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**CONSEQUENCES OF PARENTAL DIVORCE FOR ADULT CHILDREN'S
SUPPORT OF THEIR FRAIL PARENTS**

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Consequences of Parental Divorce for Adult Children's Support of Their Frail Parents*

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Consequences of Parental Divorce for Adult Children's Support of Their Frail Parents

Abstract

Using three waves of data from the Health and Retirement Study, I examined the association of parental divorce and remarriage with the odds that biological, adult children give personal care and financial assistance to their frail parents. The analysis included 5,099 adult children in the mother sample and 4,029 children in the father sample. Results indicate that adult children of divorced parents are just as likely as adult children of widowed parents to give care and money to their mothers, but the former are less likely than the latter to care for their fathers. The findings suggest that divorced fathers are prone to be the population most in need of formal support in old age.

Key words: divorce, gender, intergenerational transfers, remarriage

In the second half of the past century, American families experienced important demographic changes that are likely to redefine the rights and obligations between parents and their children. Divorce rates began to rise in the 1960s, accelerated through the 1970s, and reached a plateau in the 1980s (*Statistical Abstract of the United States*, 2004). Concurrent with a high divorce rate has been an increase in the likelihood of remarriage. The percentage of people who have been married at least twice by age 40 in the 1945 to 1954 cohort was double the corresponding percentage in the 1925 to 1934 cohort for both men and women (Kreider & Fields, 2002). As a result of these demographic changes, today's older people are more likely than those in their parents' generation to experience multiple marriages during their adulthood. Although most prior studies have centered on the short-term consequences of parental divorce for parents and children, fewer studies have examined the long-term ramifications of parental divorce on adult children's care of older parents. Researchers and policymakers worry that, because parental divorce and remarriage tend to weaken children's ties with their parents, adult children of divorced parents may be less likely than children of parents in intact marriages to provide support as their parents age (Popenoe, 1993).

The study addresses this concern by using three waves of data from the Health and Retirement Study to answer two questions. First, do parental divorce and subsequent remarriage affect biological, adult children's support of their impaired parents? Second, does the association between divorce and provision of support differ between mothers and fathers? Although the provision of support from parents to children is still the dominant flow of transfers in the United States, these are timely research questions, because cohorts who have experienced dramatic increases in divorce and multiple marriages will be passing into old age during the next two decades. In the face of increasing government costs for Social Security and Medicare, it is

important to understand the circumstances under which adult children assist their divorced parents.

The study extends previous research by testing two hypotheses regarding how parental divorce and remarriage may affect biological, adult children's assistance of their parents. The *intergenerational solidarity hypothesis* suggests that the more time that elapses after parental divorce and remarriage, the lower the probability that adult children will provide support to their frail parents, because parental divorce and remarriage weaken the bonds between generations over time (Roberts, Richards, & Bengtson, 1991). Conversely, the *altruistic motive hypothesis* postulates that adult children's provision of support is contingent upon their parents' needs (Becker, 1991). Because lone parents usually have fewer resources than married ones, adult children are likely to help their lone parents regardless of whether the parents' most recent marriage had ended in divorce or resulted from the death of a spouse.

The study also makes methodological contributions. First, this study considers the characteristics of all adult children in a family and examines individual children's support behavior across siblings, an approach that past studies rarely take (Lye, Klepinger, Hyle, & Nelson, 1995; White, 1994). Second, most prior studies about intergenerational transfers have been based on cross-sectional data, which do not consider the possibility that adult children's helping behavior may change over time and that the factors associated with their initial behavior and the rate of change may vary. Last, previous research has focused mainly on the time transferred from adult children to their older parents and has given little attention to the interaction between money and time transfers (Cooney & Uhlenberg, 1990; Henretta, Hill, Li, Soldo, & Wolf, 1997; Wolf, Freedman, & Soldo, 1997). The extent to which money transfers substitute for or complement time transfers cannot be examined without taking into account both

types of support together. Thus, this study extends prior research by using latent growth curve models to assess individual children's variability in their trajectories of providing personal care *as well as* financial assistance to frail parents over a 5-year period.

Intergenerational solidarity hypothesis

Parental divorce is likely to weaken adult children's relationships with their fathers because most children live with their mothers after parental divorce and men's bonds to their children usually occur through their ties to the children's mother (Furstenberg & Cherlin, 1991; Townsend, 2002). Once the union dissolves, the bonds between fathers and their children are likely to weaken. Remarriage could weaken children's relationships with their fathers further, as remarried fathers are likely to reduce their support to children as a result of increasing demands from the new obligations to children acquired in subsequent marriages (Furstenberg, 1995). Past research has consistently shown that parental divorce and remarriage have negative consequences for adult children's relationships with their fathers. Compared with older fathers who are still married to their children's mother, divorced fathers are more likely to have a detached relationship with their adult children (Rossi & Rossi, 1990; Silverstein & Bengtson, 1997) and are less likely to coreside with their children, to have frequent contact with nonresident children, and to give their children instrumental and financial support (Cooney & Uhlenberg, 1990; Furstenberg, Hoffman, & Shrestha, 1995; Lye et al., 1995; White, 1992).

Parental divorce is also likely to weaken adult children's relationships with their mothers because divorced, resident mothers have fewer resources to invest in their children, compared with married parents (Hoffman & Duncan, 1988). Divorce often causes emotional stress as well, consequently reducing resident mothers' energy to devote to their children (Hetherington, Cox,

& Cox, 1978; Thomson, McLanahan, & Curtin, 1992). Remarriage may further weaken children's relationships with their mothers, as children may perceive that a remarried mother will not give them as much time and attention as she did prior to remarriage (Furstenberg & Cherlin, 1991). Previous studies have shown that mothers' divorce and remarriage are negatively related to parent-child contact, the quality of parent-child relationships, and instrumental or financial support (Furstenberg et al., 1995; Lye et al., 1995; White, 1992).

