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ADULT CHILDREN'S HELP TO PARENTS: A STUDY OF BOTH ATTITUDES AND BEHAVIOR

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ABSTRACT

As the U.S. population and family structures continue to shift, the norms and obligations for adult children caring for their elderly parents are being debated in the literature. My dissertation aims to understand attitudes toward helping the elderly and behaviors of giving to parents by adult children in a recent, nationally representative sample.

Chapter one uses the General Social Survey and investigates attitudes toward two distinct but related topics. First, do Americans still value filial obligation, meaning do they see adult children as an important source of help for elderly parents? Second, which institution - families, government, or others - do Americans see as responsible for helping the elderly with specific instrumental tasks of daily living, like laundry or errands? I find that filial obligation is similarly highly valued by many in the U.S., but there is more variation toward which institution should be responsible for care. I find that Black respondents are more supportive of government support compared to Whites, and that respondents with some college or greater educational attainment are more supportive of families taking on this responsibility compared to those with a high school degree or less.

Chapter two uses the Panel Survey of Income Dynamics to test whether experiencing a parent's divorce during childhood, from ages 0 to 16, is associated with later giving of time and money to parents. Here, I find that experiencing a parent's divorce during childhood is not significantly associated with later giving to parents. While Black and White adult children have differing patterns of giving to parents, this cannot be explained by their childhood experiences of family structure. Adult children whose parents got divorced when they were young do give less to fathers compared to mothers, similar to previous research on this topic.

Chapter three also uses the Panel Survey of Income Dynamics and tests whether adult children's family structure is associated with financial and time transfers to parents. Here, I focus on cohabiting adult children and divorced adult children compared to never married adult children. I find that long-term cohabiter adult children, those who have been living with their partner for more than one year, have lower odds of giving any time to parents compared to never married adult children. Similarly, divorced/separated adult children have lower odds of giving any time to parents compared to never married adult children. The adult child's marital status is never significantly associated with giving patterns of financial assistance to parents.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

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Chapter 1: Introduction

Overview of the Problem

Families serve important roles in society, one of which is caretaking for other family members (Folbre 2002; Olson 1994). Adult children are one of the most common sources of family care for aging parents, with roughly a quarter of adult children providing help to their parents each year (Feinberg et al. 2011). By providing the common good of care within families, social institutions and the government are less strained for resources (Fine 2007; Olson 1994). The issues inherent in eldercare are the same issues inherent in all caregiving: care is often invisible and undervalued (England 1992; Folbre 2002). The estimated value of unpaid contributions by children every year is $450 billion (Feinberg et al. 2011), and even parents who are institutionalized rely on supplemental family help (Rivlin and Wiener 1988), highlighting the often invisible and costly nature of this help. If families are unable or unwilling to provide resources in the form of time and money to their parents, social institutions will need to fill this gap, which they are not currently equipped to do (Olson 1994).

This is a pressing social issue because these caregiving needs are increasing over time as the population is aging (Wolinsky et al. 2011). This is the first time in history that the U.S. will experience such a large population of older people who need care (Olson 1994), which is creating "anxiety" around future care arrangements, especially intergenerational roles between adult children and their parents (Fine 2007; Olson 1994; Pavalko and Wolfe 2015; Silverstein 2016; Swartz 2009). The dependency ratio, an indicator of the potential burden on those of working ages 18 to 64 years old, serves as an indicator of this increasing need over time (Vincent and Velkoff 2010). The old age dependency ratio is expected to increase from 22 older people

per 1,000 working age adults in 2010 to 35 older people per 1,000 working age adults in 2030 (Ortman, Velkoff, and Hogan 2014).

Another reason intergenerational relationships are in question is because family complexity is increasing. Divorce and remarriage are commonplace and cohabitation is on the rise (Amato 2004; Amato and Keith 1991; Cherlin 2004, 2010; Cherlin and Seltzer 2014), which may change intergenerational roles and responsibilities like providing help to parents (Folbre and Nelson 2000; Swartz 2009). Population estimates suggest that family disruption as well as fewer children across generations will create a "care deficit" in which the number of older people needing care will outpace the number of family members able to provide care for them (Glenn 2010:183). The responsibilities that adult children have to their aging parent may be changing as these family patterns shift (Laditka and Laditka 2001), making family caregiving an increasingly important social issue (Silverstein 2016; Swartz 2009; Uhlenberg 1996).

Given the changing nature of families alongside the aging population, it is critical to understand the ways in which contemporary adults understand and perform the role of families in caring for the aging, including adult children providing for their parents (Cherlin 2010; Silverstein 2016; Swartz 2009). The studies that are available on this are limited in a few ways. First, regarding attitudes, there is very little nationally representative work within the U.S. on attitudes within groups that does not focus specifically on caregivers. Second, for studies of childhood family structure, the findings are generally mixed whether divorce is associated with a reduction in helping. Third, few studies on adult children's family structure investigate how help changes across a diverse set of family structures. Given these lingering issues in the literature, my dissertation investigates each in turn to better understand American's attitudes and behavior

regarding help to their parents (Barnett 2013; Van Houtven, Coe, and Skira 2010; Lee et al. 2014; Pillemer and Suitor 2013; Sarkisian and Gerstel 2004a; Seltzer 2015).

Overview of my dissertation

By first focusing on attitudes toward eldercare in Chapter 1, we can better understand how the current population envisions these family decisions. Attitudes reflect social norms, and if family change and disruption is truly shifting intergenerational roles (Cherlin 2010; Silverstein and Giarrusso 2010), these may be reflected in changing attitudes toward eldercare. My first chapter uses the General Social Survey and answers the question of whether Americans still think adult children are an important source of help for aging parents, and whether the family should be responsible for helping the elderly with daily tasks. I test whether there are group differences in these attitudes among important social groups in the U.S., including between men and women, between racial/ethnic groups, and finally, among those with varying educational attainment.

My second chapter addresses helping behavior from adult children to their parents. I investigate the ways in which family structure during childhood is associated with giving to parents in later in life. This chapter answers four research questions. Is the experience of a parental divorce during childhood significantly associated with adult children's giving of time and money to their parents? Can the differences in adult children's transfers by parents' divorce during childhood be partially explained by parent's health or distance? Does the association between experiencing parents' divorce during childhood and adult children's transfer behavior differ between non-Hispanic Whites and non-Hispanic Blacks? Can the experience of parents' divorce during childhood partially explain differences in children's transfers to parents later in life related to the gender of the parent?

My third chapter tests how various family structures among adult children may affect giving to parents, since this has received less attention in the literature (Shapiro 2012). This chapter also focuses on behavior and asks three main research questions. Is the adult child's family structure significantly associated with their giving of time and money to parents? Can the differences in adult children's transfers by family structure be partially explained by the adult child's income or physical distance? Does the association between the adult child's family structure and adult children's transfer behavior differ between non-Hispanic Whites and non-Hispanic Blacks?

Chapter 2: Demographic patterns in American's views on family and eldercare

Eldercare is a pressing social issue in the United States due to several converging demographic patterns. Most importantly, life expectancy is at an all-time high (Harper, MacLehose, and Kaufman 2014) and the U.S. population is aging (Ortman et al. 2014). The baby boomers will be the largest generation ages 65 and older that the United States has seen (Knickman and Snell 2002), creating an unprecedented need for elder care (Wolinsky et al. 2011).

Historically, family members provided this caregiving (Folbre 2002; Mcgarry and Schoeni 1997; Spillman et al. 2014) and there has been widespread support for the social norm of families, especially children, caring for the elderly (Mair et al. 2016; Marcum and Treas 2013) But, families have changed drastically over the last century calling into question whether intergenerational family obligations and norms may also be changing (Agree and Glaser 2009; Cherlin 2010; Silverstein and Giarrusso 2010; Swartz 2009). Family sizes in the U.S. are shrinking (Hagewen and Morgan 2005), leading to potentially fewer children to serve as family caregivers. Family partnership structures have become more diverse and complex, with divorce, remarriage, and the rise of cohabitation (Amato 1996; Cherlin 2010). While this complexity potentially adds more adult children to the family to provide care, these diverse family forms may actually diminish the number of potential caregivers available due to unclear obligations in these new family forms (Cherlin 1978). Multiple studies find that close family members, including biological adult children, are the most likely to care for an elderly parents (McGarry 1998; Spillman et al. 2014).

With an aging population and changing families, the question then becomes the degree to which Americans still see eldercare as a family responsibility and specifically one for adult

children in an era of family change (Silverstein 2016; Swartz 2009) and the variation of attitudes within important demographic groups in the U.S. I use data from the 2012 General Social Survey to test demographic group differences in attitudes toward eldercare. This chapter contributes to the literature by providing a snapshot of attitudes toward eldercare in the U.S. and tests for group differences among three important demographic groups within the U.S. I argue, in turn, that each of these groups is important to study based on demographic changes occurring within each group.

Background

Eldercare attitudes reflect cultural values and norms around family and intergenerational relationships in a society (Bengston 2001; Rossi 1990). Cultural values and norms inform "people what is appropriate in various situations" (Schwartz 1999:25). These attitudes have the power to influence public policies (Bogenschneider 2000; Henderson et al. 1995; Silverstein and Parrott 2001), and studying attitudes can help gauge the extent to which policies match expectations of the public (Wijckmans 2013). For instance, the U.S. generally adheres to a "family as caregiver" ideology (Folbre 2002; Marcum and Treas 2013; Thornton and Young-DeMarco 2001), and our policies reflect that ideology by limiting publicly-funded programs and family supports, such as paid leave to take care of ill family members (Earle, Mokomane, and Heymann 2011).

Recent analysis of heterogeneity in public attitudes within the United States remains unexamined. While several new studies provide insight into eldercare attitudes, most focus on international comparisons (Mair et al. 2016; Marcum and Treas 2013), and therefore cannot take into account the unique demographic composition of the United States, especially by race and educational attainment (Glick 2010) which may be important for understanding attitudes.

Previous work in the U.S. has been limited by localized samples or has examined only those who are currently providing eldercare. It is important to gauge attitudes at a national level, even among those who do not currently provide care, because public attitudes can help shape public policies.

The literature explores a variety of attitudes toward the elderly and eldercare, but I will focus on two attitudes specifically: filial obligation and institutional responsibility. First, filial obligation is the attitude that adult children should care for elderly parents (Finley, Roberts, and Banahan 1988; Ganong and Coleman 1998). This attitude can be understood to be a cultural and social norm around parent and child relationships, meaning that most people within a culture will accept this as true (Schwartz 1999). Filial obligation clearly points to a specific part of the family, adult children, and their responsibility for another specific part of the family, their parents. While it does not directly state reciprocity, the inherent idea is that parents have supported children, so children should support parents later in life. Americans widely agree with this attitude of filial obligation (Finley et al. 1988; Ganong and Coleman 1998).

The second attitude , which I call "institutional responsibility," focuses on which institution Americans see as being responsible for providing help every day to the elderly (Stokes 2013). This institutional responsibility attitude is more complex because it considers norms and responsibilities of various institutions, instead of just family relationships alone. By asking which institution should help the elderly, this attitude can be considered to be reflecting sociopolitical attitudes of the respondent toward their perceived responsibility of particular institutions (Pew Research Center 2015; Stokes 2013). Americans generally do not agree on attitudes toward institutions and their responsibilities, especially government (Henderson et al.

1995; Silverstein and Parrott 2001; Stokes 2013), so this attitude may have more variation than filial obligation.

While both of these attitudes gauge slightly different concepts, they both measure acceptance of social norms for the appropriateness of behavior (Burr and Mutchler 1999). These attitudes are important to study because they potentially suggest a shift in social attitudes and norms away from the traditional expectations for families to provide care for the elderly to other institutional support. With the aging population, alongside changing family structure, who will provide care for the elderly has been repeatedly questioned in the literature (Cherlin and Seltzer 2014; Swartz 2009). I am pushing this question even further to ask, in an era of family disruption which particular groups hold which attitudes toward the elderly?

Group Differences in Attitudes

Recent research suggests that attitudes toward eldercare may be shifting among groups which previously held strong family care beliefs (Mair et al. 2016; Marcum and Treas 2013). This suggests, that as demographic groups shift within a nation, so do their attitudes (Swartz 2009); said another way, attitudes may not be universal and instead, there is a degree of difference across various demographic groups regarding particular attitudes. I focus my analyses on three main demographic group distinctions of importance within the U.S.: gender, race, and education. I start with gender.

Despite many changes regarding gender and family roles, many caregiving norms still assert that women are primarily responsible for these tasks (Folbre 2002). Women are more likely than men to perform caregiving behavior as well, which some scholars argue confirms women's stronger ties to social norms (Finley 1989). While older studies suggest that women and men similarly support family caregiving for the elderly (Finley 1989; Ganong and Coleman

1998), more recent analyses suggest that women's attitudes may be shifting regarding family caregiving for the elderly. An international evaluation shows that women, compared to men, are actually less supportive of family care for the elderly (Mair et al. 2016). In addition, women's attitudes toward family tend to liberalize before men (Gerson 2010; Thornton and Young-DeMarco 2001), and women are more supportive of government programming and supportive policies for families compared to men (Pew Research Center 2015; Silverstein and Parrott 2001; Stokes 2013).

Gender is an important demographic group to investigate because of shifts in women's labor force participation. Women and men continue to share roughly equal population size within the U.S., but women have increased their labor force participation over time and continue to do so into older ages (United States Department of Labor n.d.), increasing their labor force attachment as a group (Robison, Moen, and Dempster-McClain 1995). While attitude research is limited, studies on caregiving behavior show that when men and women's employment is more similar, their caregiving behavior becomes more similar (Couch, Daly, and Wolf 1999; Sarkisian and Gerstel 2004a). So, there is reason to believe that U.S. women's attitudes may be changing as they contribute more to the labor force, and become more aware of the economic reality of balancing care and work.

H1: Women will be less supportive of filial obligation and family based institutional support compared to men.

Race has been a focus of many studies around caregiving attitudes, but these prior studies tend to compare only Whites and Blacks and often rely only on samples of current caregivers. Further, results are mixed; while some studies find that Black families have an overall higher support for filial responsibility compared to Whites (Burr and Mutchler 1999; Lee, Peek, and

Coward 1998), not all research finds this racial difference (Lye 1996) with one study finding stronger support for filial obligations among White respondents compared to Black respondents (Hanson, Sauer, and Seelbach 1983). Black respondents, compared to White respondents, are more likely to support family care over government supports (Seelbach and Sauer 1977), but Blacks are also more likely to support government programming compared to Whites (Stokes 2013).

Among the family caregiver population specifically, Blacks and Hispanics are more likely to support filial obligation attitudes compared to Whites (Burr and Mutchler 1999; Connell and Gibson 1997; Lawton et al. 1992). However, some caregiver studies show no racial differences in these attitudes among Black and White caregivers (Young and Kahana 1995), between Blacks and Hispanics (Cox and Nkomo 1991), or even among many different racial and ethnic groups within the U.S. (Scharlach et al. 2006). Some of the differences in findings may be accounted for by the samples used because they only gauge attitudes only among caregivers who may be more likely to be supportive of these attitudes due to their social selection into and ongoing participation in caregiving responsibilities.

Racial/ethnic group differences become more salient with the changing racial/ethnic composition of the U.S. population. The Hispanic population is expected to triple by 2050, and America today is more diverse in race and ethnicity than in any previous era (Scommegna 2004). This highlights the importance of using a nationally representative sample to better understand potential group differences by race regarding eldercare attitudes.

H2: Racial and ethnic minorities will be more supportive of filial obligation and family based institutional support than White respondents.

Some scholars have argued that those with greater educational attainment may be increasingly tied to a strengthened sense of family obligation (Cherlin 2014; Cooney 1994). However, others have argued that there are no educational differences in attitudes, with the general social norms of a society being seen as universal, such as commitment to marriage for instance (Thornton 1989). It is less clear how education may tie to attitudes of eldercare, but among the general caregiving literature and specifically that which focuses on childcare, we know that greater educational attainment is associated with stronger norms of intensive family caregiving (Hays 1998; Lareau 2011). This could potentially be applied to eldercare in the same way, in that more educational attainment will be associated with stronger support of family caregiving due to norms of intensive caregiving. Research on other family attitudes, such as marriage and divorce attitudes, has shown that education is positively correlated with traditional family-based attitudes (Thornton, Alwin, and Camburn 1983).

The reason why it is important to study educational differences in attitudes toward eldercare is because of the increasing importance of education as a source of family stratification in the U.S. Educational attainment is increasing over time within the U.S. (National Center for Education Statistics 2012), and is increasingly tied to family formation patterns, including lower divorce rates and a return to more traditional family forms in more educated families (Cherlin 2014). It is important to test whether educational attainment is not only changing family behavior but whether it is also changing family attitudes as well.

H3: College educated respondents will be more supportive of both filial obligation and family based institutional care.

Data and Methods

The General Social Survey (GSS) is a nationally representative cross-sectional survey that has been administered since 1972 through the National Opinion Research Center (NORC) at the University of Chicago. The current study relies on the 2012 survey because it provides an elder care module (National Opinion Research Center n.d.). This module is missing at random for one-third of the sample due to planned survey design; outside of this there was a low level of missingness in the sample otherwise including less than 1% missing on race, age, years of education or gender. To handle missing data, I used Stata 14 to run multiple imputation with chained equations (m=25) for all dependent and independent variables. The total sample size after imputation is 1,974 American adults.

Dependent Variables

I use two dependent attitude variables in this study. The first derives from the following statement: "adult children are important help for elderly parents." This variable is referred to as "filial obligation" attitude. Respondents are given a five-point Likert scale to indicate their agreement with this statement. The original distribution of the item is highly left-skewed; in addition, because of the very small size of respondents who "strongly disagree," there were issues with imputing the full scale. Therefore, I dichotomize the scale to be those who "Strongly Agree or Agree" (=1) and those who respondent "neither," "disagree," or "strongly disagree (=0) This question is focused on providing help in general which could imply personal or instrumental care if that becomes necessary. This item specifically states one part of the family, adult children, caring for their parents.

The second dependent variable is based on the following item: "thinking about elderly people who need some help in their everyday lives, such as help with grocery shopping, cleaning

the house, doing laundry, who do you think should primarily provide this help?" Choices include: "family," "government," "non-profits," and "private providers." Non-profits were clarified to be charitable organizations, churches, or religious organizations (National Opinion Research Center n.d.). I use a dichotomous measure predicting whether they chose "family" (=1) versus all non-family institutions (=0) to first measure whether respondents think that the family or other outside institutions should care for the elderly. This variable is referred to as the "institutional responsibility" attitude and gauges whether respondents feel like eldercare is a public, non-family institution based, or private, family based, responsibility. The two most common categories for respondents were family and government; therefore, an additional analysis uses a dichotomous measure of family (1) versus government (0).

Instead of specifying only one provider of care and "help" in general like filial obligation, this question is more complex. It asks the respondent to think through the norms and responsibilities of each institution as well as which is responsible for this very specific set of everyday tasks. These "everyday tasks" are known as instrumental activities of daily living (IADLs) and include a range of tasks including household maintenance, doing laundry, shopping, and traveling (Centers for Disease Control and Prevention 2009). Among those aged 65 and older, 12.1 percent need help with IADLs, compared to 3.1 percent of the total adult (18 and older) population (Centers for Disease Control and Prevention 2009). These limitations increase over the lifespan, especially after age 65 (Wolinsky et al. 2011).

Independent Variables

I use three main demographic groups as independent variables in this study, including: gender, race and ethnicity, educational attainment, and age. Gender is coded female (=1) and male (=0). Race and ethnicity are two separate questions in the GSS and are combined to make

four mutually exclusive categories: (1) White, non-Hispanic [reference group]; (2) Black, non-Hispanic; (3) Hispanic; (4) Other, non-Hispanic. I use these categories because they represent the largest racial and ethnic groups within the GSS as well as in the general population in the U.S. Respondents are asked the number of "years of education" completed, ranging from 0 to 20 years of education. Given that the sample was split almost evenly between those with 12 years of education (43%) and those with more than 12 years, and considering that college education is increasingly important for family attitudes and behaviors (Cherlin 2014; Thornton et al. 1983), in the analyses, I dichotomize this variable to be those with 12 years of education (=0) compared to those with more (=1).

Controls

Finally, I control for a variety of variables shown to impact family attitudes (Alwin 1996; Mair et al. 2016; Marcum and Treas 2013; Thornton 1989; Thornton and Young-DeMarco 2001): age, marital status, number of children, number of siblings, frequency of visits to family, residential mobility since childhood, whether the respondent is employed, and family income. All respondents are age 18 or older, with a cap category of 89+, and age is treated as a continuous variable in my models. Marital status is dichotomized for (1) married compared to (0) not married (divorced, separated, widowed, and never married). A continuous variable for number of siblings ranges from 0 to 21. Similarly, number of children under 18 range from 0 to 7 and is treated as continuous. I include a continuous item indicating how often respondents see their relatives. Responses include: (1) never, (2) once a year, (3) several times a year, (4) once a month, (5) several times a month, (6) several times a week, and (7) almost daily. Similar to Alwin (1996), I approximate respondents' proximity to their parents based on their residential mobility since age 16. Respondents could report living in (1) the same city, (2) same state,

different city, or (3) different state as when they were 16; same city is the omitted category I also control for whether the respondent is employed (1) or not (0), and logged income. Early models did control for whether a parent currently resides within the respondent's household but results were never significant and were removed from the models due to challenges with imputation because of small sample size.

