent adjustment hypothesis, there are knotty methodological problems that make these results less easily interpretable than is

Table 3
CORRELATIONS BETWEEN PREDICTORS AND CHILD ADJUSTMENT MEASURES

MEASURE	CORRELATIONS		
	TOTAL (N=47) ^a	BOYS (N=22) ^a	GIRLS (N=25) ^a
CBCL Total Problems			
Time since divorce	.05	.27	-.17
Frequency of father visits	NS ^b	NS	NS
SES	-.25	-.30	-.24
Family income	-.16	+.21	-.33
LES-Negative Events	-.30*	+.42*	+.19
CPQ	-.27*	-.06	-.37*
BSI-Global Severity	+.52***	+.53**	+.48**
SAS	+.49***	+.55**	+.40*
SEI	-.30*	-.42*	-.11
CBCL Internalizing Problems			
Time since divorce	.05	+.23	-.13
Frequency of father visits	NS ^b	NS	NS
SES	-.23	-.16	-.31
Family income	-.12	+.15	-.24
LES-Negative Events	+.36**	+.52**	+.20
CPQ	-.24	-.08	-.33
BSI-Global Severity	+.55***	+.53**	+.57***
SAS	+.45***	+.47*	+.42*
SEI	-.22	-.32	-.07
CBCL Externalizing Problems			
Time since divorce	.00	+.21	-.22
Frequency of father visits	NS ^b	NS	NS
SES	-.22	-.30	-.17
Family income	-.16	+.24	-.39*
LES-Negative Events	+.25	+.29	+.21
CPQ	-.22	-.03	-.37*
BSI-Global Severity	+.42**	+.41*	+.41*
SAS	+.46***	+.49*	+.41*
SEI	-.31*	-.37	-.19
CBCL Aggression			
Time since divorce	-.02	+.26	-.32
Frequency of father visits	NS ^b	NS	NS
SES	-.16	-.22	-.11
Family income	-.04	+.38*	-.31
LES-Negative Events	+.16	+.26	+.05
CPQ	-.14	+.06	-.32
BSI-Global Severity	+.38**	+.46**	+.23
SAS	+.49***	+.61***	+.32
SEI	-.41**	-.56**	-.16
CBCL Depression			
Time since divorce	-.06	+.15	-.26
Frequency of father visits	NS ^b	NS	NS
SES	-.16	-.02	-.28
Family income	-.20	+.17	-.33
LES-Negative Events	+.25	+.60**	-.03
CPQ	-.16	-.02	-.23
BSI-Global Severity	+.58***	+.62***	+.55**
SAS	+.47***	+.60***	+.34
SEI	-.29*	-.47*	-.06
CDI			
Time since divorce	+.13	+.29	+.06
Frequency of father visits	NS ^b	NS	NS
SES	-.21	-.26	-.18
Family income	+.07	+.42*	-.12
LES-Negative Events	+.25	+.31	+.19
CPQ	-.08	-.21	-.07

Continued

Table 3

Continued

MEASURE	CORRELATIONS		
	TOTAL (N=47) ^a	BOYS (N=22) ^a	GIRLS (N=25) ^a
<i>CDI (Continued)</i>			
BSI-Global Severity	+ .23	+ .36	+ .18
SAS	+ .22	+ .32	+ .19
SEI	-.31*	-.32	-.39*
<i>State Anxiety</i>			
Time since divorce	-.10	-.16	-.06
Frequency of father visits	NS ^b	NS	NS
SES	-.12	-.40*	+ .10
Family income	+ .20	+ .43*	+ .08
LES-Negative Events	+ .32*	+ .37	+ .30
CPQ	-.06	-.04	-.08
BSI-Global Severity	+ .11	+ .39*	-.13
SAS	+ .23	+ .45*	+ .03
SEI	-.32	-.36	-.28
<i>Trait Anxiety</i>			
Time since divorce	-.06	+ .22	-.24
Frequency of father visits	NS ^b	NS	NS
SES	-.11	-.32	+ .04
Family income	+ .07	+ .33	-.09
LES-Negative Events	+ .30*	+ .32	+ .29
CPQ	-.10	-.02	-.24
BSI-Global Severity	+ .04	+ .18	-.03
SAS	+ .02	+ .15	-.05
SEI	-.19	-.10	-.31

CBCL=Child Behavior Checklist; SES=Socioeconomic Status Index; LES=Life Experience Survey; CPQ=Coparenting Questionnaire; BSI=Brief Symptom Inventory; SAS=Social Adjustment Scale; SEI=Self-Esteem Inventory; CDI=Children's Depression Inventory.