On the basis of the intergenerational solidarity hypothesis, I expect that the more time that elapses after parental divorce and remarriage, the weaker the bonds between parents and children and thus the lower the probability that adult children will provide support to their frail parents. Because maternal, sole physical custody is still the most common living arrangement after divorce, and because resident parents usually invest more time and money in their children than do nonresident parents, children of divorce are likely to keep an obligatory relationship with their divorced mothers (Silverstein & Bengtson, 1997). Therefore, I anticipate that the negative association between the length of time since divorce or remarriage and the provision of support is stronger for fathers than for mothers.

Altruistic motive hypothesis

The altruistic motive hypothesis suggests that one family member's altruistic feelings for another are the basis for intergenerational transfers (Becker, 1991). Riley (1983) also suggested that families are embedded in a "latent matrix" of social support and that this latent matrix can be activated when it is needed. In other words, adult children are likely to help their divorced parents even if they have minimum contact with their divorced parents or their relationships are antagonistic. Instead of responding to the past history of parent-child relationships, adult children

help their older parents according to their current needs. Because lone parents usually have fewer resources than married parents, this hypothesis suggests that adult children are as likely to help their parents who are currently divorced as they are to help their parents who are currently widowed. Consistent with this hypothesis, Pezzin and Schone (1999) showed that divorced parents were as likely as widowed parents to receive help from their adult children with activities of daily living (ADL) or instrumental activities of daily living (IADL), although the amount of help was lower for divorced fathers than for widowed fathers.

Adult children may be more attentive to mothers' current needs than to fathers' because divorced fathers seldom turn to their adult children for help. Using the first wave of the National Survey of Families and Households, Cooney and Uhlenberg (1990) found that ever-divorced fathers were less likely to consider their adult children as potential sources of financial, instrumental, or emotional support, compared with older fathers whose marriages stayed intact. Curran, McLanahan, and Knab (2003), using the same data, also found that divorce was negatively related to older men's perceptions of having kin versus nonkin for emergency aid and advice. Using data from the Wisconsin Longitudinal Study, Lin (2007) found that not only were divorced fathers less likely than married fathers to ask adult children for help, but they also were less likely than divorced mothers to turn to their children for sick care. Consequently, divorced fathers are less likely than divorced mothers to receive help with household chores from their adult children (Furstenberg et al., 1995). On the basis of the altruistic motive hypothesis, I expect that adult children are more likely to respond to parents' *current* marital status than to the *timing* of parents' divorce or remarriage. Moreover, I anticipate that adult children are more attentive to divorced mothers than to divorced fathers because the latter are less likely than the former to turn to their adult children for assistance in times of need.

Patterns of time and money transfers

Researchers know little about whether adult children complement or substitute time transfers with money transfers. Some researchers have found that the likelihood and amount of financial assistance to parents is positively associated with the number of hours that adult children care for their parents (Boaz, Hu, & Ye, 1999; Couch, Daly, & Wolf, 1999), which suggests that time and money transfers may be complementary. In contrast, the relative resources of siblings, such as income or education, may determine children's power in negotiating the family division of labor (Ross, 1987). Siblings with greater financial resources may negotiate with less well-off siblings to exempt themselves from providing time-intensive services. Thus, children with more resources may be more likely than children with lower income or education to provide financial assistance, but less likely to help with daily activities. This prediction is consistent with prior research showing that adult children's wage rate is positively associated with the amount of money transfers, but negatively associated with the amount of time transfers (Altonji, Hayahi, & Kotlikoff, 2000; Couch et al.; Zissimopoulos, 2001).

The current study

This study examines the association of parental divorce and remarriage with the odds that adult children give personal care and financial assistance to their older, frail parents, with particular attention to the difference between mothers and fathers. It extends previous research by taking into account both parents' marital history and current marital status to assess the consequences of parental divorce for adult children's provision of support. According to the intergenerational solidarity hypothesis, I expect that the more time that elapses after parental divorce and remarriage, the lower the probability that adult children will provide support to their

parents, because parental divorce and remarriage weaken the ties between parents and children over time. The negative association is expected to be greater for fathers than for mothers. Alternatively, the altruistic motive hypothesis suggests that adult children help their older parents in response to their current needs. Because lone parents usually have fewer resources than married parents, adult children are as likely to help their divorced parents as they are to help their widowed parents. Moreover, adult children are expected to be more attentive to divorced mothers' needs than divorced fathers' needs.

Although the main focus is parental divorce and remarriage, I also included in the analysis other control variables that are related to children's helping behavior: adult children's ability to provide support and parents' needs for resources. It has been shown that the number of children in a family affects parents' receipt of assistance (Checkovich & Stern, 2002; Spitze & Logan, 1990). Because daughters are more likely than sons to be caregivers in the United States, children are more likely to help their parents if they do not have a sister (Horowitz, 1985; Wolf, et al., 1997). The presence of a stepsibling from parents' remarriage may affect adult children's provision of support (Lye et al., 1995; Pezzin & Schone, 1999). Married children, children who work, and children with a child are expected to spend less time than their respective counterparts providing parental care (Checkovich & Stern; Lang & Brody, 1983; Stoller, 1983; Wolf et al., 1997). Parents' characteristics, such as age, education, race and ethnicity, health status, and financial capacity, are also likely to be related to patterns of kin support (e.g., McGarry & Schoeni, 1995; Sarkisian & Gerstel, 2004; Silverstein, Parrott, & Bengtson, 1995; Spitze & Logan).

Method

The data were drawn from the 1998, 2000, and 2002 waves of the Health and Retirement Study (HRS). The HRS is a longitudinal study of nationally representative cohorts of individuals born between 1890 and 1947 in the United States. The study consists of four cohorts who entered the study in three different years. The 1931 – 1941 cohort of the original HRS sample was first interviewed in 1992 and followed up biennially. The 1890 – 1923 cohort of the study of Assets and Health Dynamics among the Oldest Old (AHEAD) was first interviewed in 1993, reinterviewed in 1995, and combined with the HRS in 1998. The 1924 – 1930 cohort of Children of Depression Age (CODA) and the 1942 – 1947 cohort of War Babies (WB) were first interviewed in 1998. Since 1998, all four cohorts of respondents and their spouses have been reinterviewed every other year until their death (Willis, 1999). The last year of survey data that were available for public use when this study was conducted is 2002. The response rate for the HRS and AHEAD baseline interviews is about 80%; for the CODA and WB baseline interviews, the rate is about 70%. For all cohorts, the reinterview response rates are above 90% in each wave (for detailed information on study design, see <http://hrsonline.isr.umich.edu>).

