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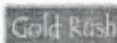
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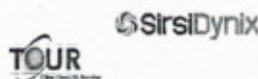
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Relocation, Parent Conflict, and Domestic Violence: Independent Risk Factors for Children of Divorce

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SUMMARY. We performed several re-analyses of data presented in Braver, Ellman, and Fabricius (2003) to examine whether their findings that parental relocation after divorce was associated with negative long-term outcomes in their grown children could be due to pre-existing levels of parent conflict and domestic violence. Conflict and violence might have caused parents to relocate, and might have caused the negative outcomes. Evidence from analyses of covariance, controlling for levels of conflict and violence (as reported by the grown children), con-

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firmed that relocation was associated with negative outcomes over and above the associations of conflict and violence with negative outcomes. These new findings support the original recommendation of Braver et al. that "courts should give greater weight to the child's separate interests in deciding such [relocation] cases" (p. 206). Additionally, there was little indication that moves reduced levels of conflict, but that finding is tentative. doi:10.1300/J190v03n03_02 [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <http://www.HaworthPress.com> © 2006 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. Divorce, relocation, custody, parental conflict, domestic violence

A study on relocation after divorce that we recently published (Braver, Ellman & Fabricius, 2003) has attracted considerable attention. Our results disclosed that young adults, one of whose divorced parents had moved more than an hour's drive away from what used to be the family home, scored significantly worse on 11 of 14 variables than those whose parents had not moved. Some of the negative associations were observed if the move separated the child from the father, others were observed if the move separated the child from the mother. Generally, it did not seem to matter how the child was separated from the parent; for example, similar results occurred if the child was separated from the father either by moving away with the mother, or by the father moving away alone. Importantly, these were long-term outcomes because the data came from young adults. In attempting to provide policy makers and courts with some guidance in applying the findings, we concluded:

courts would be mistaken to assume, in the absence of contrary evidence, that children benefit from moving with their custodial parent to a new location that is distant from their other parent, *whenever* the custodial parent wishes to make the move. Putting the point in legal terminology, the burden of persuasion in relocation disputes, on the question of whether the move is in the child's interests, should probably lie with the custodial parent who seeks to relocate, rather than with the objecting parent. (p. 215)

The timing of the editorial processing and eventual publication of this article increased dramatically the attention paid to it, because the

beginning of the process coincided with the California Supreme Court's decision to consider a case, *In re the Marriage of LaMusga*, that could potentially overturn their earlier controversial but influential relocation policy as stated in 1996 (*In re the Marriage of Burgess*, 1996). As ours was the first empirical study to directly explore the effects of relocation on children, it was natural that a link would be made between our findings and this important forthcoming policy declaration with the same focus. Soon after publication, Google reported 129 hits in a search requiring both the keywords "Braver" and "LaMusga," and the study was cited in numerous editorials, media articles, and in Amicus Curia Briefs to the CA Supreme Court on both sides of the *LaMusga* case.¹

Amici Curiae briefs filed by Dr. Judith Wallerstein et al. (2003), Dr. Carol S. Bruch (2002), and one of the Mother's Briefs (Navarro, 2003) leveled several criticisms of our study. Our goals in this paper are to respond to these criticisms and present new data to test our original findings.²

One criticism in all three Briefs focused on the variables on which we did not find differences. Wallerstein et al. stated in their Brief (p. 18) that "on all of the major mental health measures, including personal and emotional adjustment and general life satisfaction, there were *no differences* between those who remained in the same community with both parents and those who moved with the custodial mother." Mother's Brief (p. 18), quoting a newspaper article by Norval Glenn and David Blankenhorn, stated that "In the most crucial areas—friendship and dating behavior, substance abuse, and general life satisfaction—there were no significant differences at all between the two groups." While it is true that we did not find differences on those variables, the authors of the Briefs give no rationale for why those variables are more "crucial" or "major" than the other variables on which we *did* find differences. Specifically, those who moved with their mothers (representing the great majority of child relocations) fared worse than those whose parents did not move in terms of (a) their self-reported global health in young adulthood, (b) lingering inner turmoil and stress from their parents' divorce, (c) current parent conflict, (d) current relationships with fathers, and (e) amount of college financial support received from parents. These are five major and crucial variables. Parent conflict, for example, has well-known negative effects on children, and children who are less close to their fathers have worse behavioral and emotional adjustment, and lower school achievement (Amato & Gilbreth, 1999). We summarized our findings on physical health as follows:

The data also suggest potentially important physical health implications . . . high levels of family conflict have been associated with poorer physical health in adolescents (Mechanic & Hansell, 1989). Other research suggests that childhood stress may have long-lasting influences on the development of physiological stress response systems important in long-term disease susceptibility (DiPietro, 2000). Poor quality parent-child relationships have been associated with higher blood pressure in undergraduate students (Luecken, 1998), and physical health status in middle-age adults (Russek, Schwartz, Bell & Baldwin, 1998). Finally, self-reported global health has been found to be a remarkably consistent predictor of premature mortality, even when controlling for numerous specific health indicators known to predict mortality (Idler & Benyamini, 1997). Combined, it is reasonable to project that even greater and more serious deficits might be found in children of relocating parents the longer the term of the follow-up.