Analytic Strategy

Sample weights are used to make the results nationally representative (Alwin 1996; National Opinion Research Center n.d.). All results reported use the imputed dataset, except Figure 1 and Figure 2 which show the distribution of attitudes before imputation. First, I run a series of bivariate models for each demographic group separately to test for group differences in attitudes of filial obligation, followed by attitudes of family caregiving. I then use a series of multivariate logistic regressions to test filial obligation attitudes, specifically. In Model 1, I test whether there are any demographic differences in my groups when entering all groups into the model together. In Model 2, I control for family and employment characteristics. All results are reported in odds ratios. Next, I use a similar set of multivariate logistic regressions to test attitudes toward institutional responsibility. In Model 1, I test whether there are any demographic differences in my groups. In Model 2, I control for family and employment characteristics.

Because the two most common choices for eldercare among this sample are family and government, additional analyses tested group differences between those who endorsed family as the institution to provide help for the elderly compared to those who support government help. With this new test, the coefficient estimates are unbiased if somewhat less efficient. In Model 1, I test whether there are any demographic differences in my groups. In Model 2, I control for family and employment characteristics. All results are reported in odds ratios.

Results

Descriptive Statistics

Figures 1 and 2 capture the distribution on each attitude item before imputation, using the available samples for each question. Figure 1 shows that a majority (86.1%) of the original sample agreed or strongly agreed that adult children should help their elderly parents, with only a small minority (6.2%) of the sample disagreeing or strongly disagreeing with this attitude. Figure 2 shows that a majority (66.0%) of the original sample thinks that the family should provide help with IADLs for the elderly compared to the other institutions. Government was the second most common institution chosen to provide help (16.5%), followed by private providers (9.3%), and non-profits/charitable organizations (8.2%).

Descriptive statistics using the imputed and weighted dataset are presented in Table 1. A majority (84.5%) of the sample supports filial obligation, while a majority (70.3%) also supports family based institutional responsibility for eldercare. Just over half of the sample is female (53.9%) and ranges in age from 18 to 89+, with an average age of 46 years old. A majority of the sample is White (64.0%), followed by Hispanic (15.2%), African American (14.5%), and "Other" (6.0%). The average amount of education within the sample is 13.5 years, or the equivalent of some college attendance.

A majority of the sample is married (52.3%), with an average of 1.9 children and 3.6 siblings. Respondents see their family on average one or a few times a month (mean = 4.7). In regards to mobility since age 16, 39.4% of the sample lives in the same town they grew up in, followed by 36.7% who live in a different state, and lastly, 23.9% who live in the same state but

a different city. Finally, over half (61.1%) of the sample is currently employed and the average household income is roughly $40,000.

Means Between Groups Regarding Filial Obligation and Family Caregiving

I present means for each attitude separately in Table 2; results can be read as proportions. Results for filial obligation are on the left side of Table 2. There is only a small difference in support for filial obligation between men and women (men=.84, women=.85), but the difference is not statistically significant. Black respondents have a higher rate of support for filial obligation compared to White and Hispanic respondents (Black=.89, White=.84, Hispanic=.81), but the difference is not significant. Those with higher educational attainment are slightly more likely to support filial obligation (high school or less=.84, some college or more=.85), but again, the difference is not significant.

Results for the institutional responsibility attitude are presented on the right side of the Table 2. Men are slightly more supportive of families providing care versus other institutions than women (men=.69, women=.72), but the difference is not significant. Black respondents are less supportive of family caregiving and more supportive of other institutions providing care compared to all other racial groups; the difference is only significant between Black respondents and White respondents (Black=.54, White=.74, $p<.05$). Those with some college or higher educational attainment are statistically more supportive of family as an institution for caregiving compared to those who have a high school degree or less (high school=.66, some college or more =.74, $p<.05$).

Multivariate Regression Results

Turning to my regression models, I report odds ratios for all models in Tables 3, 4, and 5. Results for filial obligation are presented in Table 3. Similar to the bivariate results above, there

is no statistically significant group difference in odds of support for filial obligation among the demographic groups of interest. Among the control variables, the odds of supporting filial obligation are 55% greater for adults who live in the same city they grew up in compared to those who live in a different state ($e^{\beta} = 1.55$; $p<.05$).

Results for the institutional responsibility attitude are presented in Table 4. In Model 1, there is a significant difference in the odds of supporting the family as an institution of care. First, the odds of support are 57% lower among Black respondents compared to White respondents ($e^{\beta} = 0.43$; $p<.01$). Further tests show that this significant difference only holds between Blacks and Whites, and not Blacks and the other two racial groups. Also in Model 1, the odds of supporting family as the institution responsible for care for the elderly are 42% greater among those with more than a high school education compared to those with a high school degree or less ($e^{\beta} = 1.42$; $p<.05$). In Model 2, controlling for family and personal characteristics does not affect the odds between race, education and the family caregiving attitude, and no control variables show a significant association with this second attitude.

Table 5 presents results of further institutional analyses, reducing the sample to only those who chose family or government. In Model 1, the odds of supporting family as the institution responsible for eldercare compared to government care is 70% lower among Black respondents compared to White respondents ($e^{\beta} = 0.30$; $p<.001$). Also in Model 1, the odds of supporting family as the institution responsible for care for the elderly are 88% greater among those with more than a high school education compared to those with a high school degree or less ($e^{\beta} = 1.88$; $p<.01$). In Model 2, controlling for family and personal characteristics slightly reduces the odds for each of these groups; the odds for Black respondents is reduced to 67% lower than Whites ($e^{\beta} = 0.34$; $p<.001$) and for those with more than a high school degree, the

odds are reduced to 73% greater support for family as the institution responsible for eldercare compared to government ($e^{\beta} = 1.73$; $p<.05$). No control variables show a significant association with this simplified version of the institutional responsibility attitude.

Sensitivity analysis

To further understand the associations I find in my models, I test two additional items as control variables: respondents' attitudes toward current spending on Social Security, and respondents' current caregiving responsibilities. First, I test whether controlling for a Social Security attitude affects the associations in my models. I test this item because people's attitudes tend to cluster, or "individuals' responses to the program-specific spending items are generally quite consistent with their other political predispositions" (Jacoby 1994: 354). This variable asks the respondent whether the government spends enough money on Social Security, with responses ranging from (1) "too little" to (2) "just right" to (3) "too much." Over half (56%) of the sample felt that there was too little spending on social security, followed by a third (35.6%) who felt that spending was just right, and 8.4% thought current spending was too much. I first run simple bivariate analyses to see if Social Security attitudes are significantly associated with my two dependent variables. Results show no significant association between this Social Security attitude and an attitude toward filial obligation. However, there was a significant association for institutional responsibility; those who support more funding for Social Security are less supportive of the idea that family should be responsible for caregiving. This suggests that these attitudes may group together, and controlling for this attitude may help to explain institutional responsibility attitudes. So, next, I run a multivariate analysis controlling for attitudes toward Social Security. Yet the results for both, original attitude variables do not change with the inclusion of the Social Security attitude measure.

A large proportion of previous studies on eldercare attitudes use samples of current caregivers, but attitudes could differ greatly between those who are currently caregiving and those who are not. Those who are currently providing caregiving may be more inclined to support attitudes toward family based caregiving because they are already doing so; therefore, it becomes important to gauge attitudes for both caregivers and non-caregivers. While I cannot test whether the respondent is caregiving for elderly parents specifically, I do test an additional item that asks the respondent about their current caregiving responsibilities in general as a proxy measure. The item asks: "on average, how many hours a week do you spend looking after family members, e.g. children, elderly, ill or disabled family members?" Within my sample, respondents spend a range of 0 to 97 hours per week on family caregiving, with an average of 19 hours per week, or 2.7 hours a day. First, I use bivariate analyses to test an association between more hours in family caregiving and either filial obligation or institutional responsibility attitudes; neither are significant. For the multivariate analysis, controlling for hours of family caregiving did not affect any of the original odds for either of the two dependent variables. In sum, controlling for Social Security attitudes or the number of hours the respondent is providing care does alter the observed group differences in attitudes that I find in my original analyses.

Discussion

Eldercare attitudes within the U.S. are increasingly important as the population ages, caregiving needs surge, and supportive policies for family caregiving continue to be lacking. Attitudes toward eldercare are especially relevant given the emphasis within the U.S. on family caregiving that occurs alongside shrinking family sizes and increased family complexity. Additionally, the U.S. provides a unique perspective within which to understand caregiving attitudes, with its strong family-based caregiving ideology but limited social policies to support

such caregiving alongside shifting demographics. Less is known about whether these attitudes are heterogeneous within the U.S. or whether particular groups hold a certain ideology compared to other groups. In this study, I question whether there are within-group differences in attitudes toward eldercare among three important demographic groups within the U.S.: gender, race, and education.

As results show, there is little variation between different demographic groups regarding the filial obligation attitude in the U.S; a majority of Americans see adult children as an important source of care for their parents. This news should come as a relief to policy makers who may worry that changes in the family in the U.S. may loosen people's views on family obligations (Cherlin 2010; Silverstein 2016), leaving a large population of the elderly without support from their children. The U.S., despite many demographic family changes, continue to see the reciprocal relationship of children caring for their parents as an important social norm.

Interestingly, those respondents who reside in the same city as they did growing up are more likely to support filial obligation than those who have moved away. While the current data does not allow for causal inferences, future research should explore whether those who live in the same location as their parent have stronger filial obligations because they live in the same area, potentially move back to care for parents given their strong filial obligation attitudes, or their strong ties to this attitude reduce their likelihood of leaving the same city in the first place. This is important because physical mobility is increasingly common in the U.S. (Eichenlaub, Tolnay, and Alexander 2015).

While there is still strong support for filial obligation, results did show group differences in regards to institutional responsibility. Black respondents, compared to White respondents, are more supportive of government as an institution responsible for the elderly, mirroring previous

research on government support by race (Silverstein and Parrott 2001; Stokes 2013). This finding creates a puzzle, however, considering that research among caregivers finds that Blacks are less satisfied with non-family care compared to Whites (LaVeist, Nickerson, and Bowie 2000), as well as support family care over government intervention (Seelbach and Sauer 1977). In regards to my specific sample, Black respondents had the lowest income of all racial groups with an average income of $25,000 per year, and Black respondents were more likely to be providing care to another person among all racial/ethnic groups (though the difference was not significant). Perhaps, fewer household resources in terms of both money and time, alongside stronger support of government programming and policies in general shift Black respondents attitudes toward government aide when families are overwhelmed and under resourced. Future research should further investigate this interesting finding; an avenue for potential research would be to investigate age by race interactions or even race by gender interactions, considering these interactions may be important within group distinctions (Fingerman et al. 2011).

Also regarding institutional responsibility, those with more education are more supportive of family caregiving compared to those with a high school degree or less. This finding aligns with recent work on the association between education and family; those with more education are more likely to have traditional families (Cherlin 2014), as well as adhere to norms around intensive caregiving (Hays 1998). This finding is interesting because it marks another way in which education may be increasingly tied to family formation and obligations. Future research should continue to investigate the ways in which educational attainment influences family attitudes toward the elderly.

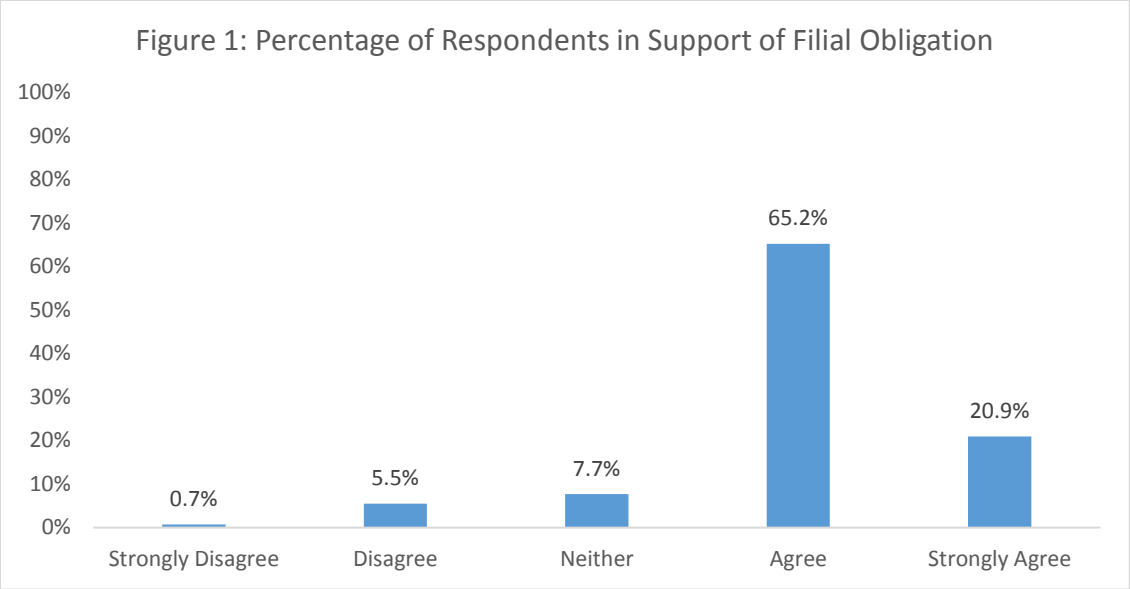
The fact that the two attitude items yield separate results confirms that they are measuring two different phenomenon. Filial obligation continues to be a strong norm within American

culture regarding family values. However, once the helping behavior is made specific, in terms of particular tasks, and respondents are asked to choose among various types of providers (including organizational and institutional options), there is more ambivalence. Some intergenerational scholars suggest that ambivalence is an important part of understanding these intergenerational relationships (Fingerman and Birditt 2013; Lüscher and Pillemer 1998), and this disconnect between ideology and potential behavior deserves further research. In a review of eldercare attitudes, Seelbach (1984) summarized American views to be that families are responsible for emotional and psychological support, while the government is seen as responsible for financial support, including pensions and medical coverage. While the two questions I use in my study cannot measure these distinctions specifically, prior research informs my current results. Respondents may be seeing this question regarding institutional responsibility as gauging medical support because the item lists specific tasks, compared to filial obligation which is a broader categorization of help and social support.

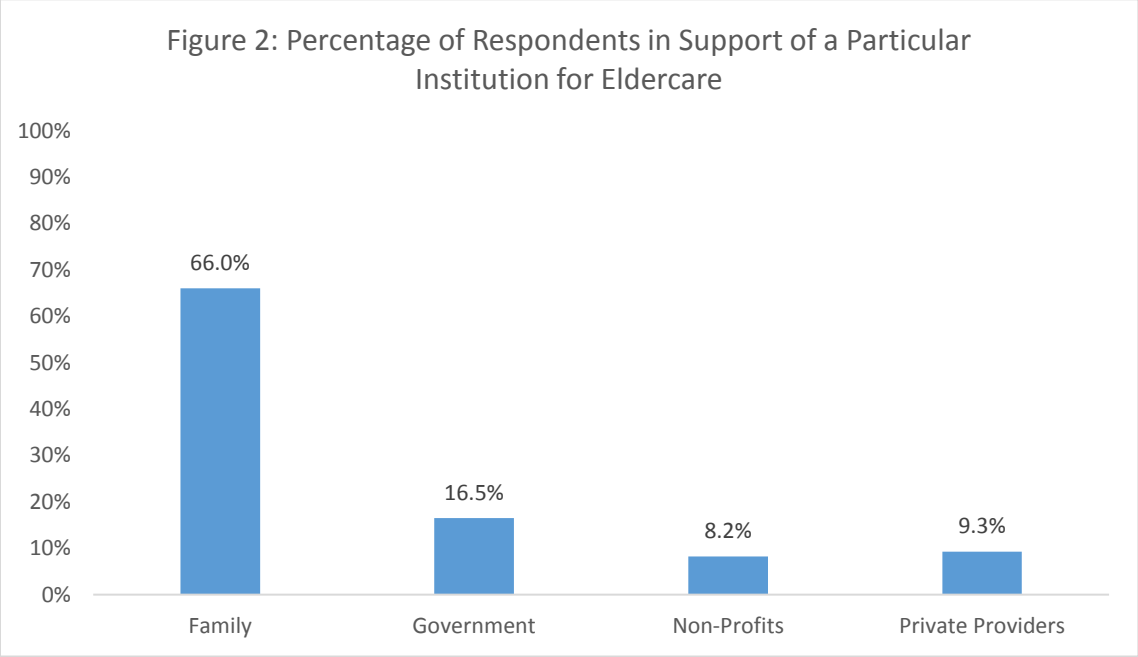
This study has limitations. First, the data is limited by only including one year of cross-sectional data. Going forward, it would be helpful to field these questions over time. Second, by not asking "who" specifically would do the caregiving for the elderly (beyond "adult children" for the first item and "family" for the second), these attitude questions miss a vital aspect of caregiving, namely, that most caregiving within a family is done by female family members (Bianchi and Milkie 2010; Dwyer 2015; Folbre 2002; Moen, Robison, and Fields 1994; Spillman et al. 2014). Future research should specify which family member would be providing the care to accurately gauge attitudes and signal which family members might experience the most caregiving. Third, because I dichotomous both of my dependent variables, I may be missing important variation in attitudes. Future analyses should further test how attitudes may differ by

other group combinations, for example by race and gender combined, or age and cohort differences within these demographic groups.

This study contributes to the literature in a few ways. First, it uses recent, nationally representative data to gauge heterogeneity within the United States regarding eldercare attitudes. Second, it confirms strong support for filial obligation within the United States. Third, Black respondents and other racial and ethnic minorities are more supportive of government as the responsible institution for the elderly, compared to Whites. This finding is important because the U.S. population is increasingly diverse, and as the population ages, this finding suggests that there may be public program service gaps between what the public desires and what is offered. Last, those with higher educational attainment are more supportive of family caregiving, suggesting that eldercare may be another way in which highly educated families are becoming more strongly tied to traditional family norms similar to Cherlin's (2014) work. Overall, this study highlights the importance of gauging national level attitudes about eldercare and looking for differences among different demographic groups.