The original HRS was designed to follow people as they made the transition from active worker to retiree. One unique feature of the HRS is its rich family data concerning intergenerational transfers. The study asks about transfers of time and money between the HRS respondents and their parents and children. It also tracks changes in family structure and major life events of three generations (Generation 1: parents of the HRS respondents; Generation 2: the HRS respondents and their siblings; Generation 3: children of the HRS respondents). Parallel data are available on the families of the HRS respondents' spouses or partners, and each transfer is uniquely linked to a specific donor and recipient. Therefore, each person mentioned by the HRS respondent as part of the support network can be identified in the study, making it possible

for researchers to examine the patterns of intergenerational transfers between each donor-recipient pair over time.

Because the HRS consists of three generations, researchers can adopt two approaches to studying adult children's provision of support to their aging parents. The first approach is to examine the transfers from the HRS respondents to their parents (e.g., Boaz et al., 1999; McGarry & Schoeni, 1995); the second approach is to examine the assistance received by the HRS respondents from their children (e.g., Henretta et al., 1997; Pezzin & Schone, 1999; Wolf et al., 1997). This study adopts the latter approach for two reasons. First, the HRS asks respondents about their current marriage as well as prior marriages (up to three), but it does not ask respondents about their parents' marital history. Second, although the HRS respondents report whether their siblings provide support to their parents, previous studies have shown that the various children in a family may have different perceptions about how familial responsibility is divided among siblings with respect to given tasks (Lerner, Somers, Reid, Chiriboga, & Tierney, 1991; Matthews, 1987). Thus, this study uses respondents' reports of the time and money transfers received from their children.

This study restricts the sample to the respondents who entered the survey in 1992 (i.e., the original HRS sample) and in 1998 (i.e., the CODA and WB samples). Because the AHEAD sample contains no information about respondents' marital history, it does not allow researchers to examine the effects of the timing of parental divorce or remarriage on adult children's support behavior. Thus, the AHEAD sample is excluded from the analysis. This study further is limited to parents who have had at least one difficulty in (instrumental) daily activities ($N = 3,354$, 21%) during 1998 and 2002, because the questions about time transfers are pertinent to help with ADLs and IADLs. Finally, after excluding parents who were younger than 55 years old in 1998

($n = 335$, 10%), who were never married ($n = 188$, 6%), and who did not have a child aged 18 or older in 1998 ($n = 256$, 8%), the analytic sample consisted of 1,443 mothers and 1,132 fathers. The numbers of biological, adult children in the mother and father samples were 5,099 and 4,029, respectively.

Dependent variables

The dependent variables in this analysis are whether children provided their older parents assistance with time or money in 1998, 2000, and 2002. The response categories for the dependent variables are *yes* (coded 1) versus *no* (coded 0). Although respondents who had received help from their children were asked about the amount of support (in hours or dollars), the analysis uses dichotomous measures because only a small proportion of the children were reported as giving help (see analysis below), and the distribution of the amount of time or monetary assistance was very skewed, making it difficult to transform the amount of support to meet the multivariate normality assumption. The time transfers include help with walking across the room, dressing, bathing, eating, getting in and out of bed, and using the toilet (ADLs), as well as help preparing meals, shopping for groceries, making phone calls, taking medicines, and managing money (IADLs). The money transfers include financial support of \$500 or more in the past two years, help paying for health care costs in the past two years, and help paying for ADL or IADL support.

Explanatory variables

Two key explanatory variables were examined in this study: (a) the length of time adult children experienced between the year when their parents divorced, became a widow(er), or

remarried and 1998, (for the children whose parents remained married in 1998, these three variables were coded 0), and (b) parents' marital status in 1998, as measured by being married (or cohabiting), widowed, or divorced. Both parents' and children's characteristics that may be associated with adult children's support of their frail parents and parents' marital status also were taken into account in the analysis. Parents' characteristics included age (in years), educational attainment (in years), the number of living adult children, race and ethnicity (Whites, African Americans, Hispanics, and other races), change in their marital status over the 5-year period, the presence of a stepchild from remarriage, the numbers of ADL and IADL difficulties, and net assets (i.e., savings, certificate of deposit, individual retirement account, real estate, business or farm, stocks, bonds, and debts). Because the distribution of net assets was quite skewed and included negative values, a natural logarithm transformation of the raw amount (in \$10,000s) plus 100 was used for the multivariate analysis. Adult children's characteristics included gender, age, educational attainment, the number of sisters and brothers, the number of children, marital status (married vs. unmarried), and work status (working vs. nonworking). Missing information on the explanatory variables was imputed using the univariate imputation procedure in Stata (Royston, 2004, 2005). In this procedure, the missing value for a single variable is imputed as a function of several covariates. Parent's gender, age, race and ethnicity, and educational attainment were used to predict missing values in parent's characteristics. Parent's characteristics, along with child's gender, age, and educational attainment, were used to predict missing values in child's characteristics. The algorithm used in the procedure follows the one described by van Buuren, Boshuizen, and Knook (1999), and the procedure ensures that the imputed values fall only within the observed distribution of the missing variable.