Bruch's Brief is the only one of the three to acknowledge to the California Supreme Court that we found differences on any of these variables, but she mentions only two: "The only important differences identified are those that report distress from the divorce . . . [and] overall physical health" (pp. 3-4). Bruch gives no rationale for why parent conflict, relationship with father, and financial support from parents are not important. She says that we provide no information about how serious these differences are, but the above long quote shows that we took pains to point readers to documentation in the health literature of the long-term implications of most of our findings.

The second criticism was that we "virtually ignored" the fact that "those children in their fathers' custody showed a higher level of distress" (Wallerstein, 2003, pp. 17-18). The implication seems to be that we should have interpreted that to mean that however bad it might be for mothers to move with the child, it would be even worse to deny her permission and instead turn the children over to the father's custody. While it is true that such mean differences were displayed in our Table 1, our data did not permit us to distinguish whether children in these father custody situations had *changed* custody due to courts' denial of the mothers' requests to move with the children, or had simply remained in pre-established father custody when the non-custodial mother moved. These father custody situations are rare (8% for "remaining with dad when mother moved," and 4% for "moving with dad"), and when such a status occurs, it frequently is due to the mother abandoning the child, or

the mother being found unfit. These circumstances would commonly cause long-term distress in the child regardless of moving.

Bruch (2002) made the related argument that the proper comparison group should have been those parents who sought permission to move away with the child but were denied permission by the courts. However, even if a study of such contested cases found that outcomes were worse for those in which permission was denied than those in which it was granted, that would not warrant a presumption in favor of permitting moves in all cases (the position argued in these Briefs), just as we did not argue that our finding of negative outcomes would warrant a presumption in favor of denying permission to relocate the child in all cases. Research can only inform courts of potential risks, while it is up to them to assess the likelihood, degree, and type of harm in any particular case. The most likely scenario in which denying permission to move would be harmful to children is when children are being exposed to domestic violence, intense conflict, or other hardship conditions. In these cases courts have to balance the types of negative outcomes our study found were associated with separation from a parent, and the types likely to arise from staying in dangerous or difficult situations.

A third criticism in all three Briefs is that our study lacked *causal evidence* (Wallerstein: ". . . while failing to recognize the equally likely possibility that relocation was a *consequence* of a stressful and unhappy environment rather than a *cause* of it," p. 17; Bruch: "It is just as likely that relocation is a consequence of a stressful and unhappy or dysfunctional living arrangement as a cause of it," p. 4; Mother's Brief: "They did not report . . . the background information on the students that would permit even informed guesses about the reasons for the differences between the two groups" p. 18). We spent a great deal of the Discussion (about 15% of the entire article, far more than is typical) in a section labeled "Limitations", where we discussed at length various causal scenarios. For example, we wrote:

Although these data are far more on point in evaluating relocation policies than any previously considered by courts, they are of course correlational, not causal. So whereas the data tell us that a variety of poor outcomes are associated with post-divorce parental moves, they cannot establish with anything near certainty that the moves are a contributing cause. It is certainly possible, if not likely, for example, that various pre-existing (or self selection) factors are responsible *both* for the parents' moving and for the child's diminished outcomes. Pre-existing factors that could plau-

sibly play this role include a low level of functioning for one or both parents, the inability of one or both parents to put the child's needs ahead of his or her own, and high levels of pre-move conflict between the parents. . . . (Braver et al., 2003; pp. 214-215)

We regard this "causal direction" question as potentially the most compelling criticism, and it is the one we take up in the remainder of the present paper. In cases where random assignment to condition (i.e., move vs. stay) is impossible, evidence about causal processes that is suggestive but not conclusive may be provided by gathering data about each of the various alternative causal variables, and statistically evaluating each. The Briefs suggest several alternative causal variables. Both Wallerstein's and Mother's Briefs suggest that children whose parents moved were younger at the time of the divorce, and that could be why they were having problems as young adults, although neither cites evidence that divorce has more negative long-term outcomes for younger children. Mother's Brief suggests that parents often move because of remarriage, and that remarriage could lead to less child support which could cause the negative outcomes. In the case of a father's remarriage (and move) the authors suggest that he will be less likely to pay child support, but they offer no rationale for why a mother's remarriage (and move) will result in her receiving less. Wallerstein suggests that parents may move because they have weaker ties to the community and less financial resources, but she offers no rationale for why those circumstances would not have been rectified by the move, and why these pre-move circumstances would result in such long-term outcomes.