^a Slightly reduced due to incomplete data.

^b Father visitation analyzed using ANOVA because it is a categorical variable.

* $p = .05$, ** $p = .01$, *** $p = .001$.

at first apparent. Most troubling is the fact that the strongest statistical associations are found between parents' self-reports of their adjustment and parents' reports of child adjustment. Though the same pattern holds true for correlations between parents' reports of their adjustment and children's self-reported adjustment measures (i.e. STAI, especially State anxiety, and CDI), these associations are less powerful. This is discussed in more detail below.

Multiple Regression Analyses

Eight separate forward stepwise multiple regression analyses, one for each child adjustment measure as the criterion variable, were performed for boys and a parallel set for girls. TABLE 4 contains the results for boys, and TABLE 5 those for girls. In examining these two tables, the most striking

finding is the total absence of overlap in predictors of boys' versus girls' adjustment. Irrespective of the nature or source of the adjustment measure, the predictors of boys' adjustment are entirely different from those of girls' adjustment.

The results shown in TABLE 4 support the parent adjustment hypothesis to some degree in that mothers' social adjustment (SAS) is a significant predictor for four of the eight child adjustment measures for boys. For three of these, it is the only predictor. However, the other two parent adjustment measures (BSI-Global Severity and SEI) do not enter into these equations at all. In addition, the narrowly operationalized version of the multiple life stress hypothesis also finds support in that two of the eight child outcome measures for boys are predicted by LES-Negative Change. None of the other hypotheses

Table 4
STEPWISE MULTIPLE REGRESSION ANALYSES FOR BOYS (N = 22)

MEASURE	PREDICTOR ^a	PARTIAL CORRELATION	R-SQUARED	SIGNIFICANCE ^b
CBCL				
Total	SAS	.54	.29	.05
Internalizing	LES-Negative Change	.62	.38	.01
Externalizing	SAS	.47	.23	.05
Aggression	SAS, Income	.54, .61	.55	.01
Depression	LES-Negative Change	.73	.53	.001
CDI				
	—	—	—	—
STAI				
State	SAS	.53	.28	.05
Trait	—	—	—	—

CBCL = Child Behavior Checklist; SAS = Social Adjustment Scale; LES = Life Experiences Survey; CDI = Children's Depression Inventory; STAI = State-Trait Anxiety Inventory.

^a Only predictors reaching statistical significance at or beyond .05 are reported. (If more than one predictor enters the equation, the first to enter is the first reported.)

^b Reported only for R-squared.

are supported. In fact, family income enters as a predictor in one instance (as the second predictor for CBCL-Aggression), but in an unexpected direction. As was true for the correlational analyses (see TABLE 3), household income is positively associated with aggressive problems for boys (i.e., the higher the family income the greater the difficulties with aggression).

The data analyses reported in TABLE 5 lend support exclusively to the parent adjustment hypothesis. Mothers' general level of emotional problems (BSI-Global Severity) is the sole predictor of girls' adjustment for four of the eight child adjustment measures. Mothers' self-esteem (SEI) predicts girls' ad-

justment on two additional measures. No other predictors enter into these equations.