Analytic strategy

This study used latent growth curve models to examine the trajectories of adult children's helping behavior across the three waves (Singer & Willett, 2003). Furthermore, it investigated the factors that may explain the variability in both the initial status of support provision and the change in the children's behavior as parents age. This analytic approach improves upon traditional regression modeling strategies because it includes time as a variable in the analysis and allows us to examine not only interindividual differences, but also intraindividual changes over a period of time. As depicted in Figure 1, two underlying, true growth trajectories for each child in a family are simultaneously estimated; each trajectory is characterized by two pieces of information: a starting point (i.e., intercept) and a rate of change over time (i.e., slope). This growth model is composed of two levels of estimation. The first level (the within-person model) can be expressed as follows (Muthén, 1996):

$$y_{it}^* = \eta_{0i} + \eta_{1i}x_t + \eta_{2i}x_{it} + \varepsilon_{it}$$

where y_{it} represents the observed helping behavior measured for person i at time point t ; y_{it}^* equals 1 if the latent variable y_{it}^* exceeds some threshold (τ_t) and 0 otherwise; η_{0i} represents the true intercept of the growth trajectory (i.e., the intercept factor) for person i ; η_{1i} represents the true slope of the growth trajectory (i.e., the slope factor) for person i ; x_t represents the value of time and is equal to 0, 1, and 2 in this study to indicate an equal time interval (i.e., 2 years) of linear growth; η_{2i} represents regression parameters for time-varying covariates, ADLs, IADLs, and net assets (x_{it}); and ε_{it} represents the time-specific residual for person i at time point t .

[Figure 1 about here]

In the second level of the estimation (the between-individual model), the individual intercept (η_{oi}) and the slope (η_{li}) are random variables and vary across individuals. The model can be expressed as follows:

$$\eta_{oi} = \alpha_0 + \gamma_0 x_{0i} + \zeta_{oi}$$

$$\eta_{li} = \alpha_1 + \gamma_1 x_{1i} + \zeta_{li}$$

where α_0 is the mean intercept of the growth trajectory, α_1 is the mean rate of change of the growth trajectory, x_{0i} and x_{1i} are the explanatory variables of interest, γ_0 and γ_1 are fixed regression parameters that relate the explanatory variable to the intercept and slope components of growth, and ζ_{oi} and ζ_{li} are person-specific, time-invariant residuals. The model is identified using the Delta parameterization approach, in which the variances of the latent variables of observed, categorical dependent variables are allowed to vary across time, and the scale factors (i.e., the inverse of the conditional standard deviations of the latent response variable at each time point) are fixed at 1 at the first time point and freely estimated for the remaining time points (Muthén & Asparouhov, 2002).

Because the association between divorce and provision of support may differ between mothers and fathers, a multiple group analysis was conducted. One advantage of this analytic strategy is that equality constraints can be placed on regression coefficients between groups to examine whether the same variables have different associations with adult children's provision of support to their mothers and fathers. A statistical concern arising from the inclusion of all children is that observations from the same family tend to be correlated, thereby violating the classical assumption of independence among observations. Although it is interesting to examine dependence by modeling the random influences across families, such a two-level, growth curve model is extremely complex and involves a computationally heavy procedure that would result

from a large number of observations and the dual growth processes examined in this study (Muthén & Muthén, 2007). Thus, Huber-White sandwich estimators (Johnston & DiNardo, 1997) were used to correct standard errors of the coefficients in the presence of clustering. The analysis was conducted using the statistical package Mplus Version 4.21. Because approximately 14% of the mothers and 19% of the fathers did not participate in one or both of the follow-up surveys, their receipts of support were not observed in at least one wave. In general, mother nonrespondents did not significantly differ from mother respondents with respect to their demographic characteristics. Compared with father respondents, father nonrespondents were older, had fewer years of education, were more likely to be African American or Hispanic, were less likely to be married, had more functional difficulties, and had a lower amount of assets (results available upon request). Missing data in the dependent variables were handled in Mplus using the maximum-likelihood estimation of all existing information under the assumption that absence is a function of observed covariates and observed outcomes (Muthén & Muthén, 2007). The assumption appears to be reasonable, as the major demographic differences between father respondents and nonrespondents were taken into account in the analysis.

Results

Table 1 shows the prevalence of time and money transfers at the child and parent levels across three time points, separated by mothers and fathers. For mothers, about 5% of adult children provided help with ADLs or IADLs in 1998, and the number of children giving care increased by 50% between 1998 and 2002 ($= [8.18 - 5.42] / 5.42$). Although fewer adult children gave money than care to their older mothers, the number also increased by 30% in five years ($= [5.11 - 3.93] / 3.93$). Because most parents had more than one child and not all children in a

family provided support to their parents, the prevalence of upstream transfers was higher when the data were aggregated from the child level to the parent level. Approximately 14% and 9% of the mothers reported receiving time or monetary assistance, respectively, from at least one adult child in 1998. In 2002, comparable figures were 21% and 12%.

[Table 1 about here]

Fewer fathers than mothers received help from their adult children, likely reflecting the fact that men tend to have a shorter life expectancy than women and thus older men are more likely than older women to have a living spouse who provides care. About 2% of adult children provided time or monetary support to their older fathers in 1998. The number of children giving care increased over time, but the number of children providing financial support did not ($p > .05$). From the father's perspective, about 5% and 4% of the fathers in the sample reported receiving time or monetary assistance, respectively, from at least one child in 1998, and the number of those receiving support increased to 9% for personal care and 6% for monetary assistance five years later.

The prevalence of money transfers from adult children to their older parents reported here is comparable to that indicated by other national studies (e.g., Eggebeen & Hogan, 1990; Furstenberg et al., 1995; McGarry & Schoeni, 1995). The prevalence of time transfers from adult children to their elderly parents reported in this study, however, is lower than that obtained from other national studies. Using the 1982 National Long-Term Care Survey (NLTCS), Lee, Dwyer, and Coward (1993) estimated that 8% and 24% of adult children provided ADL and IADL assistance to their frail parents, respectively (24% for ADLs and IADLs combined, calculated by the author and available upon request). The difference may be attributable to Lee et al.'s analytic sample selection, the younger sample that was used in this study, and the differences in the types

of assistance asked about in the two surveys. Using a more comparable sample from the AHEAD study ($M = 80$ years), I found that about 7% of the adult children provided support to their older parents in 1998. This number is similar to that reported by McGarry and Schoeni (1995).