Perhaps the most important alternative cause identified by both ourselves and our critics is the relationship between the parents. A poor relationship could predispose parents to relocate and predispose children to long-term negative outcomes. In the present paper, we use the original data presented in Braver et al. (2003) supplemented with eleven variables, not reported in that paper, measuring parental conflict and domestic violence. Two of these variables asked students to report how often they had witnessed either parent "hitting, slapping, or punching" the other *after* the divorce. By coincidence, half of the students answered nine additional questions on parental conflict and domestic violence. These questions were part of another project, and the surveys that contained these questions were randomly distributed to half the students. These questions included frequency and severity of parental conflict at four time periods *before, during* and *after* the divorce, and frequency of domestic violence with *time period left unspecified*.

We addressed the following three questions in these new analyses: First, do the moveaway groups have higher reported levels of parent conflict and domestic violence than the non-moveaway group, which might explain the negative long-term outcomes in the moveaway groups? Second, do the moveaway groups show greater improvement over time in parent conflict than the non-moveaway group, which might indicate that moves were beneficial to both parents and children in reducing conflict? Finally, if we statistically control for conflict and violence, do the negative long-term outcomes persist in the moveaway groups?

In this study we examine only three of the original five groups; namely, the comparison group whose parents did not move ("non-moveaway," 39% of the sample), and the two moveaway groups in which the child was separated from the father, those who moved away with their mothers ("mother moveaway," 25%), and those whose fathers moved away without them ("father moveaway," 26%). The other two groups, in which moves separated the child from the mother, became too small to examine when we included only the half of the sample on which conflict and violence data were available.

METHODS

Respondents and Procedure

As described more fully in Braver et al. (2003), surveys were administered during class periods devoted to research to 602 undergraduate students from divorced families enrolled in a large southwestern state university. Respondents indicated whether either of their parents ever moved more than an hour's drive away from what used to be the family home. Five groups resulted: neither parent moved, the mother moved first and the respondent accompanied her; the father moved first but the respondent stayed with the mother, the father moved first and the respondent accompanied him, and the mother moved first but the respondent stayed with the father. Respondents also indicated their current age, how old they were when their parents permanently separated, and how many years altogether their parents lived more than an hour's drive apart.

Conflict Measures

Four questions asked, "How frequently was there conflict between your parents?" in the following time periods: in the year or two years

before the final separation, immediately after the final separation, during the first two years after the final separation, and in the next three years after the final separation. The response scale ranged from 0 ("never"), 1 ("rarely"), 2 ("occasionally"), to 8 ("almost always"), with 9 indicating "I don't know or I can't remember." Four questions asked "How *severe* was the conflict between your parents?" during the same time periods, with the response scale from 0 ("not applicable, there was no conflict during this time period"), 1 ("very mild"), 2 ("mild"), 3 ("mild to moderate"), to 8 ("very severe, with violence"), with 9 indicating "I don't know or I can't remember." Note that these four questions about severity of conflict also capture instances of domestic violence (response category 8) before, during, and after the divorce. All eight questions were asked of half of the participants, randomly selected.

Fabricius and Luecken (2007) provided evidence that students' reports of parent conflict were acceptably reliable and valid. In that study, 93 students (different students than the ones assessed here) provided retest data 10 months later on the same four parent conflict frequency questions used here. The test-retest correlations were all significant and between .68 and .75, and the only significant difference in means was a decrease over the 10-month interval in reports of conflict before the divorce. As a check on validity, Fabricius and Luecken compared responses of matched pairs of students and parents (22 fathers and 29 mothers). Students' and parents' reports of overall parent conflict were significantly correlated ($r = .63, p < .001$) and not significantly different in terms of mean levels.

Domestic Violence Measures

The same half of the participants answered the following question: "To your knowledge, how often did physical violence occur between your parents?" The time period for this question (e.g., pre- or post-divorce) was left unspecified, thus this question captures instances of witnessed domestic violence that occurred before, during, or after the divorce. The response scale was the same one as above for frequency of conflict. For clarity, this variable will be referred to as the "domestic violence ever" variable.

All participants answered two more domestic violence questions focused on the period after the divorce, "While you were growing up after the divorce, how many times did you witness your [dad/mom] hitting, slapping, or punching your [mother/father]?" These variables will be re-

ferred to as the "domestic violence after" variables. The response scale was 0 ("never"), 1 ("once"), 2 ("two or three times"), 3 ("a few times per month"), 4 ("once a week"), 5 ("a few times per week"), 6 ("daily or almost daily"), 7 ("more than I can count"). Pasley and Braver (2004) reported that college students', mothers', and fathers' answers to this question regarding fathers' violence all inter-correlated between .39 and .48, but that mothers reported higher mean levels of father violence than fathers or students, whose mean levels were quite similar.