Data: Original sample from the General Social Survey, N=1,276



Data: Original sample from the General Social Survey, N=1,156

Table 1. Descriptive Statistics for Multiply Imputed, Weighted General Social Survey Data

	Mean or proportion	Range
Attitude Items		
Support for Filial Obligation	84.5%	
Support for Family Caregiving	70.3%	
Demographic Groups		
Gender		
Female	53.9%	
Male	46.0%	
Race/Ethnicity		
White, non-Hispanic	64.4%	
Black, non-Hispanic	14.5%	
Hispanic	15.2%	
Other, non-Hispanic	6.0%	
Years of Education	13.5	0 - 20
High School Degree or Less	43.0%	
Some College or More	57.0%	
Control Variables		
Age	46.10	18 - 89
Married	52.3%	
Number of Siblings	3.6	0 - 30
Number of Children	1.9	0 - 8
Frequency of Family Visits	4.70	0 - 7
Residential Mobility Since Age 16		
Same City	39.4%	
Same State, Different City	23.9%	
Different State	36.7%	
Employed	61.1%	
Family Income	$39,423	$0 - $155K

Data: Multiply imputed data from the General Social Survey, N=1,974

Table 2: Mean Level of Support for Each Attitude by Demographic Group

	Filial Obligation	Family Caregiving	
Male	.851 (0.02)	.715 (0.02)	
Female	.840 (0.02)	.693 (0.02)	
White	.837 (0.02)	.739 (0.02)	
Black	.888 (0.03)	.543 (0.05)	a
Hispanic	.810 (0.04)	.699 (0.04)	
Other	.917 (0.04)	.712 (0.06)	
High School Degree or Less	.840 (0.02)	.658 (0.02)	
Some College or More	.851 (0.02)	.737 (0.02)	b

Data: Multiply imputed, weighted data from the General Social Survey, N=1,974
Note: Standard errors are in parentheses
a=significant difference between Blacks and White (p<.05)
b=significant difference between H.S. Degree and Some College (p<.05)

Table 3. Logistic Regression Results (Odds Ratios) for Support of Filial Obligation

	Model 1	Model 2	
Demographic Groups			
Female	0.91 (0.17)	0.92 (0.18)	
Race/Ethnicity (White omitted)			
Black, non-Hispanic	1.57 (0.48)	1.46 (0.46)	
Hispanic	0.84 (0.20)	0.79 (0.21)	
Other, non-Hispanic	2.23 (1.34)	2.22 (1.32)	
Some College or More	1.08 (0.19)	1.03 (0.21)	
Control Variables			
Age		1.03 (0.21)	
Age Squared		1.00 (0.00)	
Married		0.81 (0.18)	
Number of Siblings		0.97 (0.03)	
Number of Children		1.10 (0.07)	
Frequency of Family Visits		1.04 (0.06)	
Residential Mobility Since Age 16 (Different State omitted)			
Same State, Different City		1.41 (0.32)	
Same City		1.55 (0.31)	*
Employed		1.39 (0.39)	
Family Income (logged)		1.00 (0.11)	

Data: Multiply imputed, weighted data from the General Social Survey, N=1,974

Note: Standard errors are in parentheses., *p<.05

Table 4. Logistic Regression Results (Odds Ratios) for Support of Family Institutional Responsibility

	Model 1		Model 2	
Demographic Groups				
Female	0.91 (0.12)		0.89 (0.13)	
Race/Ethnicity (White omitted)				
Black, non-Hispanic	0.43 (0.10)	**	0.43 (0.11)	**
Hispanic	0.89 (0.20)		0.86 (0.21)	
Other, non-Hispanic	0.84 (0.26)		0.84 (0.26)	
Some College or More	1.42 (0.21)	*	1.47 (0.23)	*
Control Variables				
Age			1.02 (0.23)	
Age Squared			1.00 (0.00)	
Married			1.17 (0.20)	
Number of Siblings			0.98 (0.02)	
Number of Children			1.08 (0.05)	
Frequency of Family Visits			0.99 (0.05)	
Residential Mobility Since Age 16 (Different State omitted)				
Same State, Different City			1.34 (0.24)	
Same City			1.16 (0.20)	
Employed			1.11 (0.22)	
Family Income (logged)			0.93 (0.07)	

Data: Multiply imputed, weighted data from the General Social Survey, N=1,974
Note: Standard errors are in parentheses.; * p<.05, ** p<.01

Table 5. Logistic Regression Results (Odds Ratios) for Support of Family Care (=1) vs. Government Care (=0)

	Model 1		Model 2	
Demographic Groups				
Female	0.91 (0.16)		0.98 (0.18)	
Race/Ethnicity (White omitted)				
Black, non-Hispanic	0.30 (0.07)	***	0.34 (0.09)	***
Hispanic	0.72 (0.22)		0.73 (0.22)	
Other, non-Hispanic	0.49 (0.22)		0.55 (0.24)	
Some College or More	1.88 (0.33)	**	1.73 (0.36)	*
Control Variables				
Age			0.96 (0.03)	
Age Squared			1.00 (0.00)	
Married			1.35 (0.33)	
Number of Siblings			1.01 (0.03)	
Number of Children			1.03 (0.06)	
Frequency of Family Visits			0.93 (0.06)	
Residential Mobility Since Age 16 (Different State omitted)				
Same State, Different City			1.70 (0.48)	
Same City			1.36 (0.33)	
Employed			1.26 (0.27)	
Family Income (logged)			1.10 (0.11)	

Data: Multiply imputed, weighted data from the General Social Survey, N=1,613,
* p<.05, ** p<.01, ***p<.001; Note: Standard errors are in parentheses.

Chapter 3: Childhood Family Structure and Later Giving of Time and Money to Parents

Adult children are a common source of aid for parents, including intergenerational transfers of time and financial resources (Spillman et al. 2014). Adult children are expected to help their parents (see first chapter), and they do. This help provides an important, unpaid resource in society. Current estimates show that informal family care makes up over half (55%) of the estimated value of care for elderly (Hagen 2013). Caregiving also serves as a social good in that it improves outcomes for those receiving family care. Parents who receive family care are more likely to age in place, or stay out of nursing homes and other institutions, reducing social costs to the rest of society (Greenfield 2013; Sabia 2008). Adult children also provide supplemental care, even when a parent is institutionalized (Agree and Glaser 2009), so family care plays an important role in society along the whole spectrum of types of care for aging parents.

But, eldercare needs are increasing due to an aging population, placing more pressure on adult children to care for parents now more than ever before (Cherlin and Seltzer 2014; Metlife Mature Market Institute 2011). From 1994 to 2008, the percentage of men who provided help with basic care to their parent increased from 3 percent to 17 percent; for women, the percentage went from 9 to 28 percent (Metlife Mature Market Institute 2011). It is expected that these needs will continue to increase with the aging population (Wolinsky et al. 2011).

At the same time, intergenerational relationship obligations are becoming increasingly unclear as American family structures have shifted (Cherlin 2010; Silverstein 2016; Swartz 2009). Divorce is now commonplace in American society, with dramatic increases over the last 100 years (Kennedy and Ruggles 2014). The Baby Boom generation is the largest generation of elderly that the U.S. has ever had and the first generation in which divorce is relatively common

(Pezzin, Pollak, and Schone 2008; Suitor et al. 2011). Such high levels of divorce raise concern because divorce leads to unclear norms within the family (Cherlin 1978, 2010), including for intergenerational relationships and transfers (Swartz 2009).

While a majority of studies on intergenerational transfers from adult children to their parents focus on the adult child's current marital status, only a handful of studies have investigated how transfers from adult children change within the context of experiencing a childhood divorce (Suitor et al. 2011). Divorce is an important family event and leads to negative outcomes for parents and children, including reduced relationship quality, further distance, and strained relationships (Amato and Booth 1997) and is important to study given the familial nature of caregiving in the U.S. Patterns regarding "the long reach of divorce" (Amato and Keith 1991) on later transfers from adult children to their parents are mixed (Suitor et al. 2011). A majority of the studies sample generations in which divorce was "new" as well as when it was peaking in the 1980s (Kennedy and Ruggles 2014). Therefore, this chapter will add to the literature by using data from a broader age range of adult children to study whether divorce has a cumulative effect on later to transfers in a day and age when divorce is more common but also more accepted. Here, using the Panel Survey of Income Dynamics information, I test whether experiencing a childhood divorce continues to have a "long reach" by investigating how childhood family structure is associated with transfers to parents later in life.

Background

It is important to understand the magnitude and intensity of help provided by adult children to their parents. If adult children are not available or do not want to provide transfers to their parents, the burden will fall to the rest of society (Fast, Williamson, and Keating 1999). This is a problem because government and private agencies are not currently designed to fill this

gap (Olson 1994). Much like other household labor, caregiving by family members is often unseen and done without pay or knowledge of the true cost (Folbre 2002; Olson 1994).

Theoretical Framework: Linked Lives and Experiencing a Parental Divorce

In order to understand the association between experiencing a childhood divorce and later transfers to parents, my study will use a general framework of the Life Course theory's "linked lives" perspective and measure specific dimensions of linked lives, often referred to as the Intergenerational Solidarity Theory (IST). Life Course theory is widely used in Sociology to understand the ways in which early life events may impact later life (Elder Jr. 1998; Glaser et al. 2008), and often describes the way in which people are connected as "linked lives." Lives are linked because a change in one family member's life has the potential to impact other family members; family members are tied together through life course transitions. For instance, a parent's divorce not only impacts the parent experiencing the divorce, but also the children present; their lives are "linked" together by this same life course transition. Thinking about it differently, linked lives suggests that current behavior can be explained by earlier life course ties within the family, such as the experience of a divorce (Amato and Booth 1997). For instance, an adult child who experienced a childhood divorce reduces their current giving to a parent because of the strained relationship between them and their divorced parent.

I focus on the specific life course transition of experiencing a childhood divorce and how this may disrupt the linked lives of parents and children later in life. Because individuals are embedded within intergenerational relationships (Dykstra and Hagestad 2016), divorce will likely fracture the relationships between children and parents, thus reducing the transfers from adult children to parents later in life (Cooney 1994; Cooney and Uhlenberg 1990; Daatland 2007; Popenoe 1993; Shapiro and Cooney 2010; Wallerstein 1991). In theory, divorce "jeopardizes the

system of interdependencies and normative obligations" (Shapiro and Cooney 2010:203), and the impact of a divorce on family members is often negative for both adults and children alike (Amato 2000, 2010).

Adult children who experienced a parent's divorce compared to those who have not experienced a divorce show many negative impacts on their relationship including affection and agreement (Amato and Booth 1997). Experiencing a childhood divorce leads to lower quality relationships between adult children and their parents (Amato and Booth 1997; Cooney and Uhlenberg 1990), further physical distance (Braver, Ellman, and Fabricius 2003), as well as many other negative impacts on the linked lives of the parents and children (Amato and Cheadle 2005). This negative impact on the parent and child relationship will likely persist into later years, and the adult child may be more likely to reduce their later giving to their parents who are divorced. Divorce often causes strain on parent and child relationship that continues over the life course (Cooney and Uhlenberg 1990). When children live apart from one parent after a divorce, they may not be in contact or have as close of a relationship, which weakens the overall relationship. This relationship strain may continue into later life, and children who experienced a parent's divorce may reduce their giving because of this life long relationship strain. It is important to study this early life event and the effect on later giving because adult children today are more likely than any other prior generation to experience a childhood family disruption due to divorce (Amato 2010; Cherlin and Seltzer 2014; Masters, Hummer, and Powers 2012; Suitor et al. 2011).

The impact of experiencing a childhood divorce may see by measuring assistance between an adult child and parent later in life (Bengtson and Roberts 1991; Sarkisian and Gerstel 2008). The Intergenerational Solidarity Theory (IST) identifies measurable dimensions of linked

lives, such as exchanges of time and money between family members or emotional exchanges (Bengston 2001; Bengtson and Roberts 1991). I focus on two IST dimensions: "functional," or transfers of time and money from adult children to their parents, and "structural," here family structure. I focus on these two dimensions of linked lives because if this help is not provided by family members, it must be provided by other institutions like nursing homes or social service agencies (Fast et al. 1999), but these social service and government agencies currently rely on families bear these costs (Olson 1994). The research available on the behavior of adult children who experienced a childhood parental divorce is mixed with some finding that divorce does negatively affect later functional giving, with others finding no significant differences between children raised in a divorced household compared to those in an intact household (Lye 1996; Shapiro and Cooney 2010; Suitor et al. 2011).

Among the studies that find a parental divorce during childhood reduces transfers from adult children to their parents later in life (Furstenberg, Hoffman, and Shrestha 1995; Lin 2008; Pezzin et al. 2008), many argue that "ruptures in parent-child relationships brought about by a divorce are rarely healed in later life" (Dykstra 1997:90). These patterns are seen among U.S. samples as well as samples from European countries with divorce rates similar to the U.S. For instance, using data from adults in the Netherlands, Dykstra (1997) finds that experiencing a parental divorce reduces time given to parents. However, limitations of this study include the use of a broad comparison of "ever-divorced" parents compared to those never divorced, making it impossible to separate effects of parental divorce experienced during childhood from that experienced in adulthood. Additionally, she only investigates time transfers and not financial ones.

Also using data from adults in the Netherlands, Kalminjin (2007) finds that experiencing a parental divorce during childhood before age 18 has a strong negative effect on adult children's contact and exchanges of time with parents later in life. A limitation of his study is that he does not investigate financial transfers from adult children to parents. Daatland (2007) uses data from adults in Norway and finds that, compared to never-divorced parents, divorced parents receive less help overall from adult children using a combination of both time and financial help with one overall "help" category. Daatland uses a similar comparison to Dykstra (1997) of ever-divorced versus never-divorced, potentially missing the particular effect of a childhood experience of divorce.

Some studies that use U.S. samples find similar results. Davey et al (2007), use the National Survey of Families and Households (NSFH) and find that experiencing a divorce during childhood, before age 18, increases later support to a mother, but there is no association for fathers. A limitation of their study is that they combine both time and financial transfers into one measure of "help" to parents. While some studies argue that combining measures into one overall giving is valid (Amato, Rezac, and Booth 1995), I believe that they are distinct measures and should be measured separately. Last, among the studies that show a negative association between experiencing a parental divorce during childhood and later giving to parents, Furstenberg et al (1995) use the Panel Survey of Income Dynamics (PSID) survey from 1988. They restrict their analysis to only a subsample of adult children whose parents are also in the PSID, have complete marital history, and were not widowed; this sampling strategy may underestimate the true association between childhood family structure and later giving. Furstenberg et al (1995) finds that experiencing a parental divorce during childhood, under age

18, reduces the time adult children later transfer to their parents; they do not investigate financial transfers from adult children to parents, however.

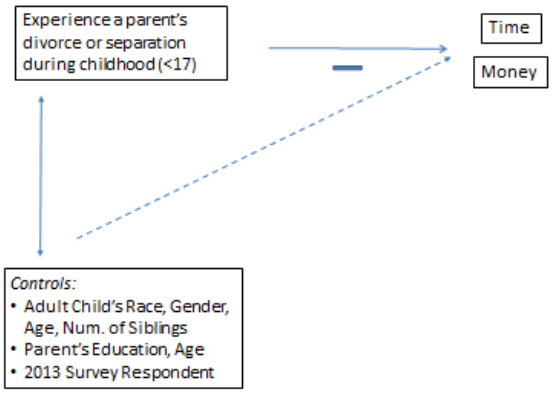
In contrast, some research supports the null hypothesis and shows no association between experiencing a parental divorce during childhood and later transfers to parents (Aquilino 1994; Cooney 1994; Glaser et al. 2008). Aquilino (1994) uses the NSFH to compare a broad set of parents, including always married parents, single mothers, remarried mothers, single fathers, remarried fathers, children raised with no parent, or those raised with adoptive parents. One limitation of his study is that he excludes any of those adult children who experienced multiple family transitions and those missing family structure information, potentially truncating the sample of children who experience these diverse family structures during childhood. He finds no significant difference between adult children raised in divorced households compared to those raised in married households, even by gender and remarriage of the parent (Aquilino 1994).

White (1994) also uses the NSFH and combines both time and financial transfers into one measure of help to parents. She uses three categories of family structure: intact, or those raised with both parents through age 19 who are still married to one another; single parent, or those whose parents divorced before the respondent was age 19 and both are still alive but not remarried; and, remarried parents, or those who divorced when the respondent was younger than 19, but now are remarried. In analysis where she combined categories of adult children who experienced a divorce during childhood at all compared to those who did not, she finds no significant difference in the association of giving help to parents later in life. Finally, among studies that find no association between childhood family structure and later giving to parents, Glaser et al (2008) use the British Household Panel Survey, and finds that parent's marital dissolution during childhood, ages 0 to 17, did not reduce the likelihood of transferring help to

parents later in life. One limitation of their study is that they removed parents who cohabit, potentially limiting the sample of parents receiving transfers.

To summarize, among the studies available that test time transfers, a slight majority find that experiencing a childhood divorce reduces later giving to parents, and others find no association between experiencing a parental divorce during childhood and later giving to parents. Only two studies investigate financial transfers as a separate concept from time and neither of them find an association between childhood family structure and later giving of money. The limitations of previous studies include combining time and financial help into one measure of general help, not separating out childhood experiences of divorce as distinct from a parent ever divorcing, and removing those who experienced many family transitions or those who had one parent pass away or live in a non-traditional family structure. Therefore, my study contributes to the literature by investigating how childhood family structure specifically is associated with later giving to parents, keeping measures of time and money separate as well as measuring diverse family structures. Following the divorce literature, I expect that experiencing a childhood divorce will reduce giving of both time and money to parents later in life; this is modeled in Figure 1 above.

Figure 1: Main Model

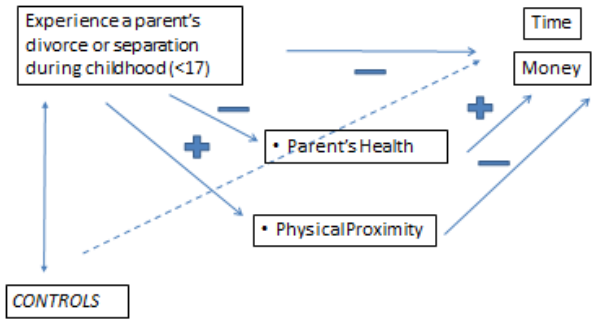


H1: Adult children who experienced a parental divorce during childhood have lower odds of giving time and money to parents later in life compared to adult children raised by married parents.

Mechanisms

Another contribution of my study is the consideration of potential mechanisms that may help explain some of the relationship between childhood family structure and giving to parents later in life (Suitor et al. 2011). I focus on parent's current health as well as residential distance between adult children and their parents because these factors are likely influenced by the childhood family structure as modeled in Figure 2 below. These variables are important because they not only have the potential to affect parent's need for help, but also the adult children's ability to provide transfers of money and time.

Figure 2: Mechanisms



Divorce has a negative effect on the health of the person experiencing it (Umberson et al. 2006). Divorced parents may therefore have worse health than parents who are still married (Umberson et al. 2006), which then increases their need for help from their adult children. A parent's poor health has been shown to trigger an increase in care from children (Glaser et al. 2008; Silverstein 2016). Therefore, it is expected that a divorced parent will be in worse health, which then puts them at greater need or earlier need for help from their adult children, who in turn increase the amount of help they provide to the divorced parent. Here, I am hypothesizing that if a parent's divorce can have a positive effect on later giving, that this can be explained through the mechanism of poor health.

H2a: Adult children who experienced a parental divorce during childhood will have higher odds of having a parent in poor health.

H2b: Having a parent in poor health will be associated with higher odds of giving time to parents.

Divorce also has the potential to affect physical distance between family members, which can then negatively affect transfers from adult children to their parents (Aquilino 1994). Divorced children are more likely to have greater physical distance from at least one parent (Suitor et al. 2011). In a study of college students, over half experienced a parent moving more than one hour away from them after a divorce, and a quarter moved with their custodial mother away from their father (Braver et al. 2003). Increased residential distance from a parent decreases the help given to parents later in life (Laditka and Laditka 2001; Suitor et al. 2011), though some evidence suggests that physical distance may not diminish caregiving (Cagle and Munn 2012). Overall, I expect that children who experienced a parent's divorce during childhood will live farther from them, and in turn, they will reduce their transfers to their parents because of increased distance.

H3a: Adult children who experienced a parental divorce during childhood will live further from parents.

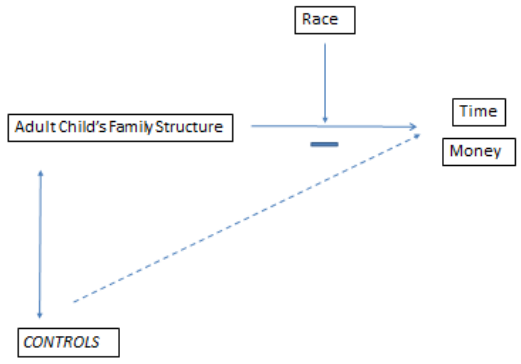
H3b: Living further from parents will be associated with lower odds of giving time and money to parents.

Race, Family Structure, and Giving

I also consider the ways in which childhood family structure may vary by race and how this helps explain provisions of help and finances to parents from adult children. Scholars argue that despite many studies that investigate race and family structure separately, few provide a complete picture of how family structure experiences for Blacks and Whites may vary for their giving behavior (Pavalko 2011; Sarkisian and Gerstel 2004a; Silverstein and Giarrusso 2010;

Suitor et al. 2011). The literature falls on two sides on the issue of race, family structure, and giving to parents.

Figure 3: Race and Giving



One set of studies argues that divorce increases the disadvantages Blacks experience. Because Blacks are more likely to experience a parental divorce or single parenthood growing up (Aughinbaugh, Robles, and Sun 2013; Vespa et al. 2013), this view predicts worse outcomes and fewer resources for Blacks to share between family members, leading to a cycle of inequality within these families (McLanahan and Percheski 2008). On the contrary, some studies argue that despite family disruption, Black families may be more resilient and not worse off even in the face of diverse family structures (Hill 2003; Sarkisian and Gerstel 2004b). This literature argues that the cultural ties within Black families are stronger and Blacks' stronger emphasis on filial obligation (Sarkisian and Gerstel 2004b) works over any family disruption or disadvantage.

No studies that I am aware of investigate the interaction between race and childhood family structure regarding later giving to parents. Two studies investigate race and the adult child's family structure and find that marital status reduces transfers to parents for Whites, but not for Blacks (Laditka and Laditka 2001; Lee and Aytac 1998), suggesting support for the argument of the strength of Black families. In an additional study, Peek et al. (2000) point out that there is little resolution regarding whether family structure differences by race can help account for the propensity to receive care from adult children. In their study of older adults, they do not directly test an interaction effect of marital status, but instead use additive models controlling for "family characteristics" which includes co-residence with an adult child or

grandchild and number of children. They find that Black adult children are more likely to give care to parents compared to White adult children, and that this can be accounted for by the family characteristics they measure (Peek et al. 2000). Given these three studies, I expect that the experience of a divorce during childhood may differentially affect Blacks and Whites and the transfers they provide to their parents later in life. This is modeled in Figure 3 above.

H3: Experiencing a divorce during childhood will not be associated with later giving of time and money to parents for Black adult children, but it will be for White adult children.