Parents' marital history is the major interest of the study. As shown in Table 2, for the adult children whose mothers divorced, became widowed, or remarried, the length of time between the marital event and 1998 was 25 years, 18 years, and 11 years, respectively. In contrast, adult children in the father sample, on average, had been exposed to a shorter period of parental divorce, but a longer period of parental remarriage. More than half of the mothers were married or living with a partner in 1998, about a quarter were widowed, and 21% were divorced. More fathers than mothers remained married at baseline. A majority of the parents did not change their marital status during the study period; 5% lost their spouse through divorce or (mostly) death; and fewer than 2% remarried. Other characteristics of parents and their children are summarized in Table 2. Because of the small number of children whose parents remarried during the study period, and whose parents belong to a race other than White, African American, or Hispanic, these children were excluded from the multivariate analysis described below.

[Table 2 about here]

Table 3 shows the result from the latent growth model, separated for mothers and fathers. The model is considered to fit the data well, as the comparative fit index (CFI) is greater than .95, a Tucker-Lewis index (TLI) is greater than .95, and a root mean square error of approximation (RMSEA) is less than .06 (Hu & Bentler, 1999). The nonsignificant mean intercepts in the growth rate equations for both parents suggest that adult children's helping behavior was relatively stable over time. The residual variances for the initial status of time transfers (.49 for mothers and .61 for fathers), as well as money transfers (.75 for mothers and

.96 for fathers), are highly significant, but those for the change in support behavior are nonsignificant, indicating that there was considerable between-individual heterogeneity in initial status, but little variation in the trajectories of children's support behavior over time. The positive residual covariance between the two initial statuses indicates that adult children who give care to their older parents are also likely to provide financial support at baseline (.08 for mothers and .24 for fathers). In other words, time and money transfers are likely to be complementary rather than substitutable. The negative residual covariance between the initial status and the growth rate of adult children's care for their mothers (-.11) suggests that children who are more likely to give care to their older mothers at baseline tend to have a slower rate of increase than children who are less likely to give care. Individual children's initial behaviors regarding money transfers to mothers and both time and money transfers to fathers, however, are unrelated to their trajectories of the transfers.

[Table 3 about here]

The first and second columns in Table 3 show that the lengths of time since mothers' divorce, widowhood, and remarriage were unrelated to adult children's provision of personal care or monetary support in 1998, after controlling for mothers' and children's characteristics. Adult children were more likely to provide care or financial assistance, however, when their mothers were currently widowed (-.34 for time and -.40 for money) or divorced (.08 vs. -.34 for time and -.13 vs. -.40, $p < .10$, for money) as opposed to married, and adult children of divorced mothers were as likely as children of widowed mothers to provide both types of support to their mothers (.08 and -.13). Together, these results are consistent with the prediction drawn from the altruistic motive hypothesis: Mothers' current marital status was more important than the timing of divorce and remarriage in relation to adult children's support behavior in old age. Moreover,

the loss of a spouse through divorce or (mostly) widowhood during the study period was associated with a steeper rate of increase in the propensity of receiving care over time (.27).

Daughters were more likely than sons to give care to their older mothers initially (.64), but their rate of growth in caring for the mothers was slower than sons' (-.14). Because the responsibility of taking care of older parents usually falls on daughters' shoulders, children with sisters were less likely than children without sisters to help with ADLs or IADLs and to provide monetary support. Older children were less likely than younger children to care for their older mothers at baseline (-.03), but the former had a steeper increase in time transfers than the latter (.01). Compared with children who received fewer years of education, children who received more years of education were less likely to offer personal care (-.04) but were more likely to provide financial support to their mothers (.05).

Mothers' ADL and IADL difficulties were positively associated with the likelihood of receiving personal care from adult children at each time point. Older mothers were more likely than younger mothers to receive care from their children at baseline (.03) but the rate of increase is slower for older mothers than for younger mothers (-.01). Compared with White mothers, Hispanic mothers were less likely to receive time transfers from their children (-.32), whereas both Hispanic and African American mothers were more likely than White mothers to receive financial support (.23 and .63, respectively). The presence of a stepsibling from the mothers' remarriage did not appear to affect adult children's provision of support.

Fewer covariates were significantly associated with adult children's provision of support in the father sample than in the mother sample. Similar to the findings for mothers, the third and fourth columns in Table 3 show that the durations since fathers' divorce, widowhood, and remarriage were unrelated to adult children's provision of personal care or monetary support in

1998, after controlling for fathers' needs and children's resources. Unlike the results for mothers, however, adult children of divorced fathers were as likely as children of married fathers to give personal care to their fathers (-1.11 vs. $-.90$, $p > .05$) and these children were less likely to provide care than children of widowed fathers. Additionally, the provision of financial assistance was not associated with the fathers' current marital status. The loss of a spouse through divorce or widowhood during the study period did not appear to affect fathers' receipt of support from adult children. Taken together, the results support neither the intergenerational solidarity hypothesis nor the altruistic motive hypothesis for fathers. Consistent with Furstenberg et al.'s (1995) study, divorced fathers in this study were less likely to receive personal care from their adult children than were divorced mothers ($.08$ vs. $-.90$, $p < .01$).

Unlike the results for mothers, daughters were not more likely than sons to give care to their older fathers. Sibling structure had no association with the propensity for adult children to provide support to their fathers. Like the results for mothers, older children were less likely than younger children to care for their fathers at baseline ($-.03$). Children who had one child were less likely to provide financial support to their fathers, compared to children without offspring. Like mothers, fathers' IADL difficulties were positively related to the likelihood that adult children would provide personal care. Hispanic fathers were more likely than White fathers to receive financial support from their adult children ($.80$).

Discussion

Divorce and remarriage have altered the kinship system in the United States dramatically over the past few decades. Researchers have devoted much attention to the short-term effects of parental divorce on parent-child relationships, but they have given relatively less attention to the

long-term ramifications. Some researchers have worried that parental divorce will weaken children's ties with their parents, leading adult children to provide little or no support when divorced parents become frail (the intergenerational solidarity hypothesis). Other researchers have argued that families are embedded in a latent matrix of social support, which can be accessed when it is needed (the altruistic motive hypothesis). I tested these two hypotheses by using three waves of the Health and Retirement Study that followed the same families over a 5-year period to understand the association of parental divorce and remarriage with the odds that adult children give personal care and financial assistance to their older, frail parents.