Outcome Measures

We re-analyzed all 14 of the original outcome measures. In Braver et al. (2003), six of the 14 outcome measures had shown deficits associated with the two moveaway groups that we examine in this paper; namely, those in which the child was separated from the father. These included four deficits associated with both the mother moveaway and father moveaway groups (total parental contributions to college expenses, inner turmoil and distress from the divorce, relationship with father ["dad good supporter"],³ and how well the parents currently get along with each other). Deficits in students' global health were associated only with the mother moveaway group, and increased worry about college expenses was associated only with the father moveaway group. Below we present shortened descriptions of these six outcome measures.

Parental contribution to college expenses was assessed by combining an item for each parent that asked "How much money is your [mother's/father's] household (including [her/his] new [husband/wife] or live-in partner or [boy/girl]friend, if any) contributing to your total college expenses (tuition, books, room and board, fees, etc.) per year?" The potential responses included 0, 1-8, which represented \$1,000 increments and 9, which represented "more than \$8,000."

We included four of the original 38 items from the Painful Feelings About Divorce scale (Laumann-Billings & Emery, 2000) to assess inner turmoil and distress from divorce, ("I probably would be a different person if my parents had not gotten divorced," "My parents' divorce still causes struggles for me," "I had a harder childhood than most people" and "My childhood was cut short"). These items were asked with a 0 (strongly disagree) to 4 (strongly agree) response format used in the original.

The student's current relationship with father was assessed with two 0 ("not at all") to 8 ("extremely") items each, devised specially for this

purpose, "To what extent is your father really there for you when you need him to be?" and "To what extent do you feel your father is a good role model for you?"

A single item "How well do your parents get along?" on a 0 ("not at all well") to 8 ("extremely well") format, was designed especially for this investigation.

We used a 1-item measure of global health, "Would you say that in general your health is" with responses of 0 = Poor, 1 = Fair, 2 = Good, 3 = Very Good, and 4 = Excellent. Perceived global health, as measured by single items such as this one, has been shown to be related to physical health and premature mortality (e.g., Idler & Benyamini, 1997).

A single item assessed worry about college expenses, "I worry a lot about my college expenses" with a 0 (applies to me very closely) to 8 (doesn't apply to me at all) response format.

RESULTS

At the time of their parents' separation, students in the non-moveaway group were older (mean age = 10.5) than those in the father moveaway group (7.9), who in turn were older than those in the mother moveaway group (5.4; all p 's < .01). Relatedly, those in the mother moveaway group spent more years with their parents living an hour's drive apart (10.3 years) than those in the father moveaway group (8.1; p < .01).

Levels of Parent Conflict and Domestic Violence, and Rates of Decline

Students reported on the frequency and severity of parent conflict two years before the final separation, immediately after, during the first two years post-separation, and during the next three years. Those who were older at the time of the separation tended to report higher levels of conflict. Five of the correlations between these eight conflict variables and age at separation were significant (r 's = .15 to .24, p 's < .05). Number of years spent with their parents living an hour's drive apart did not relate to reports of conflict. Consequently, we controlled for age at separation when testing whether the three groups (non-moveaway, mother moveaway, father moveaway) differed in levels of conflict. A 3 (group) \times 4 (time period) repeated measures ANOVA on frequency of conflict with age at separation as a covariate revealed a statistically reli-

able decrease in conflict over time ($F(3, 414) = 7.03$, $p < .001$), a marginally significant difference among the three groups ($F(2, 138) = 2.47$, $p = .09$), and no difference in the rates with which the groups improved over time ($F(6, 414) = .79$). A similar analysis of severity of conflict revealed marginally significant decreases in severity over time ($F(3, 417) = 2.27$, $p = .08$) and among the three groups ($F(2, 139) = 3.03$, $p = .052$), and no difference in the rates with which the groups improved over time ($F(6, 417) = .98$). Figures 1 and 2 show the estimated marginal means for frequency and severity of conflict, adjusted for age at separation. These results suggest somewhat higher levels of parent conflict, as experienced and recalled by the students themselves, in the mother moveaway group. The results also suggest that moving away in either group did not lead to any steeper decline in conflict than the "natural" decline in the non-moveaway group.