Gendered Giving

Last, I consider parent's gender in the association between family disruption and later giving. Mothers receive more help from adult children than fathers do (Chesley and Poppie 2009; Furstenberg et al. 1995; Kaufman and Uhlenberg 1998; Silverstein et al. 2002). Potential explanations for this trend may be because women, compared to men, live longer (Harper et al. 2014), are more likely to live in poverty (Meyer and Herd 2007), have lower self-reported health for longer periods of time (Case and Paxson 2005), as well as live closer to their adult children (Choi et al. 2014). All of these potential explanations may increase the chances of transfers to mothers over fathers, given previous literature.

Divorce often has greater negative impacts on children's relationships with their fathers than with their mothers. Divorced fathers often live further from their children after the divorce (Braver et al. 2003), as well as have lower quality of relationships with their adult children, compared to divorced mothers and their adult children (Cooney and Uhlenberg 1990). With lower relationship quality and potentially further distance from their fathers, I expect that divorce will have a negative association with later giving to parents by adult children, especially for

giving to divorced fathers (Furstenberg et al. 1995; Kalmijn 2007; Kaufman and Uhlenberg 1998).

H4: Adult children who experienced a divorce will give less time and money to fathers than they will give to mothers.

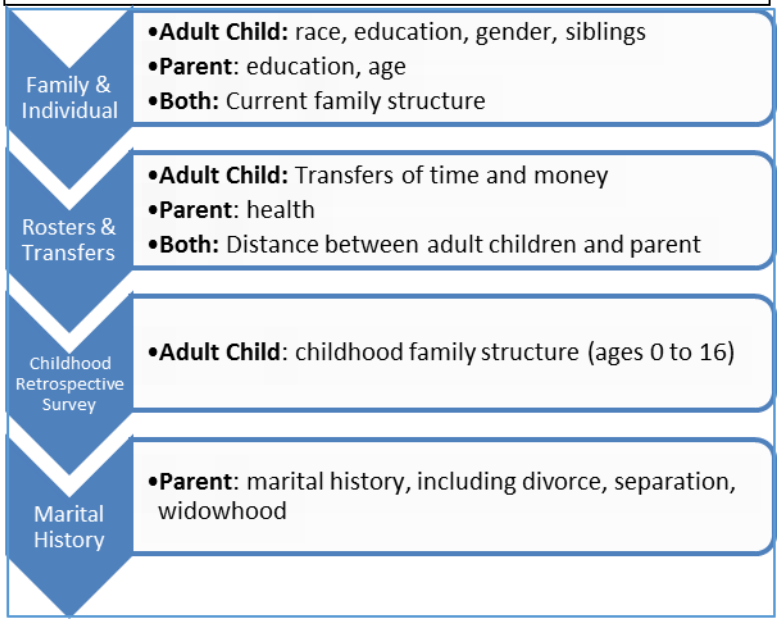
Summary

Results from previous research on the association of childhood family structure on the provisions of time and money to parents have mixed results, with some finding that divorce negatively impacts later giving from adult children to their parents and others find no association (Suitor et al. 2011). However, a majority of the studies do find a negative association between experiencing a parent's divorce during childhood and later giving to parents. Most of the research studying this phenomenon combines both measures of time and money together or only investigates time (with two exceptions). Additionally, few studies consider potential explanatory mechanisms in this association or the ways in which experiences of family structure may work differently for Black and White adult children. Therefore, my study has three main contributions: first, I build on the handful of studies on the effect of childhood divorce on later giving to parents using separate measures of time and money, and keep all family forms in my sample; second, I consider mechanisms for this relationship, specifically parent's health and distance between the adult child and parent; third, I test how childhood family structure experiences by race may help explain giving patterns; fourth, I build on previous literature that shows a difference in giving to mothers and giving to fathers and test whether childhood family structure helps explain these patterns.

Data and Methods

I use the Panel of Survey Income Dynamics (PSID) to study the association between childhood family structure and later transfers of time and money to parents by adult children. One of the benefits of using the 2013 transfer data is the low levels of non-response on intergenerational items (McGonagle et al. 2012) as well as more sensitive measures of financial transfers. Because of the way that the PSID survey is designed, the PSID is more sensitive to even small exchanges of money (less than $500) between family members, compared to other surveys (Mcgarry and Schoeni 1997). This is important to my study because these smaller measures of financial exchanges may provide a more robust picture of intergenerational transfers among low income families and other types of families that may have fewer financial resources, such as divorced households.

Figure 4. Datasets within PSID used to build my dataset



The PSID began collecting data on a nationally representative sample in 1968 of over 18,230 individuals living in 4,802 families across the United States. PSID collected data annually until 1997 when it changed to biennial data collection (Institute for Social Research and Panel Study of Income Dynamics 2014). The PSID collects information on households, but also individuals within the households when possible, allowing for answering intergenerational family based research questions (McGonagle et al. 2012). Because the data was nationally representative of families from 1968, it is best used

to analyze Black and White families, and Blacks are over sampled making weights important for national representation (Institute for Social Research and Panel Study of Income Dynamics 2014). My final dataset draws from five separate but connected datasets within the PSID to gather information on my variables of interest as illustrated in Figure 4. All information was collected in 2013, except the Childhood Retrospective Study (CRS) which was collected in 2014.

In 2013, there were 9,063 families participating in the data collection. The 2013 survey includes an extension survey, referred to by PSID as the 2013 Rosters and Transfers dataset, to collect complete family level information on parent and child relationships for each of the 9,063 families, as well as transfers of time and money between households. For this chapter, I focus on the adult child's[1] giving to their own parents, including their biological, adopted, or a step-parent. Respondents can report on only two parents: a mother and a father.[2] This is a limitation of the data. I cannot adequately model a partner's giving due to limited data available for partner's parent's family structure history. I address these issues in my limitations section.

In order to participate in PSID's data collection on transfers from adult children to parents, respondents had to have at least one living parent and be under age 80 (N=6,388). I make further restrictions on my dataset to arrive at my final analytic sample. I drop cases in which the respondent was under 18 years old in 2013 (N=2) and those who do not identify as single race White non-Hispanic or Black-non-Hispanic. I also drop adult children who have

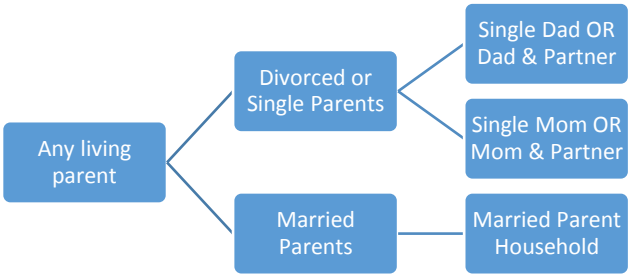
[1] Referred to as "head of household" within the PSID.

[2] The PSID asks "Is your/head/spouse/partner/wife/'wifes' biological or adoptive father/mother alive?" and they can only name one father and name one mother. They are then asked whether those two people are married to one another; if so, they are marked as married parents in this sample. Some respondents have a biological father/mother or adoptive father/mother who has also participated in the PSID; these people are automatically named in the survey. Respondents may also report a "new" father, but this father could be new to the family or new to the survey. If both bio and adoptive mother/father are living they ask "we would like to select the adoptive father/mother for questions for questions about family help," but a note to the surveyor says that they can accept respondent's choice of either bio or adoptive mother/father. The PSID does not have a specific indicator of whether the adult child considers these parents a step-parent.

missing data on their age (N=2) and those missing a number of siblings (N=47) due to challenges with multiply imputing these variables. Finally, I remove adult children who have any co-residential (adult child's or partner's) parents (N=553), similar to previous research which removes these cases (Cooney and Uhlenberg 1990; Furstenberg et al. 1995). The process for exchanging transfers is likely very different when families co-reside, so I focus on those not living together within my sample. There was no significant difference in having a co-residential parent by childhood family structure. My final analytic sample is 4,983 adult children.

While the 2013 transfers data has a low level of missingness (McGonagle et al. 2012), imputation was necessary due to the measure of childhood family structure. There was high missingness on the retrospective reports due to planned design (56%) and marital history files also have high missingness (58%) considering that only those adult children whose parents are also in the PSID would have this data. These percentages are typical for the historical information in PSID due to survey design (Furstenberg et al. 1995). Multiple imputation is best suited to address these issues of missingness and helps correct for such high levels of missingness (Allison 2001). In a listwise deletion sample, childhood family structure was not significantly associated with later giving. However, this could be because there is such a high level of missingness on that measure; therefore, imputation will help give a better picture of whether this relationship exists with a better sample of information.

Figure 5: Parent Household Structures for Giving



Using STATA 14, I use the "mi impute mvn" command to perform multivariate imputation on 10 data sets to address missingness. The imputation equations use all model

variables as well as auxiliary variables including transfers given to the wife's parents, the adult child's current marital status, adult child's income, adult child's homeownership, age at which their mother gave birth to them, the intensity of childhood financial struggles, and the adult child's employment status. All results use the imputed data with the 2013 cross-sectional weight to make results nationally representative for Black and White families.

Dependent Variables

I measure adult children's "functional" transfers, or giving of time and money to their own parents, based on a series of measures. The most common transfer is time. This includes a range of helping with tasks such as household maintenance, doing laundry, shopping, and traveling (Centers for Disease Control and Prevention 2009; Kahn, McGill, and Bianchi 2011; Spillman et al. 2014). These tasks are also known as instrumental activities of daily living (IADLs) (Centers for Disease Control and Prevention 2009; Work and Family Research Network n.d.) and limitations in IADLs increase over the lifespan, especially after age 65 (Wolinsky et al. 2011). To measure transfers of time the PSID asks: "Families sometimes help each other with activities such as errands, rides, chores, babysitting, or hands-on care. In 2012, did you/spouse spend time helping you or your wife's parent(s)?" Respondents provide information for this question on each parent household, including married parent households, or if their mother and father are not married to each other, on those households; I illustrate this breakdown in Figure 5. If the response is yes to the above question, there are two follow up questions regarding how many hours reported as well as unit of time (i.e. per week, month, year). I use this three tiered set of information to create three distinct variables. The first variable is a continuous sum of hours given for the whole year to each parent household separately. The second variable aggregates these individual parent households into a sum of time given across all parent

households. Previous research has used this total across all parent to help control for the fact that adult children from divorced households will have more parents to give to than those whose parent's marriages are intact (Amato et al. 1995: 372). Last, the total sum across all parents is used to create a dichotomous measure for whether the adult child gave any time to any parent household (=1) or not (=0). As noted above, only the adult child's parents are used in these analyses; I omit information about and the couple's interactions with the partner or spouse's parent(s).

The second most common type of functional help to parents that I measure here is financial resource transfers, or giving money. While this transfer is less common (McGarry and Schoeni 1995), it still signals an important intergenerational tie between family members. Questions asking about the transfer of money from adult children to their parents are similar. PSID asks: "In 2012, did you/spouse give any money, loans or gifts of $100 or more to your parent(s)?" Two follow-up questions ask: how much and frequency (i.e. per week, month, year). Three variables are created from these questions that mirror the time variables. The first variable is the sum of money given for the whole year to each parent household separately. The second variable aggregates these individual parent households into a sum amount of money for all parent households. Last, the sum for all parent households is used to create a dichotomous measure for whether the adult child gave any money to any parent household (=1) or not (=0).

Independent Variable

One multinomial variable for childhood family structure (CFS) was constructed to measure categories of parent's marital status during the adult child's childhood. The three categories for childhood family structure are: parent's marriage intact, parents divorced or separated, or parents were single due to never marrying or widowhood. To ensure a consistent

age window across the two sources I use for this measure, childhood is measured here as ages 0 to 16. I construct this one variable using a coding hierarchy, first relying on the parent's marital history file,[3] and if that is not available, second, the adult child's retrospective report.[4] While retrospective reports are often reliable, I use this hierarchy to ensure two things: greater inclusion of available data to construct my main independent variable and reliance on parental report on their own marital history followed by the child's report. If the adult child had married parents who never experienced a divorce, separation, or widowhood between the child's ages of 0 and 16, the adult child is coded as having married parents during childhood (=1). Those adult children who did experience a parental divorce or separation during childhood are coded into the second category (=2), and those adult children who experienced a widowed parent or never married parent during childhood were coded into the third category (=3). Due to the limited sample size of those adult children whose parents remained single or who were widowed, these two categories were combined into one category.

Mediators

I have two potential mediators in my analysis. First, I create a count measure of whether the adult child has any parent in poor health using the adult child's response to the following question: "Compared to others his/her age, is his/her health excellent, very good, good, fair, or poor?" Original categories include: excellent (=5), very good (=4), good (=3), fair (=2), and poor (=1). My measure counts the number of parents who are in poor health. Previous research

[3] Parents who have been in the PSID as a respondent themselves have marital history information. The marital history collects information on the year in which the marriage ended due to divorce, separation, or widowhood. I then subtract the adult child's year of birth from the year in which a parental family disruption occurred. If the event occurred between the child's ages of 0 and 16, they were marked as having experienced that event during childhood.
[4] The Childhood Retrospective Study asks respondents to name a man and woman who raised them, including their mother/father, step-mother/step-father, or other mother/father figure. They ask follow-up questions about whether these two people were married to one another or whether they separated or divorce before the respondent was age 17. Adult children could say their parent was never married, married and report no divorce or separation, or report a parental divorce/separation; retrospective reports do not allow for measuring parental widowhood

has shown that having a parent in poor health increases their need for help (Glaser et al. 2008; Silverstein, Parrott, and Bengtson 1995), therefore I focus on parent's who are in poor health here.

Second, I measure the current physical distance between parents and children in miles. The PSID constructs this distance measure based on the child's and parent's current addresses; distance between the adult child and each parent is the miles between the centroid of the places in which they live. Previous research has shown that those adult children living within 10 miles of their parent are more likely to give more time (Laditka and Laditka 2001), so I create a count measure of how many parents the adult child has living over 10 miles from them.

Controls

I control for several adult child factors shown to be important to intergenerational transfers (Couch et al. 1999; Kahn et al. 2011; Laditka and Laditka 2001; Silverstein and Giarrusso 2010): gender of the adult child (male=1); adult child's current age (range: 18 to 76); race (Black =1 and White=0) and, the adult child's number of siblings (range: 0 to 19). In addition, I control for whether the report was completed by the head. A majority of the 2013 module respondent are the head (69.3%), followed by the wife (25.4%), or a cohabiting partner (2.8%), but a small number of respondents were another member within the household (1.3%) or someone outside the family unit (2.3%).

If the adult child has only one parent, I control for the following parent factors shown to be important in previous literature (Albertini, Kohli, and Vogel 2007; Harknett and Knab 2007; Suitor et al. 2011): parent's age (range: 29 to 103); parent's years of completed education (range: 1 to 17 years). If more than one parent was alive, I average age and education across all parents.

Parent's ages tended to be within a few years of one another, and so I average them for the analysis.

Analytic Models

To test whether experiencing a childhood divorce or separation negatively impacts later giving to parents, I use three main sets of analyses followed by sub-analyses by race. All analyses use imputed data weighted by the 2013 cross-sectional weight in order to make results nationally representative.

First, using my full sample of adult children who have at least one living parent, in Model 1, I use a bivariate logistic regression model to test whether the adult child gave any time or money to any parent (yes=1). Then, in Model 2, I add a series of controls to see whether CFS effects can be accounted for by these demographic characteristics. In Model 3, if childhood family structure (CFS) is a significant predictor of later transfers to parents, I estimate the role of each hypothesized mediator, adding each into the model by themselves and then together.

For my second series of analyses, I restrict my sample to those adult children who gave any money or time to any parent. In Model 1, I estimate a simple OLS regression model to predict how much total time or money they gave to their parents overall by CFS. In Model 2, I add a series of control variables to test whether these linear associations hold once controlling for other factors. In Model 3, if CFS is a significant predictor of transfers, I estimate the role of each hypothesized mediator, adding each into the model by themselves and then together.

Third, I use Tobit models to test the amount of time and money given to parents using the complete sample of adult children. Similar to the models above, in Model 1, I only include childhood family structure. In Model 2, I enter a series of control variable. If childhood family

structure is a significant predictor of transfers, I then estimate each hypothesized mediator, alone and then together, in Model 3.

Fourth, I analyze differences in the association between CFS and giving by race. First, I run the logistic regressions for odds of any giving of time or money, along with the OLS models for the amounts given, using the interaction term of Black X Childhood Family Structure. I then plot predicted margins, and run a fully interacted model to test differences between White adult children and Black adult children.

Last, I restrict my sample to those adult children who have both a living mother and a living father whom are not married to one another. Using a multinomial logistic regression, I predict whether they give to: (a) no one, (b) their mother (and partner) only, (c) their father (and partner) only, and (d) both parents. In Model 1, I test whether CFS predicts giving, followed by Model 2 which enters a series of control variables into the model. In Model 3, if CFS is a significant predictor of transfers, I estimate the role of each hypothesized mediator separately and then together.

Results

Descriptive Statistics

First, I present descriptive statistics on the full sample in Table 1 along with a breakdown by race. All results reported are from the imputed, weighted data. Among the full sample (N=4,983), 58.9% do not provide any time to any parent, while 41.1 % say they gave some time to their parent(s) in the last year. Similar to previous studies, adult children are less likely to provide financial transfers to their parents. A majority of adult children (86.0 %) do not provide any financial transfers to parents while 14.0% say they did provide money to their parent(s) in the last year. Adult children provide a range of 0 hours across all parents per year to a high of

8,736 hours per year, the equivalent of 24 hours a day/seven days a week. On average among the full sample, adult children provide of 94 hours of time to their parents per year; this is about 1.8 hours per week. Adult children provide a range of no financial transfers to their parents to a high of $43,800 per year. On average, in the full sample, adult children provide $158 per year across all parents.

Turning to childhood family structure, 75.1% of adult children were raised in a married parent family, 20.1% experienced a parent's divorce or separation as a child, and 4.8% were raised in a single parent household due to widowhood or the parent never marrying. A majority (82.3%) of my sample is non-Hispanic White and 17.7% are non-Hispanic Black. A majority (72.7%) of the adult children in my sample are male, and 27.3% are female.[5] My sample ranges in age from 18 to 76 years of age, with an average age of about 42 years old. A majority (69.3%) of the respondents were the adult child. Adult children had a range of 0 to 19 siblings, with an average of 2.5 siblings and 75% of the sample having 4 or fewer siblings. Parents range in age from 29 to 103 years old, with an average parent age of 68 years old. The adult child's report of the parent's health ranges from poor to excellent, with an average health rating of about 3, which is "good" health. Parent's years of education range from 1 year of education to 17 years of education, with an average of 13.3 years of education, or some college attendance.

Table 1 also provides descriptive statistics broken down by race. Here, I focus solely on the differences in childhood family structure by race. A majority of both Blacks and Whites in my sample are raised in a married parent home during childhood (57.3% vs. 78.9% respectively). A larger percentage of Black adult children are raised in a divorced/separated home compared to White adult children (33.1% vs. 17.3% respectively), and more Black adult children are raised in

[5] This is a limitation of the way the PSID organizes their data and collects information. I address this in my discussion section.

a single parent home compared to White adult children (10.0% vs. 3.8% respectively). White adult children in my sample are significantly more likely to be raised in a married parent home during childhood than Black adult children ($p<.001$).

Means of Giving Time and Money by Childhood Family Structure

Table 2 provides means of giving any time or money by CFS and parent's current partnership status. These means should be read as proportions; for instance, 40% of those adult children who grew up in a married family where the parents are still married give time to those parents. These means show general patterns, though no comparisons by CFS were statistically significant. Regarding time, single mothers are the most likely to receive any time from their adult children, followed by married parents. Parents who are currently re-partnered are less likely to receive time than their single counterparts. Regarding money, mothers, especially those who remain single, are the most likely to receive any money from the adult children in my sample, though this difference is not statistically significant. Those who grew up in a divorced/separated home during childhood are more likely to give money to parents, except for re-partnered mothers, in which case these adult children are the least likely to give money.

Table 3 provides means for the amount of time or money given to parents by adult children using the full sample. Looking across all parents, the amount of time adult children give is similar by CFS. Those adult children who grew up in divorced/separated or single/widowed homes during childhood give the most hours to their parents, with an average of 103 hours, compared to those who grew up with married parents who only provide 90.5 hours to parents in the last year. Looking at the parent's current marital status, single mothers are the most likely to receive time from adult children. Using an analysis of variance test, I find no significant difference in giving time by CFS, however.

The amount of money that adult children provide to parents varies more than time. Across all types of parents, those adult children who grew up with a single parent give the most money ($350/year), followed by those who grew up with a divorced/separated family ($247/year), and those who grew up with married parents give the least ($121); however, these differences are not statistically significant. Similar to time, single mothers receive the largest financial transfers.