This study shows that after parents' and children's characteristics are taken into account, the timing of mothers' divorce and remarriage does not affect adult children's support behavior. Adult children of divorced mothers are just as likely as children of widowed mothers to help their older mothers. Moreover, mothers who lose their spouses during the study period have a higher likelihood of receiving care than mothers whose marital status remains the same. These findings suggest that although parental divorce and remarriage might have long-lasting effects on parent-child ties, adult children are nevertheless willing to help their mothers in times of need (i.e., altruistic children). This is indeed good news for policymakers, as the U.S. Congress is likely to consider benefit cuts for Social Security and Medicare before the 78 million baby boomers approach retirement age in the next couple of years.

The consequences of divorce for older fathers, however, call for policymakers' concern. On the brighter side, this study shows that the timing of fathers' divorce and remarriage is unrelated to adult children's provision of support, suggesting that father-child bonds are unlikely to be a determinant of support after taking fathers' and children's characteristics into consideration. Nevertheless, not only are adult children of divorced fathers less likely than

children of widowed fathers to help their older fathers, but they also are less likely than children of divorced mothers to provide personal care. Together, these results suggest that divorced fathers are prone to be the population most in need of formal support in old age.

Other important findings from this study help advance our understanding of adult children's provision of support. First, time and money transfers are likely to be complementary as opposed to substitutable, although the results should be interpreted with caution because respondents were not necessarily asked about time and money transfers using the same time frame. Second, this study found little change in adult children's helping behavior over the 5-year period, suggesting that familial responsibility may not be rotated among siblings. This finding is important because most previous studies were based on cross-sectional observations that failed to capture the dynamic process of support patterns as parents grow older.

Several limitations of this study merit further research. First, parental divorce may be endogenous; that is, unobserved family characteristics may affect both the risk of parental divorce and the likelihood of receiving support from adult children in late life. For example, parents who are in poorer health or who have lower incomes are more likely than their respective counterparts to be selected into divorce. Children growing up with parents with poorer health and fewer resources may be less capable of providing care and monetary assistance to their parents in old age. Failure to take into account parents' characteristics prior to divorce and children's upbringing environment is likely to yield an upwardly biased estimate of divorce's effect on adult children's provision of support. To better understand the divorce effect, we need better data that relate to parents' propensity to divorce and family dynamics. Second, the divorce effect may be underestimated in the father sample, as frail, divorced fathers who lack support from their adult children may not be alive at the end of the study. Third, because most parents in the sample

were relatively young, the prevalence of the provision of support from adult children to their parents was quite low. Additionally, there was little between-individual heterogeneity in the trajectories of support behavior across the three waves. Thus, it is important to replicate this study using older parents who are in greater need of support to see whether similar results are found among an older population. Last, the data lacked a measure of adult children's health status. Because older parents are unlikely to ask children with poor health for assistance, future research needs to incorporate this measure.

In the face of dramatic demographic changes that occurred during the second half of the past century and the imminent Social Security overhauls that might fail to protect poor, older parents, researchers and policymakers should understand how rights and obligations between parents and children are defined in diverse nontraditional family forms. Researchers and policymakers need to understand why some children in a family provide assistance to their older parents whereas others do not, which child initiates or organizes the help, what roles the extended family and the nuclear family play in the provision of support, and to what degree familial support can substitute for formal care systems. Because most survey research on intergenerational transfers and perceptions of shared familial responsibility has relied on a single family member's report (either the parent or the child), researchers need to think more creatively about how to collect richer survey data and use better analytic strategies to gauge what is really happening in families.

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Table 1. Prevalence of Time and Money Transfers at the Child and Parent Levels

	1998	2000	2002	Increased over time
Mother sample (<i>N</i> = 1,443 mothers, 5,099 children)				
Child gave time	5.42	5.66	8.18	***
Child gave money	3.93	4.41	5.11	***
Mother received time	14.23	15.85	20.61	***
Mother received money	8.97	10.44	12.15	**
Father sample (<i>N</i> = 1,132 fathers, 4,029 children)				
Child gave time	2.07 ^a	2.22 ^a	3.31 ^a	***
Child gave money	2.39 ^a	3.55 ^b	2.48 ^a	
Father received time	5.41 ^a	6.05 ^a	9.17 ^a	***
Father received money	4.04 ^a	6.09 ^a	5.84 ^a	**

Note: Health and Retirement Study.

^aThe difference between mother sample and father sample is significant at $p < .001$ level. ^bThe difference between mother sample and father sample is significant at $p < .05$ level.

** $p < .01$. *** $p < .001$. (two-tailed tests)

Table 2. Parents' and Children's Characteristics in the Mother and Father Samples

	Mothers		Fathers		diff
	% or <i>M</i>	<i>SD</i>	% or <i>M</i>	<i>SD</i>	
<i>Parent's characteristics</i>					
Age in 1998	63.69	5.50	64.82	5.76	***
Years of education	11.11	3.33	11.10	3.58	
Number of living children	3.53	2.14	3.56	2.13	
Race and ethnicity					***
White	66.60		74.12		
African American	20.03		14.22		
Hispanic	11.71		9.72		
Other	1.66		1.94		
Marital status in 1998					***
Married or cohabiting	55.09		81.98		
Widowed	23.91		5.30		
Divorced	21.00		12.72		
Change in marital status, 1998 – 2002					
Same	93.69		93.29		
Lose a spouse	5.27		4.77		
Have a new spouse	.97		1.41		
Lose a spouse and have a new spouse	.07		.53		
Have a stepchild	12.89		11.04		
Number of ADL difficulties in 1998	.84	1.19	.59	.96	***
Number of ADL difficulties in 2000	.94	1.22	.67	1.04	***
Number of ADL difficulties in 2002	1.02	1.29	.71	1.11	***
Number of IADL difficulties in 1998	.49	.85	.41	.80	*
Number of IADL difficulties in 2000	.52	.88	.47	.88	
Number of IADL difficulties in 2002	.65	1.03	.65	1.04	
Assets in 1998	130480	502041	181665	555436	*
Assets in 2000	149572	497909	206890	778264	*
Assets in 2002	133818	431241	213800	954185	**
<i>Child's characteristics</i>					
Child is female	50.01		50.06		
Age in 1998	37.45	7.10	35.93	7.22	***
Years of education	13.08	2.36	13.24	2.25	**
Sibling structure					
0 brother	18.06		18.34		