We explored whether moving might have led to a decline in conflict in a more precise analysis. We first calculated, for each student, when the move occurred in relation to when the parents separated, and catego-

FIGURE 1. Reported Frequency of Parent Conflict During Four Time Periods by Moveaway Status, Controlling for Age at Separation (0 = none, 1 = rarely, 2 = occasionally, 3 = some of the time, 4 = moderate, 5 = substantial, 6 = lot of time)

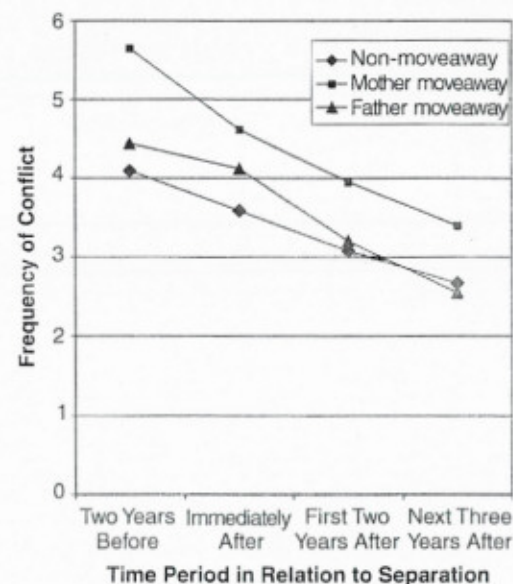
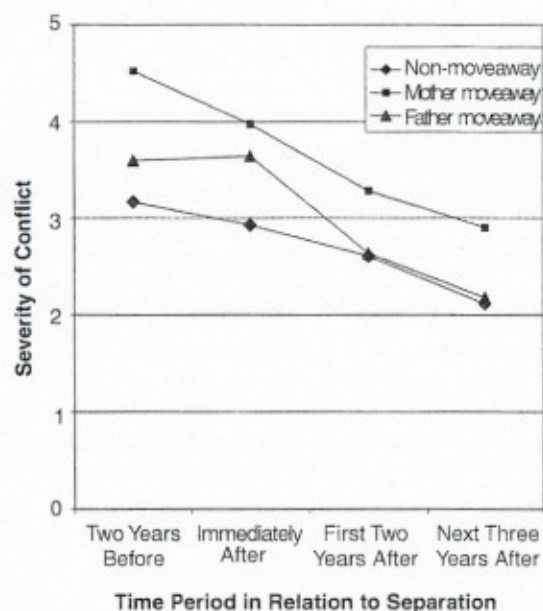


FIGURE 2. Reported Severity of Parent Conflict During Four Time Periods by Moveaway Status, Controlling for Age at Separation (0 = none, 1 = very mild, 2 = mild, 3 = mild to moderate, 4 = moderate, 5 = moderate to severe)



rized students into four groups depending on whether the move occurred (a) less than six months after the separation, (b) six months to two years after the separation, (c) during the next three years after the separation, or (d) after that. We then calculated conflict frequency and severity scores for each student's time periods before the move versus all time periods after the move. For example, for students in category (a), their frequency score before the move was the variable referring to frequency of conflict in "the two years before the final separation," and their frequency score after the move was the average of the three variables referring to frequency of conflict in the later time periods.⁴ In this way we obtained more precise measures of the frequency and severity of conflict before and after the move, and we looked separately at the two moveaway groups, controlling for age at separation. There was no evidence of a decline in either frequency or severity of conflict in either group after the move (p 's = .15 to .88).

Regarding domestic violence, Table 1 presents findings on our measures of frequency of physical violence with time period left unspeci-

TABLE 1. Means of the Two Domestic Violence Measures and Proportions of Students Reporting Any Physical Violence Between Parents

Moveaway Status	Domestic Violence Ever		Domestic Violence After	
	Mean*	Proportion	Mean**	Proportion
Non-moveaway	.42 ^a	.19 ^a	.17	.06 ^a
Mother moveaway	1.06 ^b	.42 ^b	.29	.16 ^b
Father moveaway	.78 ^{a,b}	.27 ^a	.15	.07 ^a

* Scale ranged from 0 = "never," 1 = "rarely," to 8 = "almost always."

** Sum of two scales (father hitting mother and mother hitting father) where each scale ranged from 0 = "never," 1 = "once," to 7 = "more than I can count."

Note: Means with different superscripts are significantly different at $p < .05$.

fied ("domestic violence ever"), and frequency of witnessing one parent "hitting, slapping or punching" the other after the divorce ("domestic violence after"). Age at separation and years spent with parents residing an hour apart were unrelated to any of these variables. Regarding "domestic violence ever," when mothers moved students reported statistically significantly more frequent physical violence ($M = 1.06$) than when neither parent moved (.42). When fathers moved, students reported an intermediate level of physical violence (.78). In all three groups the average frequencies were about 1 ("rarely") or less on a scale that ranged from 0 ("never") to 8 ("almost always"). Also shown are the proportions of families in which students reported any occurrence of physical violence. This was defined as any report other than "never." When mothers moved away, significantly more students (42%) reported there had been some occurrence of violence than when fathers moved away (27%) or when neither parent moved (19%).