DISCUSSION

The fact that subject families were recruited through the public schools (rather than from clinical settings), and that the description of this research project was focused on how families cope after divorce, should have resulted in a sample of reasonably well-adjusted youngsters and parents. According to our child adjustment measures, the girls in our sample were indeed average with respect to each of the five scales of the CBCL used here, and to the CDI and STAI. However, the boys in the

Table 5
STEPWISE MULTIPLE REGRESSION ANALYSES FOR GIRLS (N = 25)

MEASURE	PREDICTOR ^a	PARTIAL CORRELATION	R-SQUARED	SIGNIFICANCE ^b
CBCL				
Total	BSI-Global Severity	.48	.23	.05
Internalizing	BSI-Global Severity	.56	.31	.01
Externalizing	BSI-Global Severity	.41	.17	.05
Aggression	—	—	—	—
Depression	BSI-Global Severity	.59	.34	.01
CDI				
	SEI	-.54	.29	.01
STAI				
State	SEI	-.41	.17	.05
Trait	—	—	—	—

CBCL = Child Behavior Checklist; BSI = Brief Symptom Inventory; SDI = Children's Depression Inventory; SEI = Self Esteem Inventory; STAI = State-Trait Anxiety Inventory.

^a Only predictors reaching statistical significance at or beyond .05 are reported.

^b Reported only for R-squared.

sample, while not at all deviant on the self-report measures of adjustment (the STAI and CDI) were having significantly more difficulties according to their mothers, than norm group averages for the CBCL.

The sample may simply be representative of elementary school-age children whose parents have divorced. Previous research has indicated that girls in this period of development show few negative effects following divorce, and are largely indistinguishable from comparison groups of girls from nondivorced households, while elementary school-age boys manifest difficulties in a variety of adjustment areas, including aggressive behavior problems and depression (see *Zaslow [1988, 1989]* for a comprehensive review and analysis of these issues). To the extent that our study sample is indeed representative of Caucasian elementary school-age children of divorce, one can have confidence in generalizing these findings to such children.

It may also be the case that the mothers tend to be less tolerant of their sons' than of their daughters' behavior and thus may be inclined to pathologize boys. This could account for the discrepancy between mothers' reports and the self-reports of the boys in our sample with respect to their adjustment. On the other hand, latency-age boys may find it hard to report accurately on their own problems, while their mothers are able to see them more clearly. According to teacher reports and the behavioral observations of researchers, as well as maternal reports, boys of this age generally have more readily apparent difficulties than girls in the years following divorce, as has been well-documented (*Zaslow*).

With respect to the adjustment of the parents in our sample, the remarried mothers are as well-functioning as adults represented in normative samples. However, the single mothers in our sample appear to be considerably less well-adjusted when compared to norms. It is difficult to know whether these women are in fact suffering from emotional disturbances or are respond-

ing to these standardized questionnaires about adjustment in terms of their own high levels of divorce-related distress.

The correlations between predictor variables and the child outcome measures clearly favor the parent adjustment hypothesis for girls and for boys. By far the most powerful relationships are between the three parent adjustment measures (BSI-Global Severity, SAS, SEI) and the five CBCL scales (Total Problems, Internalizing, Externalizing, Aggression, Depression). Though there was a similar pattern of correlations for two of the three child self-report adjustment measures (CDI and STAI-State), this finding raises interesting methodological and conceptual questions.

One possibility is that mothers' reports of child adjustment, as captured by the CBCL scales, are partially attributions to the child of the mother's own difficulties rather than accurate perceptions of the youngster. This would account for the consistently higher correlations between parent adjustment measures and the maternal reports of child adjustment, compared to the children's own reports via the CDI and STAI. On the other hand, it is at least equally plausible, as noted earlier, that children of elementary school age are not particularly adept at observing their own problematic feelings and behavioral difficulties, and would tend to minimize them. This is commonly seen in clinical practice with elementary school-age youngsters.

Even assuming that the maternal reports of child adjustment are in large measure accurate, the correlations between mother and child adjustment do not tell us about the directionality of those relationships. Do mothers' problems result in less effective parenting and therefore in more difficulties in their children? Or do children's problems cause distress in mothers? Our data do not permit answers to these questions.