1 brother	31.48		30.85	
2 or more brothers	50.46		50.81	
0 sister	19.49		19.16	
1 sister	28.61		28.07	
2 or more sisters	51.89		52.77	
Family structure by 1998				
Parents' marriage ends in divorce or widowhood	41.22		29.64	***
Duration since parents divorced (years)	24.68	10.80	23.16	10.65 ***
Duration since parents became widow (years)	17.68	11.09	17.26	10.49
Duration since parents remarried (years)	11.44	13.87	15.33	12.19 ***
Number of children				
0 child	25.32		27.10	
1 child	17.85		18.44	
2 or more children	56.83		54.46	
Married or partnered	65.21		66.82	
Working	89.12		89.92	

Note: Column totals in the panels with dichotomous variables may deviate slightly from 100% because of rounding errors. Missing values were imputed (Royston 2004, 2005) for parent's marital status in 1998 (2.8%), change in marital status (5.9%), ADL or IADL difficulties in 1998 (2.4%), 2000 (7.5%), and 2002 (12.7%), assets in 1998 (3.5%), 2000 (7.9%), and 2002 (13.1%), child's gender (1%), education (1%), duration since parents divorced or became widow (4.4%), duration since parents remarried (6.1%), the number of children (6.6%), marital status (2.5%), and work status (1.6%).

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed tests)

Table 3. Parameter Estimates and Standard Errors From Latent Growth Curve Models of Likelihood of Support Provision

	Mothers				Fathers				
	Time		Money		Time		Money		
	coeff	se	coeff	se	coeff	se	coeff	se	
<i>Initial status regression</i>									
Years since parents' divorce ^a	-.06	.05	-.03	.06	-.18	.22	-.12	.15	
Years since parents' widowhood ^a	-.03	.06	-.03	.07	-.49	.68	-.21	.23	
Years since parents' remarriage ^a	-.02	.06	-.01	.08	-.15	.37	.30	.18	
Widowed in 1998 (omitted category)									
Married or cohabiting in 1998	-.34	.10***	-.40	.14**	-1.11	.28***	-.15	.53	
Divorced in 1998	.08	.10	-.12	.13	-.90	.33**	-.17	.55	
Same marital status 1998 – 2002 (omitted category)									
Lose a spouse	-.07	.15	.01	.23	.26	.33	.40	1.05	
<i>Child's characteristics</i>									
Child is female	.64	.08***	.02	.07	.16	.15	.08	.12	
Age in 1998	-.03	.01***	.01	.01	-.03	.01*	.02	.01	
Years of education	-.04	.02*	.05	.02**	-.03	.04	-.01	.03	
0 brother (omitted category)									
1 brother	-.13	.11	-.07	.10	.09	.19	.10	.23	
2 or more brothers	-.22	.10*	-.19	.12	-.15	.20	.28	.28	
0 sister (omitted category)									
1 sister	-.23	.09*	-.31	.10**	-.30	.21	-.06	.21	
2 or more sisters	-.50	.09***	-.26	.12*	-.36	.22	.08	.23	
0 child (omitted category)									
1 child	-.17	.11	.01	.10	-.14	.23	-.31	.16*	
2 or more children	-.17	.09	-.17	.10	-.14	.18	-.15	.15	
Married or partnered	-.12	.07	-.05	.08	-.30	.15	.00	.15	
Working	-.09	.10	.18	.12	-.10	.23	.13	.15	
<i>Parent's characteristics</i>									
Age in 1998	.03	.01***	-.01	.01	.02	.02	-.02	.02	
Years of education	-.03	.01	-.00	.02	-.05	.03	.02	.04	
White (omitted category)									
African American	-.13	.09	.23	.12*	-.18	.20	.12	.24	
Hispanic	-.32	.14*	.63	.26*	-.02	.28	.80	.32*	
Have a stepchild	.06	.13	.14	.14	-.43	.45	-.13	.29	
<i>Linear growth rate regression</i>									
Intercept	2.11	1.43	1.41	1.10	1.96	2.33	6.16	5.19	
Years since parents' divorce ^a	.03	.03	.03	.04	-.01	.13	.10	.11	
Years since parents' widowhood ^a	.02	.04	.02	.04	.12	.36	.20	.14	
Years since parents' remarriage ^a	-.01	.04	-.04	.05	.15	.20	-.17	.13	
Widowed in 1998 (omitted category)									
Married or cohabiting in 1998	.04	.08	.05	.09	.21	.22	-.09	.28	
Divorced in 1998	-.12	.07	.04	.08	.30	.21	-.32	.36	
Same marital status 1998 – 2002 (omitted category)									