Regarding "domestic violence after," we summed the responses for dad hitting mom and mom hitting dad to obtain an indication of how often, in total, students had witnessed domestic violence after the divorce. Table 1 shows that although the rate appeared higher when mothers moved (.29) than when neither parent moved (.17) or when father moved (.15), this difference was not statistically significant, $F(2, 520) = 1.40, p = .25$.⁵ All three summed frequencies were substantially less than 1 ("once") on a scale that ranged from 0 ("never"), 1 ("once"), 2 ("two or three times"), to 7 ("more than I can count"). However, the proportion of families in which students reported any occurrence of violence after the divorce (i.e., any report other than "never") from either parent was significantly higher in the mother moveaway group. Table 1

shows that when mothers moved away, 16% of the students reported there had been some occurrence of violence after the divorce (13% reported their father had hit their mother, and 6% reported their mother had hit their father), when fathers moved away 7% reported some violence (5% and 3%, respectively), and when neither parent moved 6% reported some violence (3% and 5%, respectively).

Controlling for Conflict and Violence

In order to statistically control for conflict and violence, we re-analyzed all 14 of the original outcome measures by including as covariates all of the conflict and domestic violence variables (i.e., the mean of the standardized scores for frequency of conflict in whichever time periods the student provided data, the mean of the standardized scores for severity of conflict in whichever time periods the student provided data, frequency of domestic violence ever, frequency of father hitting mother after the divorce, and frequency of mother hitting father after the divorce). We also included students' age at separation and number of years during which parents lived an hour's drive apart as covariates.

Expectedly, none of the eight outcome measures that originally did not show deficits in the mother or father moveaway groups now showed deficits in the re-analyses. We focus below on the remaining six. Table 2 shows the results of the re-analyses of these six variables. In three of the cases (how well the parents currently get along with each other, the students' inner turmoil and distress from the divorce, and their relationships with their fathers), the effect of moveaway status remained significant. Post-hoc tests (two-tailed) showed that in each case students whose mothers had moved away with them, as well as those whose fathers had moved away without them, showed significantly more negative outcomes than those whose parents had not moved. These findings replicate our original findings. In the other three cases (students' global health, parental contributions to college expenses, and students' worry about college expenses), the effect of moveaway status was no longer significant. Also shown in Table 2 are the significant associations that the covariates (conflict, violence, age at separation, years apart) had with each of the outcome measures. Severity of earlier conflict was associated with parents currently not getting along. "Domestic violence ever" was associated with poorer relationships with fathers and lower college contributions. Father hitting mother after the divorce was associated with greater inner turmoil and distress, poorer relationships with fathers, and more worry about college expenses. Mother hitting father

TABLE 2. Results of Analyses of Covariance on Student Outcomes and Estimated Marginal Means by Moveaway Status

Factors	Outcomes					
	Parents get along	Inner turmoil and distress	Relationship with father	Global health	College support	Worry about expenses
Covariates						
Parent conflict frequency	ns	ns	ns	ns	ns	ns
severity	** (.044)	ns	ns	ns	ns	ns
Violence ever	ns	ns	** (.050)	ns	* (.032)	ns
Dad hit mom after	ns	* (.035)	* (.030)	ns	ns	+ (.025)
Mom hit dad after	ns	+ (.025)	ns	ns	ns	ns
Age at separation	ns	** (.038)	ns	ns	ns	ns
Years parents apart	ns	ns	ns	ns	ns	ns
Moveaway status	*** (.090)	*** (.083)	* (.045)	ns	ns	ns
Non-moveaway	4.31 ^a	1.54 ^a	4.68 ^a	2.87	\$5839	3.65
Mother moveaway	2.95 ^b	2.28 ^b	3.11 ^b	2.74	\$4978	4.80
Father moveaway	2.33 ^b	2.00 ^b	3.32 ^b	2.87	\$5552	4.24

+ $p < .06$ * $p < .05$ ** $p < .01$

Note: Values in parentheses are measures of effect sizes (partial η^2).

Note: For college support additional covariates included mother's and father's standard of living, tuition type (in-state versus out-of-state), and legal custody (mother sole versus joint).

Note: Means with different superscripts are significantly different at $p < .05$.

after the divorce was also associated with greater inner turmoil and distress. Finally, the older students were at the time of the separation, the greater inner turmoil and distress they currently experienced over their parents' divorce.