It is tempting to suggest resolution of these uncertainties by obtaining information about parent and child adjustment from extrafamilial sources. In fact, other investigators have

used teacher reports of child adjustment (*Furstenberg & Allison, 1985; Kinard & Reinherz, 1984*), as well as behavioral observations by researchers (*Hetherington, Cox, & Cox, 1979; Santrock & Warshak, 1979*). Unfortunately, there is no good reason to assume that teachers, who do not live with their charges and thus know them less intimately than do their parents, can render more veridical reports of child adjustment than can parents. Nor are the necessarily very few behavioral observations, compared to the multitude of possible observations in the classroom, at recess, in gym, in the neighborhood, and at home, accurate reflections of general child adjustment. What one gains by having an impartial reporter when utilizing teacher perceptions and observer ratings must be weighed against the fact that these sources have considerably less information, current and historical, about the child than does a parent.

As to independent assessments of parent adjustment, we are not familiar with research on children of divorce in which these have been made using standardized measures. In fact, attention to the psychological well-being of the parent is virtually absent in research into the potential effects of divorce on children. One notable exception to this has been the work of Wallerstein and Kelly (1980) and subsequent reports of the California Children of Divorce Project, directed by Wallerstein. In the context of their longitudinal investigation, Wallerstein and her colleagues routinely did clinical assessments of the parents, specifically of the parents' capacity to provide effective nurturance and limits for their children. Despite frequent criticisms of their use of clinical methods rather than of standardized research measures, the findings of the California Children of Divorce Project ring true to a great many clinicians and are used to guide many clinical interventions. Our study provides clear empirical support for those findings, although the methodological conundrums addressed earlier make our results less decisive than they might appear.

The multiple regression results also lend support to the parent adjustment hypothesis for boys and girls, again with the methodological caveats noted above. In addition, the multiple life stress hypothesis is supported for boys, though to a lesser degree. What is especially intriguing about these results is the split between girls and boys in the specific predictors of their adjustment. The statistically significant predictors for boys include maternal social adaptation and negative changes in the lives of mothers. (Family income enters in, to a lesser degree, in the opposite direction from that predicted.) The SAS measures specific role performance across a variety of domains, while the LES-Negative Change scale focuses on specific life events. In sum, both of these instruments focus on concrete behavior and events. For girls, the only statistically significant predictors are BSI-Global Severity and SEI. These measures primarily assess internal, affective states. It may be that boys are more responsive to concrete, observable aspects of their mother's adjustment, while girls are more attuned to the internal experiences and feelings of their mother.

Quite apart from the context of divorce, a general tendency of boys to focus on people's observable actions and characteristics, while girls are more likely to empathize with the internal states of another, has been found by many investigators of social cognition in children (see Hoffman [1977] for an extensive review of this literature). In addition, several researchers studying person perception have concluded that girls are more sensitive to the feelings of others, while boys focus more on observable actions and qualities (*Livesley & Bromley, 1973*). Our findings may be explained by these more general gender differences.

In assessing the reactions of children who were undergoing the painful reality of the London blitz, Freud and Burlingham (1973) concluded that youngsters did best when they could be with their mother during the bombing raids. In this wartime condition, children often had to cope with the pro-

longed absence (and at times with the death) of their father, sustained economic hardship, and the horrors wreaked by the German Luftwaffe. Physical destruction of homes, and the death of neighbors and relatives were commonplace. Yet the extent to which mothers could be on reasonably even keel emotionally, and could continue to provide their children with care and nurturance, was associated clinically with the emotional well-being of these children.

We propose that mothers' psychological adjustment may play a similar role in the face of stresses caused by divorce. When economic deprivation, interparental hostilities, and the burdens of single parenting take their toll on custodial mothers, children will tend to fare less well. However, when mothers are psychologically able to provide a loving, effective parent-child relationship, children will be buffered from the stresses divorce can engender and will tend to prosper developmentally.

The buffering role of the custodial parent has been largely neglected in the empirical research literature regarding the effects of divorce on children. When this potentially crucial factor is not considered, the various stresses (e.g., father absence, economic uncertainty, interparental hostility) tend to be associated with child mental health outcomes in research samples. We suggest that when parental adjustment and its effects on the existence of a developmentally facilitating parent-child relationship is taken into account, it will carry more predictive weight than the individual psychosocial stressors usually associated with divorce. These stressors may be mediated to a great degree through the custodial parent; to the extent that the custodial parent is coping well, the child will be protected from the vicissitudes of divorce. A major reason for the adverse effects of divorce on many children may be the fact that its stresses are mediated through the parent. To the extent that custodial parents are distressed by such divorce-related factors as economic hardship, interparental hostility, and the role of single parent with-

out help from the former spouse (from the child's view, visitation), the child will be negatively affected.