Lose a spouse	.27	.12*	.26	.17	.19	.23	-.22	.62
<i>Child's characteristics</i>								
Child is female	-.14	.07*	.04	.05	.12	.12	.03	.09
Age in 1998	.01	.00***	-.01	.00	.02	.01	-.01	.01
Years of education	.01	.01	-.01	.01	.01	.03	.04	.03
0 brother (omitted category)								
1 brother	.02	.07	-.05	.07	-.19	.13	-.11	.15
2 or more brothers	.03	.07	-.01	.08	-.17	.15	-.22	.18
0 sister (omitted category)								
1 sister	.05	.06	.07	.07	.02	.14	-.04	.15
2 or more sisters	.18	.06**	.04	.07	.02	.14	-.17	.16
0 child (omitted category)								
1 child	.08	.07	-.03	.06	-.00	.15	.22	.11
2 or more children	.00	.06	.03	.06	.03	.12	.02	.12
Married or partnered	-.02	.05	.02	.05	-.04	.12	-.01	.11
Working	.02	.06	.00	.08	.05	.16	.01	.14
<i>Parent's characteristics</i>								
Age in 1998	-.01	.01*	-.00	.01	-.00	.01	.01	.01
Years of education	.02	.01*	-.00	.01	.02	.02	-.02	.02
White (omitted category)								
African American	.05	.06	-.05	.07	-.03	.13	.01	.14
Hispanic	.16	.08	-.21	.15	-.03	.18	-.25	.21
Have a stepchild	-.09	.09	-.15	.09	.09	.29	-.01	.21
# of ADL difficulties in 1998	.15	.03***	-.02	.05	.21	.07**	.21	.14
# of ADL difficulties in 2000	.06	.03*	.02	.05	.01	.06	.00	.13
# of ADL difficulties in 2002	.07	.03*	.04	.03	.05	.05	-.04	.09
# of IADL difficulties in 1998	.44	.05***	.03	.07	.32	.08***	.17	.15
# of IADL difficulties in 2000	.24	.05***	.07	.06	.27	.09**	-.04	.14
# of IADL difficulties in 2002	.22	.07**	.04	.05	.22	.09*	.14	.09
Assets in 1998	-.48	.72	.17	.49	-.32	.32	-.35	1.01
Assets in 2000	.44	.27	-.62	.43	.09	.39	-1.61	2.47
Assets in 2002	1.16	.45**	.09	.24	.21	.76	-.64	1.13
Residual correlated error in 1998			.08*				.11	
Residual correlated error in 2000			.08*				.11	
Residual correlated error in 2002			.08*				.11	
Residual variance of intercept		.49***		.75***		.61***		.96***
Residual variance of slope		.05		.05		.03		.15
Residual covariance between two intercepts			.08**				.24**	
Residual covariance between intercept and slope		-.11***		-.18		-.01		-.23
Model χ^2 (df)					118.62 (96)			
CFI / TLI					.98 / .96			
RMSEA					.01			
N		4,934 ^b					3,860 ^b	

^aRescaled by dividing the value by 10 because the estimate is too small and beyond two decimal places. ^bThe number of

children is fewer than 5,099 for mother sample and 4,029 for father sample because variables “other race,” “have a new spouse,” and “lose a spouse and have a new spouse” are excluded from the analysis.

* $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed tests)

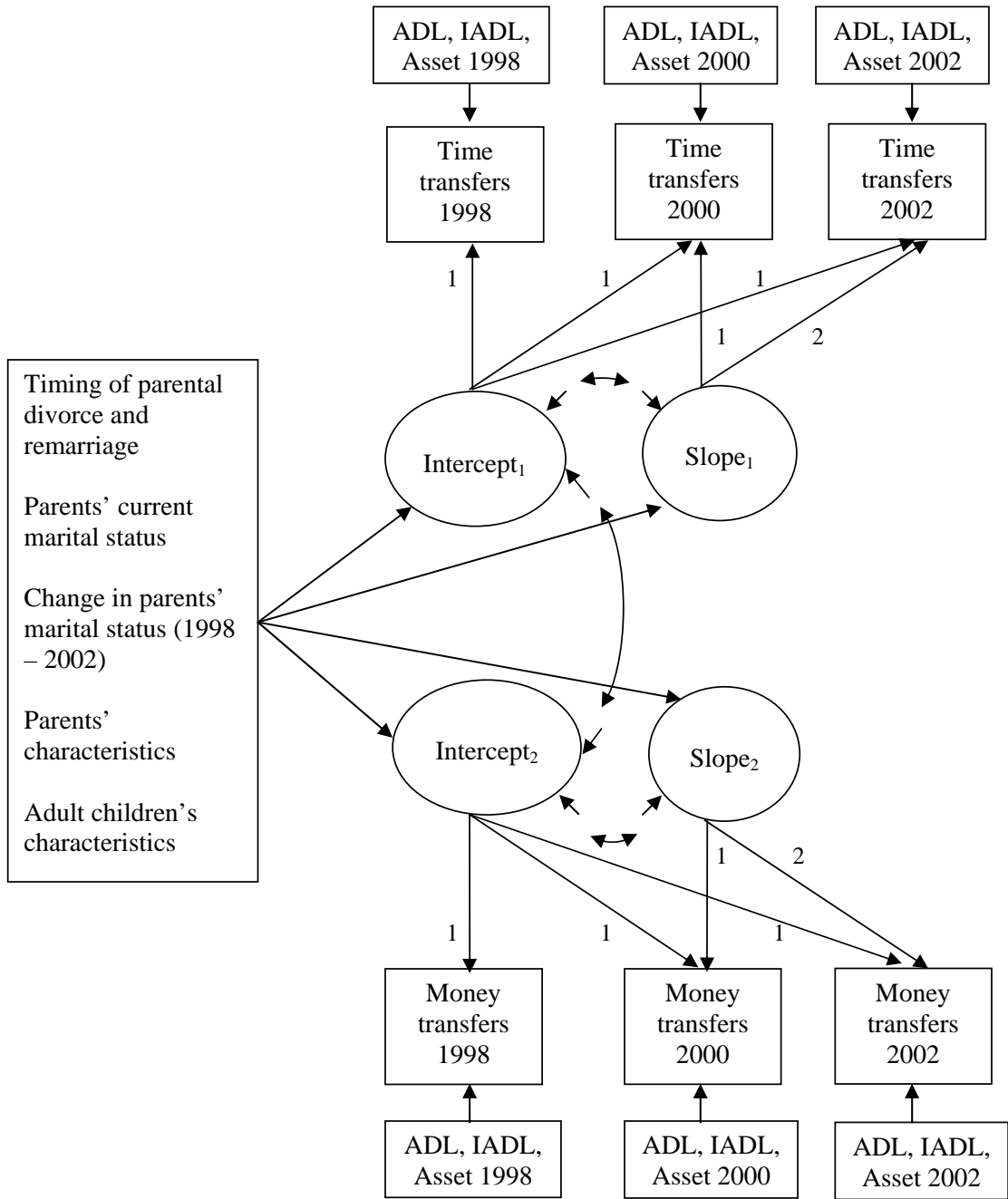


Figure 1. Structural Equation Path Diagram for Conditional Latent Growth Model

Note: Exogenous variables and contemporaneous residuals for the reports of transfers are correlated but not shown.