Also shown in Table 2 are measures of effect sizes ("partial eta squared") for each of the significant associations. These measures tell us how much of the total variability is attributable to that factor. Moveaway status accounts for twice as much variability (9%) in parents getting along than does the only other significant factor, severity of conflict (4.4%). The same is true for students' inner turmoil and distress over their parents' divorces, where moveaway status accounts for 8.3% of the variability, and age at separation and each parent hitting the other after the divorce account for less than 4% each. Moveaway status accounts for 4.5% of the variability in students' relationships with their fathers, which is similar to that accounted for by "domestic violence ever" (5%) and father hitting mother after the divorce (3%).

DISCUSSION

What is new in these findings is that over and above the effects associated with parent conflict and domestic violence, parental relocation after divorce itself appears to additionally negatively impact children's long-term relationships with their fathers, their adjustment to their parents' divorce, and their ongoing experience of their parents' relationship. These new findings of course do not prove that moves caused these outcomes, but they do eliminate the alternate possibility, cited by our critics and first raised by ourselves in our original report, that the outcomes were *only* due to higher rates of parent conflict in the moveaway families.

As we found in our original study, when either parent moved away and separated the child from the father, then years later when children had reached young adulthood they experienced poorer relationships with their fathers, they suffered greater inner turmoil and distress about the divorce, and they experienced less amicable and cooperative relations between their parents. Analyses of covariance controlling for conflict and violence showed that these negative long-term outcomes could not be completely accounted for by exposure to parent conflict or domestic violence before, during, or after the divorce. The analyses of covariance did detect effects specifically associated with conflict and violence. These included the following: (a) the parents' ability to present a cooperative relationship to their grown children decreased with severity of conflict between the parents in the period before and up to five years after the divorce, (b) young adults' inner turmoil and distress over the divorce increased with severity of parent conflict, and with domestic violence from either parent toward the other after the divorce, and (c) young adults' relationships with their fathers suffered with domestic violence ever and specifically with violence directed toward the mother after the divorce. These findings on conflict and domestic violence make intuitive sense. But the current findings also make it clear that these same three outcomes are also associated with moves by either parent that separate child from father. In fact, the measures of effect sizes indicate that moves were either stronger indicators of these negative outcomes than parent conflict and domestic violence, or equally strong indicators.

It is notable that the effects associated with moves were strong enough to be detectable even after the sample was cut in half (because most of the conflict and violence data was available for only half the subjects). Another indication that the effects were strong is that we de-

tected them even though we measured the outcomes (relationship with dad, distress, parents getting along) with vastly shortened scales of only one or two items each. Longer, reliable scales generally make effects easier to detect.

Three of the six outcomes (college support, physical health, and worry about college expenses) were not associated with moves in these new analyses. However, the amounts of college support were in the same direction as in our original analyses, with those whose mothers had moved away with them receiving the least support. Our one-item measure of global health no longer related to moves after removing the effect associated with severity of parent conflict. But in a new study (Fabricius & Luecken, 2007), in which we measured health via self-reports of somatic symptoms in addition to global health, we found relationships between health and time with father. We did not assess moves, but instead time spent with father after divorce, which are highly related. The more time students had spent with their fathers, the better their relationships were with their fathers, and better father-child relationships in turn predicted better health in young adulthood. This was over and above any effects associated with parent conflict, because we controlled for conflict (although not violence) as we did here. These new findings suggest that moving away may affect children's health indirectly, by first reducing their time with father, which negatively affects their relationships with their fathers, which in turn negatively affects their health. New findings by Kraft and Luecken (2005) are beginning to reveal the physiological link by which time with father can impact physical health. These researchers found that less time spent with fathers after divorce predicted dysregulated physiological stress responses in young adults. We will test specific indirect pathways between parental relocation and health in future studies.

Implications for Child Custody

Relocation scenarios require policy makers and courts to consider the interests of three stakeholders, the child and the two parents. Our findings suggest that moves are a risk factor for children, over and above the risks associated with parent conflict and domestic violence. In addition, we did not find clear evidence that moves benefited children by reducing the levels of parent conflict from what they would have been had the move not occurred, although more definitive research is needed on this issue. There were no group differences in rates at which frequency or severity of conflict declined over time; instead, on both measures, con-

flict decreased similarly in all three groups. Using a more precise measure that looked at conflict before and after the move for each individual, we found no decreases associated with the move. Some caution is called for before accepting this latter finding, however, because of the small numbers of families (between 20 and 40) with available data to compare frequency and severity of conflict before and after the move.

Moves that separate fathers and children are a risk factor for fathers also, to the extent that children's relationships with fathers are damaged by the moves. Findings from recent studies (Furstenberg, Hoffman & Shrestha, 1995; Lye, Klepinger, Hyle, & Nelson, 1995) suggest that damaged father-child relationships after divorce persist as fathers grow older, and translate into diminished caring from grown children. Specifically, these studies show that many young to middle-aged adults have substantially weakened relationships with their divorced fathers, as measured by time spent together as adults, quality of the relationship, and support given and received in the form of intergenerational transfers of time and money.