Multivariate Logistic Regression Models of Whether Adult Children Give to Parents

First, I predict the likelihood of transferring any time to parents (yes=1) from adult children using the full sample. These results are on the left side of Table 4 and are presented as odds ratios. In Model 1, I find that CFS is not significantly associated with the likelihood of transferring any time to any parents. Turning briefly to the control variables, I find that the following adult child characteristics are associated with increased odds of giving time to parents: being Black (e^{β} = 1.28, p<.05), as well as having older parents (e^{β} = 1.04, p<.001). In contrast, being male (e^{β} =0.77, p<.01) reduces the odds of giving any time to any parents, as does each additional year of age for respondents (e^{β} =0.97, p<001), and parent's increasing years of education (e^{β} =0.96, p<.05). Because CFS was not associated with giving time, I do not test mechanisms (Model 3, not shown).

Next, I predict the likelihood of transferring any money to parents (yes=1) from adult children using the full sample. These results are presented on the right side of Table 4 and are presented as odds ratios. In Model 1, I find that CFS is not significantly associated with the odds of any financial transfers to parents. Turning briefly to the control variables, I find that the following variables are associated with an increase in odds for adult children giving any money to their parents: being Black (e^{β} =3.03, p<.001), and parent's increased educational attainment

(e^{β} =1.05, p<.05). Because CFS was not associated with giving money, I do not test mechanisms (Model 3, not shown).

Multivariate OLS Regression Models of the Amount Adult Children Give to Parents

In these models, I predict the amount adult children transfer to their parents using the subsample of adult children who reported giving any time or money, respectively. I begin with an analysis of the amount of time; results are presented on the left side of Table 5 and results can be read as hours provided. In Model 1, I find that CFS is not significantly associated with the amount of time transfers to parents for the 41% of my adult child sample who gave any time to their parent in the last year. Turning briefly to the control variables, I find that Black adult children give more hours of time to their parents than White adult children (b=211, p<.01), and males give fewer hours of time to their parents than female adult children (b=-105, p<.01). Because CFS was not associated with giving time, I do not test mechanisms (Model 3, not shown).

Next, I predict the amount of money given to parents among the 14.5% of the original adult child sample who report giving any money to any parent. Results are presented on the right side of Table 4 and can be read as dollar amounts. Childhood family structure is not associated with the amount of money that adult children give to their parents. I also find that control variables do not predict the association. Because CFS was not associated with giving time, I do not test mechanisms (Model 3, not shown).

Conditional Multivariate Models: Differences by Race

In my sample, Black adult children are more likely to have divorced parents or single parent households growing up compared to Whites (p<.05). I test for an interaction association

between race and childhood family structure in an additional set of models. Table 6 presents results for the interactions for the four main models.

The first column in Table 6 presents the results for the odds of giving any time to parents. The Wald test for this model shows that I fail to reject the null hypothesis, meaning that I cannot accept the alternative hypothesis that there is a significant interaction between race and childhood family structure in this model for the odds of giving any time to parents (F=.28; p=.75). This results means that the race variable in the model captures racial differences across all childhood family structures; Black adult children have 137% greater odds of giving any time to their parents compared to White adult children (e^{β} =1.37; p<.05). Figure 6 plots the predicted probabilities of this interaction model which shows that the interaction between CFS and race is not statistically significantly different, but that Black adult children have a higher probability than White adult children of giving any time to parents. Furthermore, when I interact every variable with race (i.e., in a "fully interacted" model), I find that, together, all variables work similarly for Whites and Blacks (F=0.40; p=0.91).

The second column in Table 6 presents the results for the odds of giving any money to parents. The Wald test for this model shows that I fail to reject the null hypothesis; this means that I cannot accept the alternative hypothesis that there is a significant interaction between race and childhood family structure for the odds of giving any money to parents (F=0.09; p=0.91). This results means that the race variable in the model captures racial differences across all childhood family structures; Black adult children have three times the odds of giving any money to their parents compared to White adult children (e^{β} =3.09; p<.05). Figure 7 plots the predicted probabilities of this interaction model which shows that Black adult children have a higher probability than White adult children of giving any money to parents across each type of

childhood family structure. Furthermore, when I interact every variable with race (i.e., in a "fully interacted" model), I find that, together, all variables work similarly for Whites and Blacks (F=0.37; p=0.92).

The third column in Table 6 presents the results for the regression analysis predicting the amount of hours given to parents by adult children of different childhood family structures among those that gave some time to their parents. The Wald test for this model shows that I fail to reject the null hypothesis; this means that I cannot accept the alternative hypothesis that there are significant interaction associations between race and childhood family structure (*F*=0.61; p=0.54). The Wald result means that the race result should be interpreted by itself. In this model, Black adult children give 257 more hours per year (i.e., approximately 5 additional hours per week; p<.01) than White adult children. This result is illustrated in Figure 8 which shows the significant difference between these two groups for the amount of hours they provide their parents each year by race, with Black adult children providing more hours than White adult children. In a fully interacted model, I also find that I cannot reject the null hypothesis for this model (*F*=1.04; p=0.40).

The fourth column in Table 6 presents the results for the regression analysis predicting the amount of dollars given to parents by adult children among those that gave any money. The Wald test for this model shows that I fail to reject the null hypothesis; this means that I cannot accept the alternative hypothesis that there are significant interaction associations between race and childhood family structure (*F*=0.27; p=0.76). In this interaction model, there are no significant race differences within my model; this is also illustrated in Figure 9. In a fully interacted model, I also find that I cannot reject the null hypothesis for this model (*F*=0.95;

p=0.47). Further, the model does suggest that, among those that give some financial transfers to their parents, Black and White adult children give equal amounts.

Tobit Analyses

The previous multivariate OLS regressions were relevant for adult children with at least one living parent who also gave any time or money at all to a parent. Next, I will use Tobit models to jointly estimate the two equations, and adjust for correlated errors that could bias results from my previous tests. These Tobit models test amount of time and money given to parents among all of those with at least one living parent. A Tobit model estimates the association of independent variables on censored dependent variables. Here, there is a censor at zero for hours and dollars if they did not give any to a parent; the Tobit utilizes the information from the "zero" cases, whereas those "zero" cases were dropped in the original OLS analysis. By using a Tobit and identifying the lower limit value of zero, these models estimate expected giving patterns for the full population of adult children with at least one living parent, rather than the conditional expectations for a restricted sample.

Table 7 presents the amount for time (hours) and money (dollars) respectively. Childhood family structure continues to show no association with later giving of time to parents, as reported on the left-hand side of Table 7. To briefly discuss control variables, Black adult children give an estimated 190 hours more per year to their parents than White adult children, holding all other variables constant ($p<.001$). Male compared with female adult children give an estimated 134 hours less per year, holding all other variables constant ($p<.01$). For each additional year of parent's age, there is an estimated difference of 8 hours per years in the expected time given to parents ($p<.01$), and for each additional year of education a parent has,

there is an estimated decline of 17 hours per year in the predicted time given to parents, holding all other variables constant ($p<.01$).

The right-hand side of Table 7 shows no significant association between childhood family structure and the amount of money given to parents. Turning briefly to control variables, Black adult children compared to White adult children on average give two thousand dollars more per year, holding all other variables constant ($p<.001$).

Comparing the OLS regressions for amount of time to the Tobit, I find that when looking across the whole sample of adult children with at least one living parent, childhood family structure is never significantly associated with the hours given to parents. Comparing the OLS regressions for amount of money to the Tobit, I find childhood family structure is never significantly associated with the amount of money given to parents. However, there is a difference that emerges between the OLS and Tobit models regarding money given. In the OLS regression, among adult children who gave any money to parents, there is no significant difference between Blacks and Whites. In the Tobit, however, Black adult children are expected to give over two-thousand dollars more per year to their parents, holding all other variables constant ($p<.001$). The logistic regression showed that Black adult children are three times more likely to give any money to their parent ($e^{\beta} = 3.03$; $p<.001$), and alongside this Tobit results, this suggests that Black adult children give more time and money to their parents than White adult children.

Multinomial Logit Models Predicting Giving to Mothers, Fathers, Both, or Neither

To test gendered giving, my next set of analyses predicts giving to parent households for the subsample of adult children for which their parents are no longer married to one another, regardless of when the parental disruption occurred (N=1,518). I use a multinomial logistic

regression to predict whether childhood family dissolution is associated with giving to (a) neither parent, (b) mother (and partner) only, (c) father (and partner) only, or (d) both parents. Among this subsample of adult children, 60.9% give time to neither their mother or father, 23.5% give time to the mother household only, 4.2% give time to the father household only, and 11.6% give time to both their mother's and father's households. Similar patterns emerge for giving money: 86.2% give to neither, 8.8% to mother household only, 1.1% to father household only, and 4.0% to both. The differences between giving to neither, mother only, father only, and both parent households are all significantly different from one another, for both time and money ($p<.05$). Because giving to neither parent household is the most common type of transfer for both time and money it is the omitted category for these analyses.

The results for giving time for this subsample are presented in Table 8. Childhood family structure does not have a statistically significant association with differences in giving time to certain parents relative to others. Turning to control variables, we see that being Black, compared to being White is associated with almost twice the odds of giving time to a mother only households relative to giving to neither parent hold all other variables constant ($b=0.65$, $e^{\beta}=1.92$, $p<.05$). Overall, Black adult children in this subsample have lower odds than White adult children of giving time to their fathers relative to their mothers ($b=-1.95$, $e^{\beta}=0.14$, $p<.001$), to father only relative to neither parents ($b=-1.30$, $e^{\beta}=0.27$, $p<.01$), and to both relative to mothers only ($b=-0.90$, $e^{\beta}=0.41$, $p<.01$). In other words, Black adult children, compared to White adult children, are more likely to give to their mother relative to other patterns of giving among parents who are not married to one another. Being male ($b=-0.48$, $e^{\beta}=0.62$, $p<.05$) , each year the adult child is older ($b=-0.05$, $e^{\beta}=0.95$, $p<.05$), and each additional sibling ($b=-0.13$, $e^{\beta}=0.88$, $p<.05$) is associated with a reduction in the odds of giving to a mother only relative to

giving to neither household, but having older parents (b=0.05, e^{β}=1.05, p<.05) is associated with a slight increase in the odds of giving time. Finally, every year older the adult child becomes, there is a slight reduction in the odds of giving to both parent households over giving to neither parent household (b=-0.06, e^{β}=0.94, p<.05).

The results for giving money for this subsample are presented in Table 9. Childhood family structure is not associated with giving money to particular parent households relative to one another. Turning briefly to controls, Black adult children have over four times the odds of giving money to a mother relative to giving to neither parents (b=1.47, e^{β}=4.35, p<.001), as well as over three times the odds of giving to both parents relative to giving to neither (b=1.23, e^{β}=3.42, p<.01), compared to White adult children. Black adult children have reduced odds of giving to a father, relative to giving to a mother (b=-2.89, e^{β}=0.06, p<.01), compared to White adult children. Each additional sibling an adult child has is associated with a 139% increase in the odds (b=0.33, e^{β}=1.39, p<.05) of giving to a father household relative to giving to neither parent, as well as an increase in the odds of giving to the father only relative to the mother only (b=0.31, e^{β}=1.36, p<.01). Males have lower odds of giving to both parents relative to giving to neither (b=-0.95, e^{β}=0.39, p<.05) compared to females.

Supplementary Models

I run a series of supplemental analyses. First, I test an alternative specification of childhood family structure; I run the same sequence of analyses as above using a dichotomous measure of childhood family structure: intact CFS (=1; married) vs. non-intact CFS (=0; divorced/separated/single/widowed). I combine the non-married families together into one group in order to increase sample size to improve power to detect group differences. Overall, results mirror those in my original analyses, with one exception. The likelihood of giving any

money to parents was significantly more for children who experienced a non-intact family during childhood ($p<.05$), but entering controls into the model leads this association to become statistically nonsignificant. This association between being raised in a non-intact family and greater giving of money to parents can be accounted for by the adult child's race and parents' education.

Second, I run an additional set of models to test parent's current partnership status as an additional control variable. Parent's current family structure may change adult children's transfer of time and money behavior (Lin 2008; Shapiro 2012). This could be due to the introduction of a spouse to provide care or other adult children (Spillman and Pezzin 2000), or improved health, especially for men (Lillard and Panis 1996). Even though men are more likely to remarry (Seltzer 1994) both re-partnered mothers and fathers often receive less from adult children (Amato et al. 1995; Kalminjin 2007). I measure the parent's current partnership status using the adult child's report on their parent. I dichotomized the measure to be parents who are partnered, including married, living with a partner, or have a partner but the adult child is not sure if they are married, (=1) and those who are not partnered (=0). Overall, I still find no association for CFS, even controlling for parent's current partnership status. For logistic regression models predicting giving any time, I find that controlling for a re-partnered mother is associated with reduced odds of giving any time to any parents (e^{β} =0.72, $p<.05$) , and the same pattern emerges for money (e^{β} =0.49, $p<.01$). Similarly, a mother being re-partnered reduces the amount of hours given to any parents ($b=-150.1$, $p<.05$), but there is no association for amount of money. In the multinomial logistic regression, mothers and fathers being re-partnered reduce the likelihood of receiving time for each respectively, but only mother's re-partnership status reduces the likelihood of her receiving money relatives to neither. Overall, these findings

suggest that being re-partnered reduces giving to parents overall for those with two living parents who experienced a childhood divorce, but that the association is stronger for mothers, perhaps because she is more likely to be receiving help in the first place.

Discussion

As the population ages, the need for family care will increase (Wolinsky et al. 2011). Adult children are one of the most common providers for parents (McGarry 1998; Spillman et al. 2014), but the family structures they experience during childhood have a potential "long reach" into later life (Amato and Keith 1991). Using a linked lives and intergenerational solidarity framework, I test whether family disruption during childhood is associated with reductions in giving time and money to parents later in life. The main goals of this study are to give clarity to previous mixed results on whether CFS is associated with reduced giving to parents later in life, test potential mechanisms in the association between CFS and giving if it is present, provide insight into whether differences in CFS by race is associated with giving, and test whether CFS can account for gendered giving patterns.

While, one out of five adult children in my sample have experienced a family divorce or separation during childhood, overall, I find that CFS is not associated with later giving of time or money to parents. This aligns with studies of attitudes that show strong support for the idea that children should take care of their parents, even divorced ones (Coleman, Ganong, and Rothrauff 2006). This finding contradicts a few studies that find a negative associate with time or overall help, but mirrors a handful of previous studies that found no association (Aquilino 1994; Glaser et al. 2008). The finding regarding money transfers was unsurprising giving similar results in previous research, but no significant differences by childhood family structure for time transfers pose an interesting issue to consider. Empirically, this null finding could be due to measurement

error in the way I constructed my variable or due to omitted variables, such as relationship quality which may better capture the effect of the divorce on later giving.

Theoretically, this null finding suggests that divorce may not have such a "long reach" after all in regards to provisions of time to parents later in life. My findings lend support to the idea that the effects of divorce may not last throughout the life course (Furstenberg et al. 1995). This finding is important because suggests that diverse family structures are now a part of American culture and have less deleterious long term consequences. Alternatively, it could be that norms of taking care of parents later in life are stronger than early family disruptions. One way in which divorce could be "dampened" over time is the fact that with an extended life expectancy children and parents share longer life histories together, which in turn may strengthen bonds even within divorced families (Dykstra 1997). This is good news for those who are worried that family disruptions will sever family ties and leave many parents searching for help later in life and increase their reliance on government for formal care (Spillman and Pezzin 2000). Americans expect families to care and my results suggest, even when experiencing family disruptions, that they do care for parents.

My null race interaction findings suggest support for the enduring strength of Black families (Hill 2003), considering that even within my sample, as in the population, Black adult children are more likely to grow up in divorced or single parents households. Future research should further test race and childhood family structure differences, including the length of parent's marriages or the age at which the adult children experienced their parents' divorce as well as relationship quality across the life course.

Going forward, the help that adult children provide to their parents is important to gauge because of the invisible nature of caregiving. Caregivers often experience a wide range of

negative effects. For instance, adult children who provide aid to their parents experience more emotional strain, which may negatively affect their own well-being (Brody et al. 1987; Fast et al. 1999). Providing for a parent may also isolate the adult child from their normal activities (Fast et al. 1999), including their ability to work (Kossek, Colquitt, and Noe 2001). The direct costs, in addition to the indirect costs, of caregiving can take a toll on the caregiver and their own family; therefore, measuring the frequency and amount of help that adult children provide to their parents is important.

This study has limitations. First, one limitation of this dataset is in the way the transfer questions are asked. If a spouse is present, their help may be counted within the estimates of time given to parents. This may matter for my results because it could be unclear who within the household is actually providing these transfers. For instance, in married households, the wife may be providing time even for the husband's parents potentially overestimating the actual transfers that the head of household is giving to their own parent. While there is some support for the idea that caregiving for the elderly is gendered, most adult children provide care for their own parents compared to other potential caregivers like their spouses (McGarry 1998).

Second, my sample of adult children is largely male due to PSID design. Because women are more likely to provide time to their parents compared to men (Spillman and Pezzin 2000), my limited sample of women may be underestimating an important group of care providers. Further tests that provide matched samples of men and women may help correct some of this.

Third, the transfer questions are very broad and may not fully capture various types of transfers from adult children to their parents. While the PSID financial measure is more sensitive than other surveys, like Health and Retirement study with a lower bound of $500

(McGarry and Schoeni 1995), there are no questions within the PSID about emotional exchanges (Sarkisian and Gerstel 2008), or specific breakdowns of tasks (Amato et al. 1995; Kahn et al. 2011). Divorce has the potential to negatively affect relationship quality between parents and children (Amato et al. 1995), and by not measuring emotional ties, this study could be missing an important form of reduced giving to parents later in life.

Fourth, by limiting my sample to only Black adult children and White adult children, I am missing a clear picture of what transfers look like across a more racially diverse set of families within the United States. As the U.S. becomes more diverse, racially as well as ethnically, understanding transfers across groups is increasingly important. As Seltzer notes (Seltzer 2015), a more in-depth survey of transfers within families across a broader range of the population and time is desperately needed.

There is much left to be explored in this area. Future analyses should test for an association between child custody and later giving to parents. Who the child lived with during childhood may better predict giving to parents because children are more likely to reside with a mothers, potentially increasing their emotional ties with her (Aquilino 1994; Davey et al. 2007). Only one study that I am aware of has investigated the effect of factors like child support payments on later giving to father, but it finds no association (Furstenberg et al. 1995). This deserves more research.

Future research should also further investigate the ways in which giving is reciprocal and whether childhood divorce severs this relationship. Divorce reduces financial well-being, and research has shown that divorce lowers the transfers of time and money from parents down to their adult children (Shapiro and Remle 2011). If parents investment in children is made in hopes of receiving better and more resources from children (Cox and Rank 1992), then divorce

will dampen this potential reciprocal giving between parents and children. In order to test causality, it would be important to have a longitudinal dataset that allows for causal order to be established. In early analyses I found that receiving help from parents was associated with later giving, but it had no effect on the association between CFS and later giving. This deserves more research in the future.

Most studies examine eldercare among adult children who have any living parents. When trying to estimate the effect of childhood divorce on later giving to parents, there is a problem that some parents may have died by the time the survey is administered, thus leading to a selection problem within the samples. The timing of a parent's death is correlated with the same factors that are correlated with eldercare: age of parent, gender, and health, income differences (Warren and Hernandez 2007). This will lead to downward-biased estimates of giving to parents across the life course because the sample is under-representative of the population I am interested in (Puhani 2000). While a strength of my study is that I capture a broad range of ages of adult children, an important addition to the literature in order to capture parents before they die (Barnett 2013; Lin 2008), there may still be a missing parent problem. I originally wanted to test for selection effects, but was limited due to imputation issues. This is an area for future research.

Another important area for future research, especially regarding race and differences in family structure is differences in giving by race, gender, and family structure (Sarkisian and Gerstel 2004b; Silverstein and Waite 1993). This will require a powerful dataset in order to properly test. A strength of my study is that I bring the race and CFS issue to the forefront when considering the effect of divorce on family relationships, but there is more to be done.

Many scholars have worried that divorce will server family ties and leave a population of aging parents without the care they need. However, my findings are not consistent with that perspective and instead suggest that giving to parents is similar despite childhood family structure, suggesting enduring solidarity between adult children and their parents even in an era of family disruption and divorce.