Although this view requires further research and clinical exploration, it suggests that a key point in intervention on behalf of children of divorce may be the custodial parent. Thus, supportive parental guidance, parenting support groups, and individual therapy for custodial parents may be among the most effective ways of helping children adjust to the stresses so commonly in evidence in the extended divorce process.

REFERENCES

- Achenbach, T.M., & Edelbrock, C.S. (1983). *Manual for the Child Behavior Checklist and Revised Child Behavior Profile*. New York: Queen City Printers.
- Ahrons, C. (1981). The continuing coparental relationship between divorced spouses. *American Journal of Orthopsychiatry*, *51*, 315-328.
- Biller, H.B. (1981). Father absence, divorce and personality development. In M.E. Lamb (Ed.), *The role of the father in child development* (2nd ed.). New York: John Wiley.
- Brandwein, R.A., Brown, C.A., & Fox, E.M. (1974). Women and children last: The social situation of divorced mothers and their families. *Journal of Marriage and the Family*, *36*, 498-514.
- Camara, K.A., & Resnick, G. (1988). Interparental conflict and cooperation: Factors moderating children's post-divorce adjustment. In E.M. Hetherington & J.D. Arasteh (Eds.), *Impact of divorce, single-parenting, and step-parenting on children* (pp. 169-195). Hillsdale, NJ: Lawrence Erlbaum.
- Derogatis, L., & Spencer, P. (1982). *The Brief Symptom Inventory (BSI)*. (Available from L. Derogatis, Johns Hopkins School of Medicine, Baltimore).
- Emery, R.E. (1982). Interparental conflict and the children of discord and divorce. *Psychological Bulletin*, *92*, 310-330.
- Freud, A., & Burlingham, D. (1973). *The writings of Anna Freud* (Vol. III, Reports 6, 12). New York: International Universities Press.
- Furstenberg, F.F., Jr., & Allison, P.D. (1985). *How marital dissolution affects children: Variations by age and sex*. Unpublished manuscript, University of Pennsylvania, Philadelphia.
- Furstenberg, F.F., Jr., Nord, C.W., Peterson, J.L., & Zill, N. (1983). The life course of children of divorce: Marital disruption and parental contact. *American Sociological Review*, *48*, 656-668.
- Guidubaldi, J., & Perry, J.D. (1984). Divorce, socioeconomic status, and children's cognitive-social competence at school entry. *American Journal of Orthopsychiatry*, *54*, 459-468.
- Guidubaldi, J., & Perry, J.D. (1985). Divorce and mental health sequelae for children: A two year follow-