Moving away may benefit mothers in cases of domestic violence, and in fact our data suggest that many moves by mothers may have been motivated by domestic violence concerns (see also Newmark, Harrell, & Salem, 1995). Students reported that domestic violence occurred at some point in 42% of the families in which mothers moved with the child, which broke down to 15% of students saying it occurred "rarely," 11% "occasionally," 9% "some of the time," and 8% "a moderate amount of the time" or higher. Similarly, there was a higher percentage of families (16%) in which students reported some domestic violence after the divorce in the mother moveaway group (13% reported their father had hit their mother, and 6% reported their mother had hit their father). Finally, there were marginally significant trends for frequency and severity of parent conflict to also be higher in the mother moveaway group. While domestic violence and conflict might partially account for mothers' decisions to move, and while the present results show they also partially account for young adults' continued distress over the divorce and worsened relationships with their fathers, they do not account for all of the negative effects associated with moves. The decision to move itself brings added risks, as our data have shown, and in contested cases it appears that courts must try to balance the potential benefits and risks of relocation.

We do not offer this study as a final answer to the issue of whether preexisting conditions in families in which a parent moves away after

divorce could explain the long-term negative outcomes of children in those families. Rather, researchers should address these problems more systematically, with larger more representative samples, and with more precisely targeted measures in longitudinal (rather than retrospective) studies. These are the first findings on this important issue, and as such, from a scientific perspective, they serve as a starting point for researchers to attempt to refute them with better methods. From a policy perspective, however, our previous recommendation still stands; namely, that our findings "allow us to say . . . that there is no empirical basis on which to justify a legal presumption that a move by a custodial parent to a destination she plausibly believes will improve her life will necessarily confer benefits on the children she takes with her" (Braver et al., 2003; p. 215), and that "from the perspective of the child's interests, there may be real value in discouraging moves by custodial parents [via strategic use of a conditional change-of-custody orders], at least in cases in which the child enjoys a good relationship with the other parent and the move is not prompted by the need to otherwise remove the child from a detrimental environment" (p. 216). The current findings that there are long-term negative outcomes for children associated with moveaways that are not simply due to higher rates of parent conflict or domestic violence provide no evidence so far to revise that recommendation.

NOTES

1. The Court decided on April 29, 2004, to overturn their holding in *Burgess* and ruled in favor of the father opposing the mother's relocation with the children, declaring "the noncustodial parent bears the initial burden of showing that the proposed relocation of the children's residence would cause detriment to the children, requiring a reevaluation of the children's custody. The likely impact of the proposed move on the noncustodial parent's relationship with the children is a relevant factor in determining whether the move would cause detriment to the children and, when considered in light of all of the relevant factors, may be sufficient to justify a change in custody. If the noncustodial parent makes such an initial showing of detriment, the court must perform the delicate and difficult task of determining whether a change in custody is in the best interests of the children."

2. In the paper we acknowledged an additional, potential criticism: namely, that college students from divorced families may not represent young adults from divorced families in general. We stated, "It may be, for example, that a college sample is likely to include those who were least negatively affected by the relocation" (p. 214). Note that this would have worked *against* the likelihood of finding deficits associated with relocation, and might account for the few variables (i.e., relationship choices and substance

abuse) on which we did not find deficits. We have addressed the representativeness issue at length in a subsequent paper (Fabricius & Braver, 2004) and have found little evidence that college samples are likely to seriously bias the findings. For example, in one of the sources we checked, "McLanahan and Sandefur [1994] examined 5 nationally representative studies and find across all of these that about 50% of children of two-parent families go to college, while about 40% of children of "one-parent families" do so. Even this rather slight 10% discrepancy is an over-estimate of the extent of bias between married and divorced families, because the one-parent families they counted included never-married parents (as well as divorced parents) and McLanahan and Sandefur later show (in Figure 5) that children of never-married parents are about 6% less likely to graduate high school than children of divorced parents. Overall, one could fairly say that, of children from divorced families, those who made it to college appear a very slightly select group" (Fabricius & Braver, 2004, p. 353).

3. The variable "two good role models" in our original report also showed negative outcomes associated with these two groups, but this only reflected the contribution from the "dad good supporter" variable.

4. In calculating these new "before" and "after" variables, we standardized the frequency and severity scores so that the means of different combinations of time periods would not be affected by the overall declines in conflict over time.

5. All of the subjects from our original study were included in this analysis, so we should have been able to detect any real differences among moveaway groups in physical violence directed by either parent toward the other after the divorce.

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