Table 1. Descriptive Statistics

	Range	Mean or proportion	Black N=2,034	White N=2,949
Giving to Parents				
Time				
At all		41.1%	44.9%	40.3%
Total Hours (per year)	0 - 8736	93.8	191.7	72.8
Money				
At all		14.5%	26.5%	11.4%
Total Dollars (per year)	0 - 43800	$158.50	$309.6	$125.9
Childhood Family Structure				
Married		75.1%	57.3%	78.9%
Divorced/Separated		20.1%	33.1%	17.3%
Widowed/Single		4.8%	10.0%	3.8%
Adult Child's Race				
White, Non-Hispanic		82.3%		
Black, Non-Hispanic		17.7%		
Control variables				
Adult Child Characteristics				
Male		72.7%	53.4%	76.8%
Age	18 - 76	41.8	39.0	42.0
Number of Siblings	0 - 19	2.5	3.7	2.2
Head Answered Survey		69.3%	80.8%	66.9%
Parent Characteristics				
Age	29 - 103	68	63	69
Avg. Health Status	1 - 5	3.0	2.9	3.1
Avg. Yrs. of Education	1 - 17	13.3	12.1	13.6

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=4,983
Note: Avg.=Average; Yrs.=Years

Table 2: Proportion Giving Any Time or Money to Parents by Childhood Family Structure and Parent's Current Partnership Status

	Married Parents (N=1,676)	Single Father (N=1,001)	Repart. Father (N=957)	Single Mother (N=2,042)	Repart. Mother (N=825)	Average Across All Parents
Any Time						
Childhood Family Structure						
Married	0.400 (0.02)	0.289 (0.03)	0.144 (0.02)	0.476 (0.03)	0.273 (0.03)	0.409 (0.01)
Divorced/Separated	0.320 (0.15)	0.207 (0.03)	0.141 (0.03)	0.468 (0.04)	0.306 (0.05)	0.427 (0.03)
Widowed/Single	0.445 (0.22)	0.117 (0.09)	0.160 (0.07)	0.397 (0.07)	0.345 (0.10)	0.380 (0.05)
Any Money						
Childhood Family Structure						
Married	0.114 (0.01)	0.081 (0.02)	0.062 (0.02)	0.168 (0.02)	0.105 (0.02)	0.131 (0.01)
Divorced/Separated	0.27 (0.15)	0.046 (0.02)	0.052 (0.03)	0.206 (0.03)	0.067 (0.02)	0.166 (0.02)
Widowed/Single	0.072 (0.07)	0.036 (0.07)	0.005 (0.04)	0.211 (0.05)	0.154 (0.07)	0.185 (0.04)

Table 3. Means of Giving Money or Time to Parents by Childhood Family Structure and Parent's Current Partnership Status

	Married Parents (N=1,676)	Single Father (N=1,001)	Repart. Father (N=957)	Single Mother (N=2,042)	Repart. Mother (N=825)	Avg. of All Parents
Hours of Help to Parent						
Childhood Family Structure						
Married	62.8 (8.14)	63.8 (23.7)	22.6 (10.4)	141.9 (18.9)	43.8 (13.1)	90.5 (8.9)
Divorced/Separated	39.9 (25.5)	27.8 (11.5)	50.5 (24.9)	107.9 (21.9)	39.6 (23.0)	103.9 (17.7)
Widowed/Single	90.8 (70.4)	23.3 (43.2)	26.1 (18.2)	108.3 (34.4)	97.8 (57.6)	103.6 (28.6)
Amount of Money to Parent						
Childhood Family Structure						
Married	81.8 (13.6)	109 (55.6)	46.5 (20.9)	174.6 (59.8)	73.3 (23.6)	121.8 (21.3)
Divorced/Separated	185.4 (93.7)	49.3 (44.7)	42.6 (25.0)	314.7 (141.2)	49.5 (25.0)	247.1 (96.0)
Widowed/Single	29.5 (27.2)	63.4 (205.8)	17.2 (22.5)	482.8 (498.0)	75.9 (27.2)	350.7 (336.7)

Data: Multiply imputed, weighted data from PSID, N=4,983; No differences are statistically sig.

Table 4: Logistic Regression Models (odds ratios) for Giving Any Time or Any Money to Any Parent(s)

	TIME		MONEY	
	Model 1	Model 2	Model 1	Model 2
Childhood Family Structure, Ages 0 to 16				
(married omitted)				
Divorce/Separation	1.07 (0.14)	1.07 (0.14)	1.32 (0.23)	1.13 (0.21)
Single Parent/Widow	0.89 (0.18)	0.85 (0.18)	1.51 (0.38)	1.25 (0.33)
Control Variables				
Adult Child Characteristics				
Black		1.28 (0.15) *		3.03 (0.45) ***
Male		0.77 (0.08) **		0.89 (0.13)
Age		0.97 (0.01) ***		1.00 (0.11)
Number of Siblings		0.96 (0.02)		0.99 (0.30)
Who Answered the Survey		1.09 (0.10)		1.07 (0.14)
Parent Characteristics				
Average Parent Age		1.04 (0.01) ***		1.00 (0.01)
Average Parent Years of Education		0.96 (0.02) *		1.05 (0.28) *

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=4,983, *** p<.001,** p<.01, * p<.05, † = p<.06

Table 5: OLS Regression Models for Amount of Time or Money to Any Parent(s) Among Those Who Gave Any

	TIME (N=2,011)		MONEY (N=833)	
	Model 1	Model 2	Model 1	Model 2
Childhood Family Structure, Ages 0 to 16 *(married omitted)*				
Divorce/Separation	30.5 (42.6)	15.7 (47.5)	555.9 (580.1)	612.2 (626.7)
Single Parent/Widow	57.2 (67.1)	-3.02 (71.5)	967.9 (1811.2)	970.2 (1750.8)
Control Variables				
Adult Child Characteristics				
Black		211.1 (63.0) **		253.3 (250.3)
Male		-105.4 (39.2) **		469.2 (253.8)
Age		3.78 (3.33)		-39.4 (42.1)
Number of Siblings		-4.24 (9.18)		-30.7 (52.7)
Who Answered the Survey		-26.2 (30.7)		494.9 (293.9)
Parent Characteristics				
Average Parent Age		-3.21 (3.55)		61.0 (51.6)
Average Parent Years of Education		14.3 (7.49)		-32.4 (106.5)
Constant	227.2 (19.5) ***	1122.8 (456.5) *	941.7 (144.3) ***	-1803.7 (2329.6)

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=4,983; *** p<.001,** p<.01, * p<.05, † = p<.06

Table 6: Final Regression Models with Race and Childhood Family Structure Interactions

	Any Time (N=4,983)		Any Money (N=4,983)		Hours (N=2,011)		Dollars (N=833)
Childhood Family Structure, Ages 0 to 16 *(married omitted)*							
P. Div/Sep.	1.08 (0.17)		1.12 (0.29)		12.97 (48.37)		661.15 (989.72)
P. Single/Wid.	0.98 (0.26)		1.40 (0.56)		46.13 (73.95)		20129.09 (3255.45)
Control Variables							
Adult Child Characteristics							
Black	1.37 (0.20)	*	3.09 (0.61)	***	256.98 (93.01)	**	474.15 (336.64)
Male	0.76 (0.08)	**	0.89 (0.13)		-104.02 (38.82)	**	492.58 (268.36)
Age	0.98 (0.01)	**	1.01 (0.01)		3.78 (3.33)		-39.98 (41.28)
Number of Siblings	0.97 (0.02)		1.00 (0.01)		-4.12 (9.14)		-32.36 (52.42)
Survey Resp.	1.08 (0.10)		1.07 (0.14)		-25.92 (30.58)		483.80 (289.68)
Parent Characteristics							
Average Parent Age	1.04 (0.01)	***	1.00 (0.01)		-3.18 (3.54)		59.41 (50.22)
Avg. P. Edu.	1.08 (0.01)		1.06 (0.03)	*	-13.96 (7.43)		-34.67 (102.73)
Interaction							
P. Div/Sep * Black	0.99 (0.28)		1.00 (0.41)		-114.62 (129.74)		-228.03 (1011.44)
P. Single/Wid. *Black	0.70 (0.34)		0.78 (0.43)		-165.20 (153.58)		-2204.83 (3203.31)
Constant	0.21 (0.06)	***	0.04 (0.02)	***	536.07 (152.13)	***	-1705.75 (2334.25)
F	0.28		0.09		0.61		0.27
Prob>F	0.75		0.91		0.54		0.76

Data: Multiply imputed, weighted data from PSID; Standard Error in parentheses; Any Time and Any Money are Odds Ratios; Hour and Dollar Models are among the sub-sample of adult children who gave any of each respective transfer. Note: Avg.=Average; Div/Sep=Divorced/Separated; Edu.=Education; P.=Parent; Wid.=Widowed

*** p<.001,** p<.01, * p<.05, † = p<.06

Table 7: Tobit Regression Models for Amount of Time or Money to Any Parent(s)

	TIME			MONEY		
	Model 1		Model 2	Model 1		Model 2	
Childhood Family Structure, Ages 0 to 16 *(married omitted)*							
Divorce/Separation	36.9 (45.47)		7.67 (47.73)	694.70 (446.32)		442.68 (455.37)	
Single Parent/Widow	-3.96 (69.97)		-53.63 (72.13)	1080.54 (888.43)		744.11 (888.22)	
Control Variables							
Adult Child Characteristics							
Black			190.58 (54.45)	***		2048.00 (546.50)	***
Male			-134.20 (38.94)	**		-2.19 (258.93)	
Age			5.39 (2.87)	†		-1.78 (23.67)	
Number of Siblings			-13.30 (8.81)			-20.54 (59.57)	
Who Answered the Survey			7.27 (30.17)			302.08 (267.23)	
Parent Characteristics							
Avg. Parent Age			8.10 (2.85)	**		26.53 (28.86)	
Avg. Yrs. of P.'s Edu.			-17.62 (6.52)	**		82.63 (63.65)	
Constant	-265.78 (31.74)	***	-256.32 (134.76)	†	-4509.88 (1284.91)	***	-7842.77 (2874.74)	**
/Sigma	622.89 (56.27)	***	610.29 (54.25)	***	3749.28 (1001.94)	***	3697.56 (998.85)	***

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=4,983; Note: Avg.=Average; Edu.=Education; P.=Parent; Yrs.=Years *** p<.001,** p<.01, * p<.05, † = p<.06

Table 8. Multinomial Logit Models for Any Giving of Time to Parent(s) Among Those Who Have Both a Living Mother and Father who are not married

	Neither vs. Mother only	Neither vs. Father only	Neither vs. Both	Mother only vs. Father only	Mother only vs. Both	Father only vs. Both
Childhood Family Structure, Ages 0 to 16 *(married omitted)*						
Divorce/Separation	0.26 (0.28)	-0.22 (0.42)	0.07 (0.25)	-0.47 (0.48)	-0.19 (0.33)	0.28 (0.46)
Single Parent/Widow	-0.08 (0.54)	2.09 (1.73)	-0.56 (0.67)	-2.00 (1.54)	-0.47 (0.79)	1.53 (1.83)
Control Variables						
Adult Child Characteristics						
Black	0.65 (0.25) *	-1.30 (0.45) **	-0.25 (0.30)	-1.95 (0.48) ***	-0.90 (0.34) **	1.05 (0.50) *
Male	-0.48 (0.22) *	0.04 (0.40)	-0.26 (0.25)	0.52 (0.43)	0.21 (0.29)	-0.31 (0.44)
Age	-0.05 (0.02) *	-0.06 (0.03)	-0.06 (0.03) *	-0.00 (0.04)	-0.01 (0.03)	-0.01 (0.04)
Number of Siblings	-.13 (0.05) *	0.01 (0.08)	-0.04 (0.06)	0.13 (0.09)	0.09 (0.07)	-0.04 (0.10)
Head Respondent	0.03 (0.23)	-0.12 (0.39)	0.36 (0.28)	-0.15 (0.43)	0.33 (0.32)	0.48 (0.45)
Parent Characteristics						
Avg. Age	0.05 (0.02) *	0.01 (0.04)	0.04 (0.03)	-0.04 (0.04)	-0.01 (0.03)	0.02 (0.04)
Avg. Yrs. Of P.'s Edu.	-0.05 (0.07)	-0.13 (0.10)	-0.07 (0.07)	-0.08 (0.12)	-0.02 (0.08)	0.06 (0.13)
Constant	-1.10 (1.14)	0.54 (1.84)	-0.65 (1.07)	1.64 (2.15)	0.44 (1.31)	1.19 (2.17)

Data: Multiply imputed data from Panel Survey of Income Dynamics, N=1,518; Note: Avg.=Average; Edu.=Education; P.=Parent; Yrs.=Years
*** p<.001,** p<.01, * p<.05, † = p<.06

Table 9. Multinomial Logit Models for Any Giving of Money to Parent(s) Among Those Who Have Both a Living Mother and Father Who are Not Married

	Neither vs. Mother only	Neither vs. Father only	Neither vs. Both	Mother only vs. Father only	Mother only vs. Both	Father only vs. Both
Childhood Family Structure, Ages 0 to 16 *(married omitted)*						
Divorce/Separation	0.36 (0.37)	-0.03 (0.79)	-0.11 (0.52)	-0.39 (0.84)	-0.47 (0.53)	-0.08 (0.84)
Single Parent/Widow	0.38 (0.60)	7.99 (7.97)	-1.43 (1.16)	-8.37 (7.90)	-1.81 (1.22)	6.57 (8.00)
Control Variables						
Adult Child Characteristics						
Black	1.47 (0.36) ‘*	1.42 (0.88)	1.23 (0.44) **	-2.89 (0.95) **	-0.23 (0.55)	2.66 (0.98) **
Male	-0.12 (0.30)	1.07 (0.80)	-0.95 (0.38) *	-0.95 (0.84)	-0.83 (0.45)	0.12 (0.88)
Age	0.02 (0.03)	0.02 (0.04)	0.03 (0.05)	-0.00 (0.05)	0.00 (0.06)	0.00 (0.06)
Number of Siblings	-0.02 (0.05)	0.31 (0.09) *	-0.16 (0.13)	0.33 (0.10) **	-0.14 (0.14)	-0.47 (0.16) **
Head Respondent	0.69 (0.36)	-0.61 (0.73)	-0.00 (0.57)	-1.30 (0.80)	-0.70 (0.65)	0.60 (0.92)
Parent Characteristics						
Avg. Age	-0.02 (0.03)	0.00 (0.05)	-0.04 (0.05)	0.03 (0.06)	-0.02 (0.06)	-0.05 (0.07)
Avg. Yrs. Of P.’s Edu.	0.05 (0.08)	-0.13 (0.14)	0.03 (0.14)	-0.18 (0.17)	-0.02 (0.16)	0.16 (0.20)
Constant	-3.73 (1.74)	-3.38 (2.88)	-1.67 (1.67)	0.34 (3.36)	2.06 (2.27)	1.71 (3.29)

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=1,518; Note: Avg.=Average; Edu.=Education; P.=Parent; Yrs.=Years
*** p<.001,** p<.01, * p<.05, † = p<.06

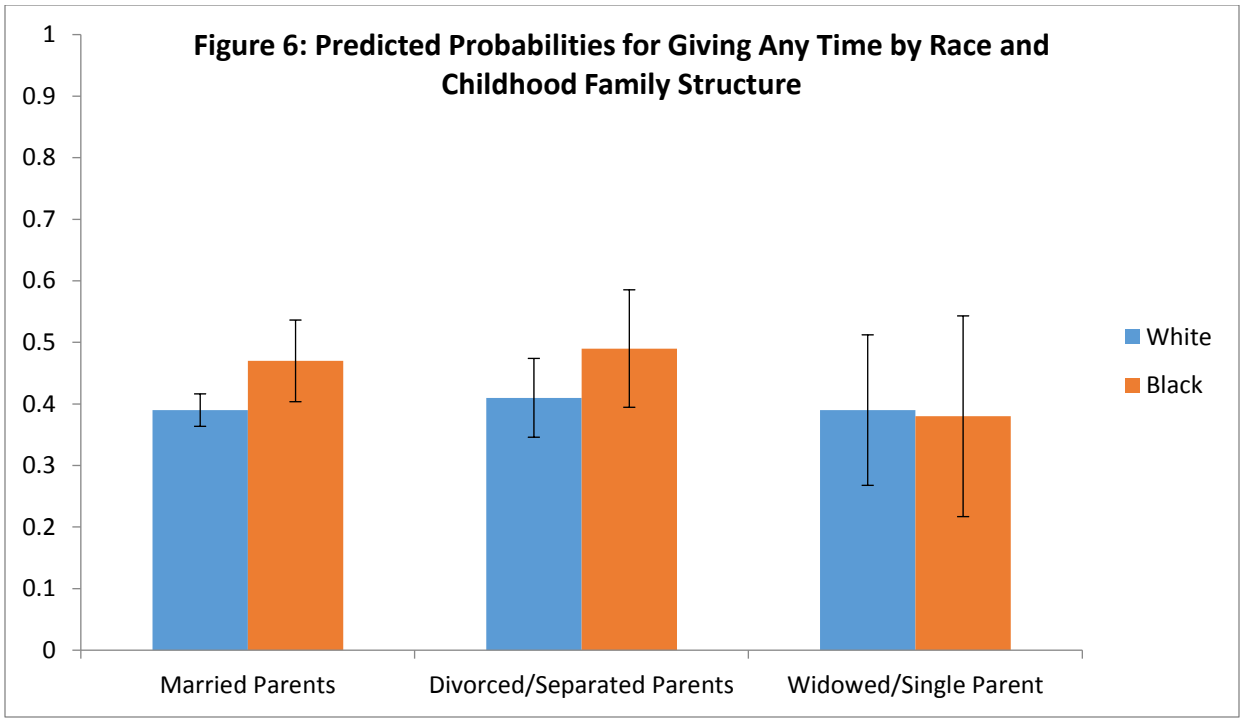


Figure 6: Predicted Probabilities for Giving Any Time by Race and Childhood Family Structure
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Married Parents
Divorced/Separated Parents
Widowed/Single Parent
White
Black

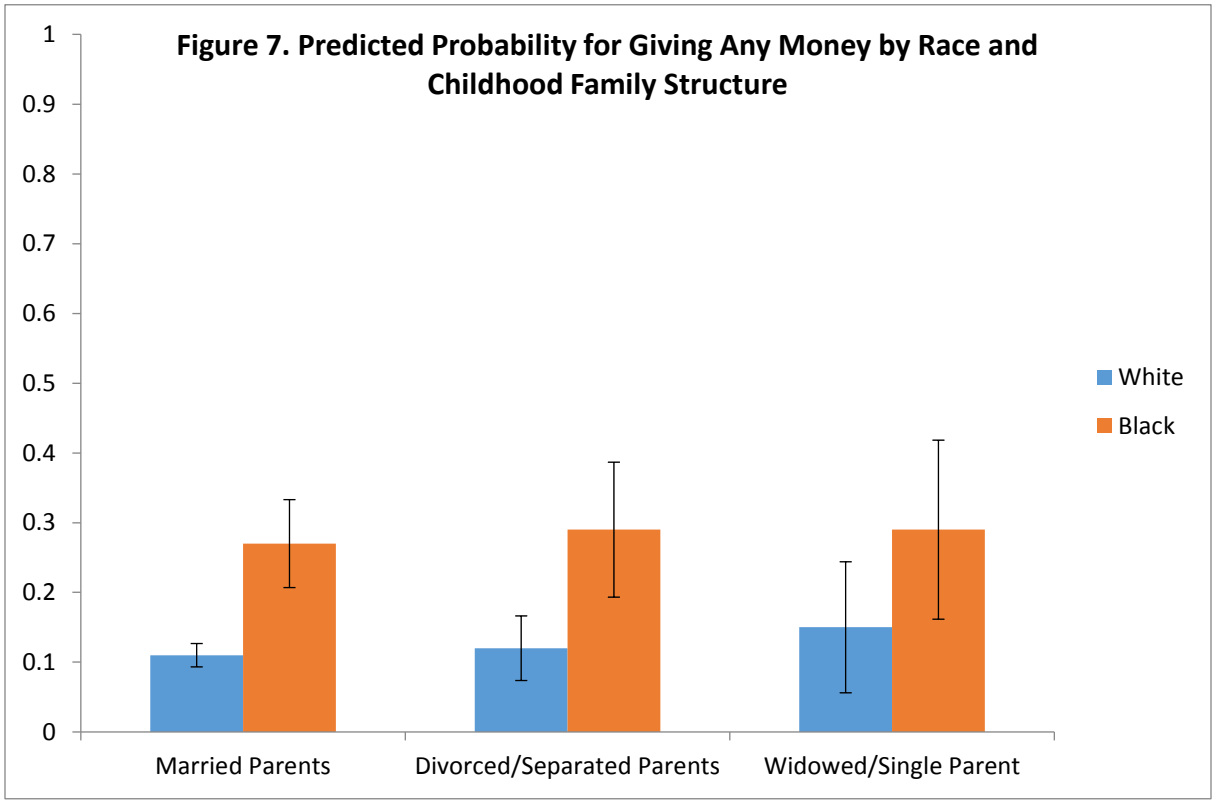


Figure 7. Predicted Probability for Giving Any Money by Race and Childhood Family Structure
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Married Parents
Divorced/Separated Parents
Widowed/Single Parent
White
Black