- up of a nationwide sample. *Journal of the American Academy of Child Psychiatry*, 24, 531-537.
- Herzog, E., & Sudia, C.E. (1973). Children in fatherless families. In B.M. Caldwell & H.N. Ricciuti (Eds.), *Review of child development research* (Vol. 3). Chicago: University of Chicago Press.
- Hetherington, E.M. (1979). Divorce: A child's perspective. *American Psychologist*, 34, 851-858.
- Hetherington, E.M., Cox, M., & Cox, R. (1979). Play and social interaction in children following divorce. *Journal of Social Issues*, 35, 36-49.
- Hetherington, E.M., Cox, M., & Cox, R. (1985). Long-term effects of divorce and remarriage on the adjustment of children. *Journal of the American Academy of Child Psychiatry*, 24, 518-530.
- Hoffman, M.L. (1977). Sex differences in empathy and related behaviors. *Psychological Bulletin*, 84, 712-722.
- Hollingshead, A. (1972). *Four factor index of social status*. New Haven: Yale University, Department of Sociology.
- Holmes, T., & Rahe, R. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11, 213-218.
- Kalter, N. (1984). Conjoint mother-daughter treatment: A beginning phase of psychotherapy with adolescent daughters of divorce. *American Journal of Orthopsychiatry*, 54, 490-497.
- Kalter, N. (1987). Long-term effects of divorce on children: A developmental vulnerability model. *American Journal of Orthopsychiatry*, 57, 587-600.
- Kalter, N., & Rembar, J. (1981). The significance of a child's age at the time of parental divorce. *American Journal of Orthopsychiatry*, 51, 85-100.
- Kalter, N., Riemer, B., Brickman, A., & Chen, J.W. (1985). Implications of divorce for female development. *Journal of the American Academy of Child Psychiatry*, 24, 538-544.
- Kinard, E.M., & Reinherz, H. (1984). Marital disruption: Effects on behavioral and emotional functioning in children. *Journal of Family Issues*, 5, 90-115.
- Kovacs, M. (1983). *The Children's Depression Inventory: A self-rated depression scale of school aged youngsters*. Unpublished manuscript, University of Pittsburgh.
- Livesley, W.J., & Bromley, D.B. (1973). *Person perception in childhood and adolescence*. London: John Wiley.
- Ollendick, T., & Herson, M. (Eds.). (1984). *Child behavioral assessment: Principles and procedures*. New York: Pergamon Press.
- Peterson, J.L., & Zill, N. (1983). *Marital disruption, parent/child relationships and behavior problems in children*. Paper presented to the Society for Research in Child Development, Detroit.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton: Princeton University Press.
- Rutter, M. (1980). Protective factors in children's responses to stress and disadvantage. In M.W. Kent & J.E. Roff (Eds.), *Primary prevention of psychopathology: III. Promoting social competence and coping in children* (pp. 49-74). Hanover, NH: University Press of New England.
- Santrock, J.W., & Warshak, R.A. (1979). Father custody and social development in boys and girls. *Journal of Social Issues*, 35, 112-125.
- Sarason, I., Johnson, J., & Siegel, J. (1978). Assessing the impact of life changes: Development of the life experiences survey. *Journal of Consulting and Clinical Psychology*, 46, 932-946.
- Silber, E., & Tippett, J. (1965). Self-esteem: Clinical assessment and measurement validation. *Psychological Reports*, 16, 1017-1071.
- Spielberger, C.D. (1973). *STAIC preliminary manual*. Palo Alto, CA: Consulting Psychological Press.
- Steinman, S.B., Zimmelman, S.E., & Knoblauch, T.M. (1985). A study of parents who sought joint custody following divorce: Who reaches agreement and sustains joint custody and who returns to court. *Journal of the American Academy of Child Psychiatry*, 24, 554-562.
- Stolberg, A., & Garrison, K. (1985). Evaluating a primary prevention program for children of divorce. *American Journal of Community Psychology*, 13, 111-124.
- Wallerstein, J.S. (1985). Children of divorce: Preliminary report of a 10-year follow-up of older children and adolescents. *Journal of the American Academy of Child Psychiatry*, 24, 545-553.
- Wallerstein, J.S., Corbin, S.B., & Lewis, J.M. (1988). Children of divorce: A 10-year study. In E.M. Hetherington & J. Arasteh (Eds.), *Impact of divorce, single-parenting and step-parenting on children* (pp. 198-214). Hillsdale, NJ: Lawrence Erlbaum.
- Wallerstein, J.S., & Kelly, J.B. (1980). *Surviving the breakup: How children and parents cope with divorce*. New York: Basic Books.
- Weissman, M., & Bothwell, S. (1976). Assessment of social adjustment by patient self-report. *Archives of General Psychiatry*, 33, 1111-1115.
- Weissman, M., Prusoff, B., Thompson, D., Harding, P., & Myers, J. (1978). Social adjustment by self-report in a community sample and in psychiatric outpatients. *Journal of Nervous and Mental Disease*, 166, 317-326.
- Zaslow, M.J. (1988). Sex differences in children's response to parental divorce: 1. Research methodology and post-divorce family forums. *American Journal of Orthopsychiatry*, 58, 355-378.
- Zaslow, M.J. (1989). Sex differences in children's response to parental divorce: 2. Samples, variables, ages, and sources. *American Journal of Orthopsychiatry*, 59, 118-141.