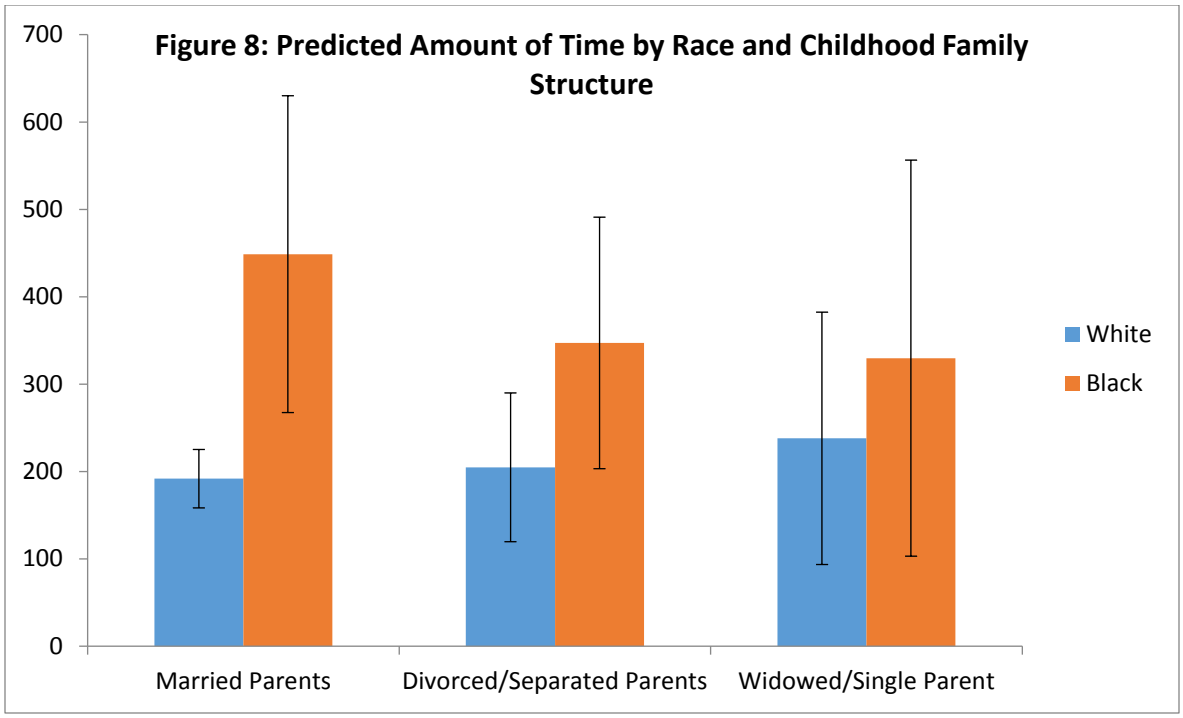


Figure 8: Predicted Amount of Time by Race and Childhood Family Structure
700
600
500
400
300
200
100
0
Married Parents
Divorced/Separated Parents
Widowed/Single Parent
White
Black

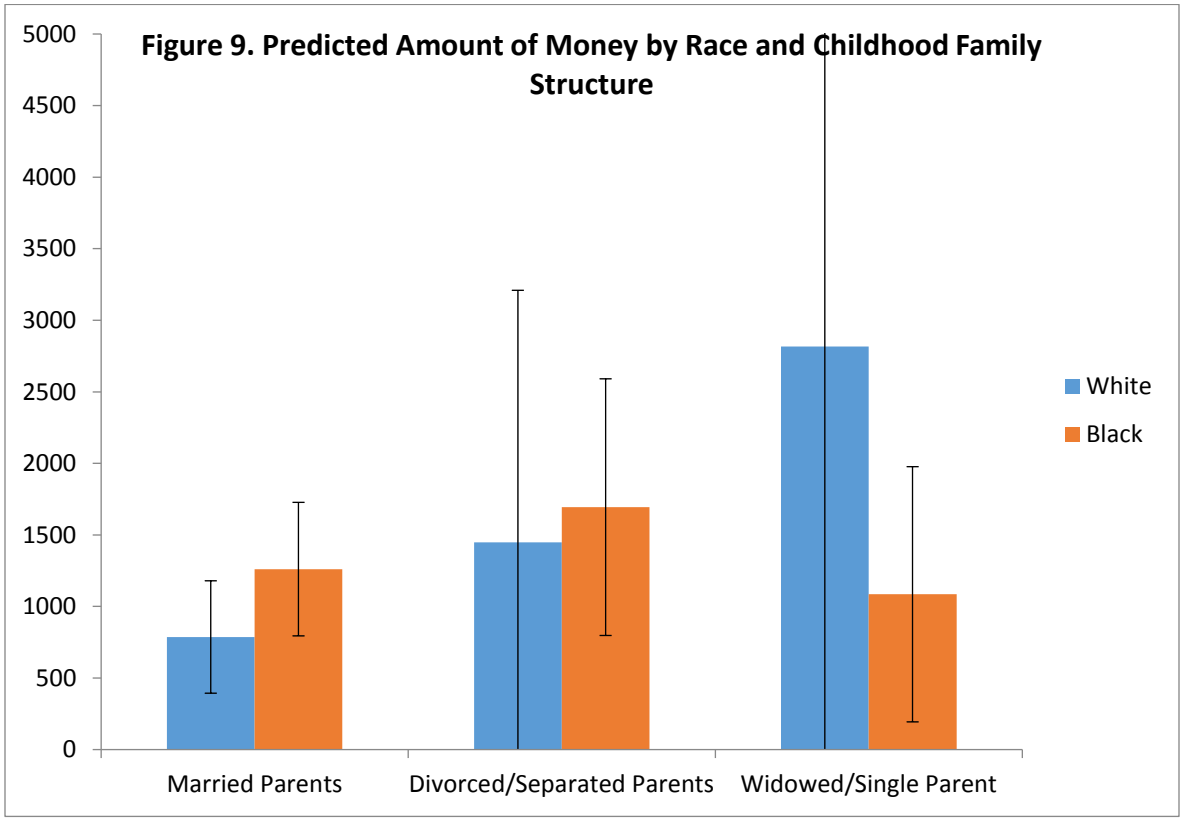


Figure 9. Predicted Amount of Money by Race and Childhood Family Structure
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Married Parents
Divorced/Separated Parents
Widowed/Single Parent
White
Black

Chapter 4: Adult Children's Family Structure and Giving Time and Money to Parents

The population is aging (Uhlenberg 1996) which places increasing pressure on families to fill increasing caregiving needs (Wolinsky et al. 2011). Adult children continue to be a main source of this caregiving for aging parents (McGarry 1998; Spillman and Pezzin 2000), with the percentage of the adult child population providing care increasing steadily over the last decade (Metlife Mature Market Institute 2011). The American social safety net relies upon family caregiving (Fast et al. 1999), and is not equipped to provide for the increasing needs of an aging population if families do not or re not able to provide that care (Olson 1994).

An adult child's family structure influences their giving to parents. Married adult children are less likely to transfer time to parents compared to single adult children (Laditka and Laditka 2001; Sarkisian and Gerstel 2008) and findings are mixed for cohabiters' patterns of giving (Artis and Martinez 2016; Eggebeen 2005). The research on divorced children is mixed, with some finding that they give less than married counterparts, while others find they give more (Sarkisian and Gerstel 2008; Shapiro 2012). Financial transfer patterns are less clear in the literature (Suitor et al. 2011). A majority of previous studies have relied upon simple measures of particular family structure to compare groups, such as married versus unmarried and do not explore all types of family structures for adult children (Sarkisian and Gerstel 2008).

This matters because family structures have shifted greatly across time. Divorce rates have plateaued, but adult children are as likely to divorce as their parents were (Kennedy and Ruggles 2014). Adult children, however, are more likely than their parents to cohabit with a romantic partner (Sassler 2010), or even remain single across their life course (Cherlin 2010). Family forms are more diverse today than previously in history, and there are some differences in these patterns by race. For instance, Blacks have higher rates of divorce and remaining single

compared to Whites (Aughinbaugh et al. 2013). These differences in family structure among younger generations makes it increasingly unclear who will lend assistance to older people because of the changing nature of families and exchanges (Cherlin 2010; Pavalko and Wolfe 2015; Swartz 2009). Less is known about more complex family structures, including cohabitation and those adult children with history of divorce (Shapiro 2012; Swartz 2009). The question then becomes whether diverse family structures among adult children influence intergenerational transfers from adult children to parents.

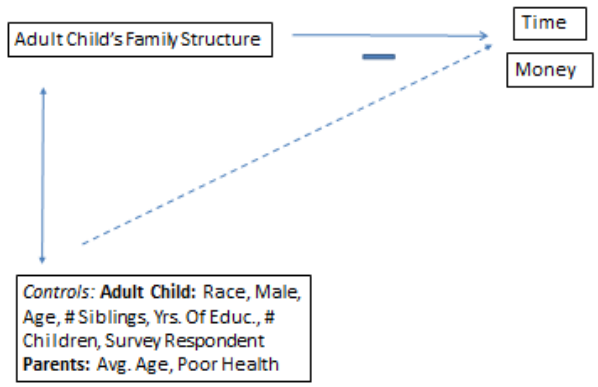
I use the Panel Survey of Income Dynamics to provide an analysis of a nationally representative sample of adult children's giving to parents. I contribute to the literatures by testing a broader range of adult children's family structures than previously tested. I test whether marriage still reduces giving, and add to the literature by testing whether cohabitation also reduces giving or whether it works differently than marriage for intergenerational transfers. I also test whether divorce reduces transfers to parents and whether a history of divorce affects giving to parents. Finally, given the differences in family structure between Whites and Blacks, I test whether race moderates the relationship between adult children's current family structure and their transfers of time and money to their parents.

Background

Family demographers have emphasized the importance of extending our understanding of family forms and intergenerational relationships beyond the nuclear family (Swartz 2009). Previous research has generally relied on relatively simple comparisons of married adult children to not-married adult children, or has combined married and cohabiting adult children together in the analysis. For instance, Laditka and Laditka (2001) use the 1993 Panel Survey of Income Dynamics (PSID) and combine married and cohabiting adult children into a catchall category of

"coupled" compared to those who were not in a couple, which includes never married but also divorced and widowed adult children.

Figure 1: Main Model



The general concensus of these previous studies on adult children's family structure and their giving to parents is that coupled adult children are less likely than single adult children to provide times to parents, but results are mixed regarding financial transfers (Laditka and Laditka 2001; Spillman et al. 2014; Spitze and Logan 1990; Zissimopoulos 2001). The findings, however, are less clear in studies that use more detailed categories to capture adult children's current family structure (Shapiro 2012), though there is some suggestion that non-traditional families give less to parents compared to traditional families (Marks and McLanahan 1993). A major contribution of this study is to provide a picture of giving to parents among a diverse set of adult child family structures.

Theoretical Framework: Cohabitation and Giving

Within the family transfer literature, "marriage as a greedy institution" (MGI) theory argues that marriage pulls time and financial resources away from other family relationships because married people are investing those resources into the marriage itself (Coser 1974; Sarkisian and Gerstel 2006; Sarkisian and Gerstel 2008). Marriage is an institution that provides a set of norms and prescriptions for behavior (Amato 2004; Cherlin 2004), such as investing time and money into your marriage instead of other relationships. An example of this could be that when you are single, you spend time mowing your parent's lawn to help out. But once you are

married, it is expected that you will mow your own lawn instead. The time and resources are now spent within your own marriage.

This is reflected in findings from previous studies that have found married adult children are less likely to provide time and financial resources to their parents compared to those who are not married (Couch et al. 1999; Laditka and Laditka 2001). For instance, Sarksian and Gerstel (2008) use the National Survey of Families and Households, and compare married adult children to those who never married. One limitation of their study is that they do not analyze cohabiting adult children. They find that married adult children are less likely to provide time to parents compared to never married adult children, but there is no significant difference between married and never married for financial transfers to parents. Laditka and Laditka (2001) find that uncoupled children are more likely to help their parents than those who are couples and when they do they give more hours (Laditka and Laditka 2001). They use a dichotomous measure of "help" to measure whether the parent received practical help with two types of specific tasks, but no finances.

Prior research has been relatively silent in theorizing the relative "greediness" of cohabitation, especially for transfers from adult children to their parents. While cohabitation is seen as institutionalized in other countries, it is not considered an institution in the U.S. (Sassler 2010). For instance, in other countries, cohabitation is associated with family laws that protect the couple similar to married people. This is sometimes referred to as "common law" marriages where a couple lives together long enough to be recognized as basically married in the eyes of the law. MGI would not see cohabitation as institutionalized in the same way that marriage is in the U.S., and therefore, it would assume that like single people cohabiters can invest time and money into the relationship with their parents compared to their married counterparts.

However, findings from previous literature do suggest that cohabiters reduce their contact with other family members including their own parents (Hogerbrugge and Dykstra 2009), suggesting that cohabitation diminishes social ties to other family members. Because cohabitation is not institutionalized in the U.S., it could be that all relationships take time, and intimate relationships, like cohabitation, take more time than being single (Finley 1989). If we assume that all intimate relationships are time intensive, married and cohabiters behavior will be the same. This means that both groups will give less to their parents because of these important time investments in what I call "greedy relationships."

There are two available studies that investigate cohabitation as a separate category from married adult children. First, Eggebeen (2005) uses the NSFH and focus analyses on adult children ages 19 to 30. One limitation of his study is that he does not have data from the partner's family nor a broader age range of adult children; cohabitation may be very different in young adulthood compared to cohabitation in middle age. He finds that that married adult children help with time more than cohabiters, but no significant difference emerges for financial exchanges. He does not find a significant difference between cohabiters and single adult children regarding help of any type to parents (Eggebeen 2005). His findings suggest that the time invested in cohabitation is actually more intensive than marriage.

Second among the two studies that investigate cohabiters specifically, Artis and Martinez (2016) use more recent NSFH data, and restrict their analysis to only adult children who were age 40 at the start of the study. They find no significant difference in the provision of practical help (i.e. time), but cohabiters were less likely to give money to parents compared to married adult children (Artis and Martinez 2016). Their findings suggest that cohabitation is equally as greedy as marriage.

In light of previous research and theories, the formal MGI perspective assumes that there is no difference between never married and cohabiting adult children because they are not involved in the formal "greedy institution" of marriage.

H1a: Married adult children have lower odds of providing time and money to parents than do (1) never married adult children and (2) cohabiting adult children.

In contrast, what I call the "greedy relationship" perspective assumes that there is no difference between married and cohabiting adult children because they are both investing time and resources into their partnership and therefore reduce investments in other relationships.

H1b: (a) Married adult children and (b) cohabiting adult children have lower odds of providing time and money to parents than do never married adult children.

Theoretical Framework: Divorce and Giving

I also focus on differences in giving by divorced children as compared to never married adult children because the specific effect of an adult child's divorce and history of divorce on transfers to parents has been overlooked (Seltzer 1994; Shapiro 2012; Shapiro and Cooney 2010). Divorce disrupts a person's life and often leads to poor health, fewer financial resources, and other negative outcomes for the person and their family (Amato 2010). This reduction in resources and increase in strain can then sever the adult child's ability to give to parents (Wijckmans 2013), because the adult child need to focus all resources on reorganizing their own lives instead of investing in other relationships like giving to parents (Dykstra 1997). Divorce diminishes ties within families and can cause stress and strain on other family members, like a person's parents, due to this life transition (Amato 2000).

Among the literature on adult children's divorce and giving to parents, Sarkisian and Gerstel (2008) use NSFH. Comparing divorced adult children to married adult children, they

find that divorced adult children are more likely to provide time to parents compared to married adult children; they find no significant difference for financial transfers. Comparing never married adult children to divorced adult children, they find that divorced adult children are less likely than never married children to provide help; again, there is no difference in financial help to parents. Sarkisan and Gerstel (2008) argue that their findings "suggest that the diminished ties to parents persist even after marriages dissolve" (p. 368).

Shapiro (2012) also uses the NSFH and operationalizes a "union" as those who are married or cohabiting. He compared divorced adult children to coupled adult children and finds that divorced respondents are less likely to help their parents compared to non-divorced respondents. Surprisingly, divorced adult children were more likely to transfer financial resources to parents (Shapiro 2012). Overall, however, the divorce literature would argue that a divorce reduces the adult child's resources of time and money, which then reduces their ability to help their parents.

In light of previous research and theories, there are two variable predictions about the effect of an adult child's divorce on their giving of time and money to parents. A divorce stress perspective assumes that the divorce reduces the adult child's time and money considering they now need to invest those resources in recovering from this life transition.

H2a: Divorced adult children will have lower odds of providing time and money to parents compared to (1) never married adult children and (2) married adult children.

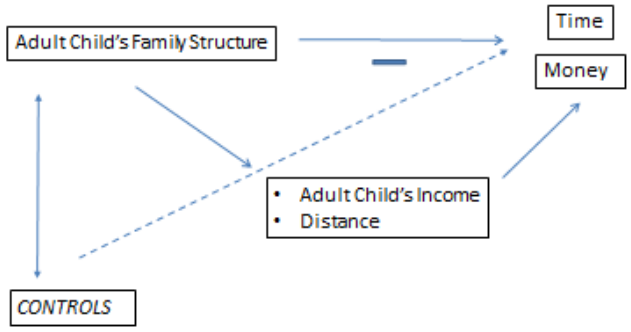
In contrast, the MGI perspective assumes that divorced individuals are no longer a part of the greedy institution of marriage, but that some effects of marriage will still be present when compared to never married adults because they were once within this institution.

H2b: Divorced adult children will have higher odds of providing time and money parents compared to married adult children and lower odds of providing time and money compared to never married adult children.

Mechanisms

The relationship between an adult child's family structure and giving to parents may work through several potential mechanisms, including income and physical distance to parent as illustrated in Figure 2 below. First, family complexity, including cohabitation and divorce, may negatively impact adult child's wealth, which then reduces their ability to give to their parents (Shapiro 2012). For instance, single adults, including never married and divorcees, have lower incomes compared to married adult children (Boniface et al. 2014). Because married adult children will have more financial resources, they may be able to give their parents more money. For cohabiters, because their relationship is not institutionalized, the same norms of sharing your family income that are applied when married may not be the same here. If there is no norm to share income within the partnership, cohabiting adult children may not be able to provide to parents because they do not have the same level of income as married couples do. Income levels can affect the types of transfers that adult children can provide to their parents, with adult child households with higher income being more likely to provide financial transfers compared to providing time transfers to parents (Couch et al. 1999; Schoeni 1997).

Figure 2: Potential Mechanisms



H3: Cohabiting adult children will have higher family incomes and have higher odds of giving to parents. Divorced adult children will have lower family incomes and have lower odds of giving to parents.

Another way that the adult child's family structure may impact their giving to parents is through physical distance between them and their parents, leading to changes in the types and amount of transfers they provide to their parents. Unmarried adult children live within closer proximity of their parents, which then facilitates exchanges, especially time exchanges (Hoyert 1991). Married children are more likely to live further away from their parents (Sarkisian and Gerstel 2008), and it is expected that living further away will cause greater barriers to providing time, but not necessarily money (Hoyert 1991; Schoeni 1997). The research is unclear regarding cohabiters and where they live in relation to their parents, but we could expect that they will also live far away like married adult children because they are investing in a relationship; this in turn will reduce their giving to parents due to further physical proximity. Because divorce causes a reduction in resources, I expect that divorced adult children are more likely to live closer to a parent, and therefore be more likely to give to them because of the closer proximity.

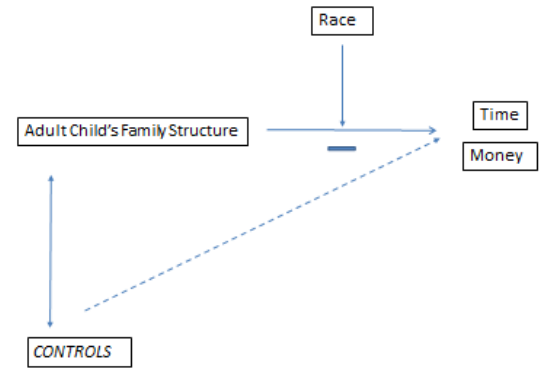
H4: Cohabiting adult children live further away and have lower odds of giving to parents. Divorced adult children will live closer to parents and have higher odds of giving to parents.

Race, Family Structure, and Giving

I also investigate the ways in which race moderates the relationship between family structure and transfers to parents as illustrated in Figure 3 below. Critiques in the literature have pointed to a lack of understanding about the ways in which family structure and race go hand-in-hand with transfers from adult children to parents (Pavalko 2011; Sarkisian and Gerstel 2004a;

Silverstein and Giarrusso 2010; Suitor et al. 2011). The growing diversity within the United States highlights the importance of paying attention to race differences in aging and caregiving; if different races have varying needs, the social supports for the elderly may need to change as the population shifts (Bookman and Kimbrel 2011).

Figure 3: Race and Giving



Family structures differ for Blacks and Whites: Blacks are more likely to divorce, cohabit, or never marry than Whites (Aughinbaugh et al. 2013). The meaning and implications of Blacks' greater likelihood of experience divorce and cohabitation is debated. On the one hand, some argue that Blacks' increased risks of living in nontraditional family forms reduces the resources they have to share with family members (McLanahan and Percheski 2008). On the other hand, some scholars argue that despite their complexity, Black families may be more resilient and not worse off even in the face of diverse family structures (Hill 2003; Sarkisian and Gerstel 2004b). This literature argues for that the cultural ties within Black families, with more and stronger emphasis on filial obligation (Sarkisian and Gerstel 2004b) will encourage Black families to share resources with parents, even if they have less due to their more complex family structures.

Hogan, et al. (1993) suggest that in order to understand racial differences in exchanges, it is important to understand the interaction with family structure. Only three studies that I am aware of investigate race, the adult child's marital status, and giving to parents. Peek et al. (2000) point out that there is little resolution regarding whether family structure differences by

race can help account for the propensity to receive care from adult children. In their study of older adults, they do not directly test an interaction effect of marital status, but instead use additive models controlling for "family characteristics" which includes co-residence with an adult child or grandchild and number of children. They find that Blacks are more likely to give care to parents compared to Whites, and that this can be accounted for by the family characteristics they measure (Peek et al. 2000).

While Peek et al. (2000) use additive models to argue for the importance of race and family structure, two other studies directly test whether race moderates the association between adult children's family structure and their giving to parents. Laditka and Laditka (2001) find that marital status does not impact giving to parents for Blacks, but does reduce transfers for Whites. Similarly, Lee and Aytac (1998) find that married White children provide less financial support than married Blacks. This research suggests that family structure may be more important for understanding the association of family structure on giving to parents for Whites than for Blacks.

H5: Cohabitation does not reduce giving for Blacks, but it does for Whites. Divorce does not reduce giving for Blacks, but it does for Whites.

Summary

Overall, this chapter contributes to the literature in multiple ways. First, I add to the literature on family transfers by considering family structures that are less studied, including cohabiters and divorcees as separate groups. I also consider several possible mechanisms that may explain the relationship between adult children's family structure and their giving to parents. Finally, I test how race may moderate the relationship between family structure and giving, a less studied phenomenon.

Data and Methods

I use the Panel of Survey Income Dynamics (PSID) to study the association between adult children's family structure and transfers of time and money to parents by adult children. One of the benefits of using the 2013 transfer data is the low levels of non-response on intergenerational items as well as more sensitive measures of financial transfers (Schoeni, Hotz, and Wiemers 2015). Because of the way that the PSID asks financial transfer questions, setting the lower bound at $100, the PSID is more sensitive to even small exchanges of money between family members, compared to other surveys that use a lower bound of $200 or $500 (McGarry and Schoeni 1995). This is important to my study because these smaller measures of financial exchanges may provide a more robust picture of intergenerational transfers among low income families and other types of families that may have fewer financial resources, such as divorced mother households.

The PSID began collecting data on a nationally representative sample in 1968 of over 18,230 individuals living in 4,802 families across the United States. PSID collected data annually until 1997 when it changed to biennial data collection (Institute for Social Research and Panel Study of Income Dynamics 2014). The PSID collects information on households, but also individuals within the households when possible, allowing for answering intergenerational family based research questions (McGonagle et al. 2012). Because the data was nationally representative of families from 1968, it is best used to analyze Black and White families, and Blacks are over sampled making weights important for national representation (McGonagle et al. 2012). All information was collected in 2013.

In 2013, there were 9,063 families participating in the data collection. The 2013 survey includes an extension survey, referred to by PSID as the 2013 Rosters and Transfers dataset, to

collect complete family level information on parent and child relationships for each of the 9,063 families as well as transfers of time and money between households. For this chapter, I focus on adult child family households, including the adult child and any partner/wife and their household level giving to any living parent households, including their biological, adopted, step-parent, or in-law/common-law-in-law parent households.

In order to participate in PSID's data collection on transfers from adult children to parents, respondents and their partners had to have at least one living parent and be under age 80 (N=6,388). I make further restrictions on my dataset to arrive at my final analytic sample. I drop cases in which the adult child was under 18 years old in 2013 (N=2) and those adult children who do not identify as single race White non-Hispanic or Black-non-Hispanic. I also drop adult children who have missing data on their age (N=2) and those missing a number of siblings (N=47) due to challenges multiply imputing these variables. Finally, I remove adult children who have any co-residential (adult child's or partner's) parents (N=553), similar to previous research which removes these cases (Cooney and Uhlenberg 1990). My final sample is 5,473 adult child households. The adult child's marital status has very little missingness (<1%), but for consistency, I use the same data as presented in chapter two with all data being imputed using "mvn" in Stata 14.

Dependent Variables

I measure adult children's household giving of time and money to parents based on a series of questions. In this chapter, transfer information is measured at the household level and includes all living parents for the adult child and their partner/spouse. First, I start with time measures. The PSID asks: "Families sometimes help each other with activities such as errands, rides, chores, babysitting, or hands-on care. In 2012, did you/spouse spend time helping your or

your wife's parent(s)?" If the response is yes, there are two follow up questions regarding how many hours reported as well as by unit of time (ex: week, month, year). I use this three tiered set of information to create three distinct variables. The first variable measures whether the family gave any time to any parent (=1) or not (=0). The second variable is an aggregate of average hours given across all living parents. The third variable measures "total time given across the whole year" for each parent household.

Transfers of money from adult children to their parent's measures mirror time measures. PSID asks: "In 2012, did you/spouse give any money, loans or gifts of $100 or more to your or your wives' parent(s)?" Two follow-up questions ask: how much and frequency (i.e. per week, month, year). Three variables are created from these questions that mirror the time variables. The first variable is the sum of money given for the whole year to each parent household separately. The second variable aggregates these individual parent households into a sum amount of money for all parent households. Last, the sum for all parent households is used to create a dichotomous measure for whether the family gave any money to any parent household (=1) or not (=0).

Independent Variable

The adult child's current family structure measures both their marital status and their cohabiting status. This variable is constructed using two separate items. The first item asks: "Are you married, widowed, divorced, separated, or have you never been married?" The second item asks the "couple status" of the head with choices of having a wife (married) present, a "wife" (PSID's term for one-year plus cohabiters), less than a year partner present, or no one else present. These items were used to create mutually exclusive categories including never married (=0), married (=1), long-term cohabiters (=2), short-term cohabiters (=3), divorced/separated but

single (=4), widowed and single (=5). In original tests, both sets of cohabiters were combined, but differences between them emerged and therefore I use this more expansive set of groups throughout my tests.

Mediators

Two measures are used as mediators in my models, including adult child's family income and the mileage between the adult child and wife and their parents. Family income is measured according to PSID's constructed variable for family income for the year, ranging from no income to a high of over $300,000 per year. The PSID constructs this distance measure based on the child's and parent's current addresses; distance between the adult child and each parent is the miles between the centroid of the places in which they live. This ranges from zero miles to over 4,000 miles. Previous research has shown that those adult children living within 10 miles of their parent are more likely to give more time (Laditka and Laditka 2001), so I create a count measure of how many parents the family has living over 10 miles from them.

Controls

I control for several adult child factors shown to be important to intergenerational transfers (Couch et al. 1999; Kahn et al. 2011; Laditka and Laditka 2001; Silverstein and Giarrusso 2010): gender of the adult child (male=1); adult child's current age (range: 18 to 80); race (Black =1 and White=0), the adult child's number of siblings (range: 0 to 22), and the adult child's number of children (range: 0 to 9). In addition, I control for whether the survey was completed by the head (=1).

If the family has only one living parent, I control for the following parent factors shown to be important in previous literature (Albertini et al. 2007; Harknett and Knab 2007; Suitor et al. 2011): parent's age (range: 29 to 103) and the number of parents in poor health (range: 0 to 3). If

more than one parent was alive, their age was averaged across all parents. The adult child reports on each parent's health in response to the following question: "Compared to others his/her age, is his/her health excellent, very good, good, fair, or poor?" Original categories include: excellent (=5), very good (=4), good (=3), fair (=2), and poor (=1). My measure counts the number of parents who are in poor health.

Models

To test whether the adult child's family structure impacts giving to parents, I use different analyses for various outcomes, depending on samples used. All analyses use imputed data weighted by the 2013 cross-sectional weight in order to make results nationally representative. I use the full sample of adult child families who have at least one living parent for the models testing any giving, as well as the Tobit models. I restrict the sample to only those who indicated they did give time or money, respectively, for the OLS models predicting amounts.

First, in Model 1, I use a bivariate logistic regression models to test whether the adult child family gave any time or money to any parent (yes=1) separately. Then, in Model 2, I add a series of controls to see whether family structure effects can be accounted for by these adult child and parent characteristics. If the adult child's family structure is a significant predictor of later transfers to parents, I estimate the role of each hypothesized mediator, adding each into the model by themselves (Model 3 and Model 4) and then together (Model 5).

For my second series of analyses, I restrict my sample to those adult child families who gave any money or time to any parent. In Model 1, I use bivariate OLS regression models to predict how much total time or money they gave to their parents overall by the adult child's family structure. In Model 2, I enter a series of control variables to test whether these trends hold once controlling for other factors. If the adult child's family structure is a significant

predictor of later transfers to parents, I estimate the role of each hypothesized mediator, adding each into the model by themselves (Model 3 and Model 4) and then together (Model 5).

Third, I analyze an interaction term for race and the adult child's family structure. I run each of the original set of analyses with the interaction term. This is followed by figures that plot the predicted margins for race and adult child family structure. Finally, I run a fully interacted model (e.g., a model where every explanatory variable is interacted with race), not pictured here, to fully test Black and White differences.

Fourth, I use Tobit models to test the amount of time and money given to parents using the complete sample of adult children. Similar to the models above, in Model 1, I test the adult child's family structure alone. In Model 2, I enter a series of control variable. If the adult child's family structure is a significant predictor of transfers, I then estimate each hypothesized mediator, alone and then together, in Model 3, 4, and 5.

Results

Descriptive Statistics

Almost half of the 5,473 families (47.4%) give any time to any parent, whereas only 16% of households give any money to any living parents. On average, in my sample, families give 123 hours per year to their parents, or about two hours per week. On average, these families give $216 per year to their parents.

A majority of the sample was married (51.6%), followed by 24.7% never married, 15.7% divorced/separated, 6.9% cohabiting (5.0% long term, 1.9% short term), and 1.1% are widowed. A majority of my sample is White (83.2%) and 16.8% are Black. The adult children in this study are mostly male (75.6%) due to PSID design regarding "head of household." The adult children in this sample range in age from 18 to 79 years old with an average age of about 44 years old.

They have anywhere from 0 to 22 siblings, with an average of 2.5 siblings. Years of education for the adult child range from 4 years to 17, with an average of 14 years, some college education.

Family income ranges from no income in the last year to a high of over $300,000. The average household income is $79,782. Married families have the highest an average income of $114,451, followed by those who are widowed ($87,744), long-term cohabiters ($61,596), never married ($39,577), divorced/separated ($39,459), and the lowest average incomes are among short-term cohabiters ($36,391). The adult children in this sample have a range of children, from 0 to 9, with an average of less than one child per household. Over half (63%) of the families have no children. A majority of the respondents were the head of household (67.2%).

For parent characteristics, parents ranged in age from 29 years old to 103, with an average age of 68.9 years old. The number of parents in poor health ranged from 0 parents to 3 parents, with a majority (83.7%) of the households having no parents in poor health. Families lived anywhere from 0 miles from their parents to a high of over 4,000 miles away. On average, families live 239 miles away from parents.

Turning briefly to family structure by race, Blacks in my sample are more likely to be never married (48.4% Blacks, 20.0% Whites), while Whites are more likely to be married (24.2% Blacks, 57.2% Whites). Blacks are also more likely to cohabit (8.9% Blacks, 6.5% Whites) and be divorced (17.8% Blacks, 15.3% Whites). Blacks and Whites have similar rates of being widowed (1.0% Blacks, 1.1% Whites).

Means of Giving by Adult Child's Family Structure

Table 2 presents the means of giving any time or any money as well as the amounts by the adult child's family structure; means for giving any should be interpreted as proportions, while the means for amounts should be interpreted in hours and dollars, respectively. Giving any

time is presented in the first column of Table 2 and shows that widowed adult children are the most likely to provide any time to parents, compared to all other adult children. However, the only significant difference between groups arises for married adult children compared to never married children; married children are less likely to provide any time to parents compared to never married children (b=0.45, p<.05). The second column of Table 2 provides the average amount provided among all adult child families. Here, we see that never married children provide the most hours to parents (b=143.9), but the difference is not significantly different from other adult children.

Column 3 in Table 2 provides the means of giving any money to any parent. There are no significant differences in the amount of money children give their parents across family structure categories for the adult child.

Multivariate Logistic Regression Models of Whether Adult Child Family Gives to Parents

Odds ratios for the logistic regression models of whether the adult child's family provides any time to any parent are presented in Table 3. Model 1 shows that being married, compared to never married, is associated with an 18% reduction in the odds of providing any time to any parent compared to never married adult children (e^{β} = 0.82; p<.05). Additionally, long-term cohabiters, or those who have been residing together for a year or more, have marginally significantly reduced odds of providing time to any parents compared to never married adult children (e^{β} =0.75, p=0.59). Adding in both adult child and parent characteristics as controls in Model 2 does not change the significant of the association between married adult children and never married children, and actually increases the magnitude of the association (e^{β} =0.52, p<.001). Additionally, the association between long-term cohabiters (e^{β} =0.56, p<.01) becomes significant when accounting for control variables, as well as an association between divorced

adult children compared to never married adult children (e^{β} =0.68, p<.01). Briefly, regarding the control variables themselves, if the head of the family responded to the survey, they have reduced odds of giving any time to parents (e^{β} =0.77, p<.01), but having older parents (e^{β} =1.02, p<.05) as well as more parents in poor health (e^{β} =1.19, p<.05) increases the odds of giving time to any parent. In Model 3, I test whether the adult child's family income can help explain the association between the adult child's family structure and giving to parents. Here, I find that entering income into the models does not change the association between family structure and giving time, and it is not significant by itself. In Model 4, I test whether having more parents who live further away helps explain the relationship between family structure and giving. I find that having more parents further away strengthens the association (p<.001), suggesting a suppression effect. Because married adult children live further from their parents, these two variables were initially confounded in Models 1 and 2. Distance does not affect the significance of the association between family structure and giving to parents but does increase the negative association in the odds of giving between married (e^{β} =0.42, p<.001), long-term cohabiters (e^{β} =0.42, p<.001), divorced adult children (e^{β} =0.63, p<.01) compared to never married children. Finally, in Model 5, I test whether both income and distance together help explain the association between family structure and giving to parents. I find that living further from parents reduces the odds of giving time (e^{β} =0.53, p<.001), but income is not significant. Being married (e^{β} =0.42, p<.001), being a long-term cohabiter (e^{β} =0.42, p<.001), and being divorced (e^{β} =0.62, p<.01) compared to being never married reduces the odds of giving time to any parents in the final model; it appears that divorced adult children are the least likely to give time.

Odds ratios for the logistic regression models of whether the adult child's family provides any money to any parent are presented in Table 4. In Model 1, I find that married adult children,

compared to never married adult children, have 21% lower odds of giving their parents money, but this finding is marginally significant (e^{β} =0.79, p<.06). Similarly, long-term cohabiters have a 34% reduction in the odds of giving their parents money compared to never married adult children, but this is also marginally significant (e^{β} =0.66, p<.06). Model 2 shows that entering adult child and parent characteristics into the model leads indicators of family structure to become statistically significant. This suggests that there was initially as suppression effect in the model. Briefly, several factors are associated with an increase in the odds of giving money to parents, including: being black (e^{β} =2.81, p<.001), each year of additional education (e^{β} =1.12, p<.001), and each addition parent who is in poor health (e^{β} =1.34, p<.01). Because the original association between family structure and giving to parents was significant, I have chosen to present, very briefly, the association of my two mediators in Table 4. As illustrated in the final model, Model 5, income makes very little different in the odds of giving money to parents (e^{β} =1.00, p<.05), but each additional parent living more than 10 miles away reduces the likelihood of giving any money to any parents by 15% (p<.01). This again suggests a suppression effect, whereby marital status and physical distance to parents is confounded. Overall, family structure is not significantly associated with giving money to parents.

OLS Regression Multivariate Models of the Amount Adult Child Families Give to Parents

Results for the regression multivariate models for the amount of time families give to parents is presented in Table 5; these analyses are restricted to those adult child families who provided any time to any parent. In Model 1, we see that compared to never married adult children, married children give 68 fewer hours per year (or approximately 1.3 fewer hours a week) to their parents (b=-67.8, p<.05). Long-term cohabiters (b=-84.7, p<.05) as well as short-term cohabiters (b=-121.2, p<.001) give less time to their parents compared to never married

adult children. Model 2 controls for adult child and parent characteristics and I find that these characteristics partially explain the association between short-term cohabiters and giving to parents. Even when controlling for these variables, married adult children (b=-113.0, p<.01) give less time to parents than never married adult children. Long-term cohabiters also give less time to parents (b=-113.0, p<.05) compared to never married adult children. Turning briefly to control variables, a few factors are associated with giving more time to parents, including: being black (b=149.4, p<.001), each additional year of age for the adult child (b=5.71, p<.05), and each additional parent in poor health (b=73.0, p<.05). In Model 3, I test whether the adult child's family income alone can explain the association between family structure and the amount of time given to parents. Here, a higher income is associated with a small, but significant reduction in the amount of time given to parents (p<.01). Married adult children (b=-92.8, p<.05), and long-term cohabiters (b=-99.4, p<.05) continue to give fewer hours to parents than never married adult children, but accounting for income reduces the magnitude of this estimated association. In Model 4, I test whether the number of parents living further than 10 miles away from the adult child family helps explain the association between family structure and giving to parents. Here, I find that for each additional parent living further than 10 miles away from the adult child family, there is a 18.8 hour reduction in the average amount of time provided across parents per year (p<.01). In the final model, Model 5, I test whether both income and distance help explain the association between family structure and the amount of time provided to parents. Married adult children give an estimated 100 hours fewer to parents than never married adult children (b=-100.7, p< .05), as well as for long-term cohabiters compared to never married (b=-106.1, p<.05). Only income helps explain this association in the final model (b=-0.00, p<.01).

Table 6 presents the results of the OLS regression for the amount of money given to parents. The OLS regression models shows that family structure is never significantly associated with the amount of money they provide to their parents, even in the bivariate model, Model 1. In Model 2, family structure is not associated with the amount of money adult children provide to parents among those that give their parents money. Yet other characteristics are significantly associated with the amount of money children give their parents. Briefly, Black families give $370 more per year in the amount of money the family provides to parents compared to White families ($p<.05$), and for each year older the parents are is associated with roughly an additional $43 gift to parents ($p<.05$). Even though family structure was never associated with the amount of money given to parents, I will briefly provide an overview of the final model, Model 5, which includes both mediators. In the final model, I find that family structure is still not associated with the amount of money given to parents, but Black families give more than White families ($b=384.9$, $p<.05$) and older parents receive more per year ($b=42.0$, $p<.05$). For each additional child that the adult child has, parents receive $142 per year less ($p<.05$).

Conditional Multivariate Models: Differences by Race

In my sample, Whites are more likely to be married compared to Blacks ($p<.001$). I test for an interaction effect between race and the adult child's family structure in an additional set of models. Table 7 presents results for the interact effect for the four main models.

The first column in Table 7 presents the results for the odds of giving any time to parents. In the interaction model, there is no significant interact effect between race and adult child family structure, as the Wald test confirms ($F=1.38$; $p=0.23$). These results are illustrated in Figure 4 which plots the predicted probabilities of this interaction. Furthermore, when I interact every variable with race (i.e., in a "fully interacted" model), I find that, together, all variables

work similarly for Whites and Blacks (F=1.36; p=0.23); it appears that the estimated processes predicting giving any time to parents works similarly for Blacks and Whites.

The second column in Table 7 presents the results for the odds of giving any money to parents. While the particular comparison of divorced/separated Blacks and Whites and married Blacks and Whites significantly differs from the comparison of never-married Blacks and Whites, the Wald test results suggest that, as a whole, the association between family structure and likelihood of giving money to parents does not significantly differ by race (F=0.29; p=0.92). With a non-significant Wald test, the race variable can be interpreted as it would in a non-interaction model; therefore, Black adult children have three times higher odds of giving any money to parents compared to White adult children (e^{β} =3.03; p<.001). Figure 5 plots the predicted probabilities of this interaction model and shows the same overall higher probability of giving money among Black adult children compared to White adult children. Furthermore, when I interact every variable with race (i.e., in a "fully interacted" model), I find that, together, all variables work similarly for Whites and Blacks (F=1.34; p=.18).

The third column in Table 7 presents the results for the regression analysis predicting the amount of hours given to parents by adult children of different childhood family structures among those adult children who gave time. Yet again, despite the fact that one Black-White family structure comparison term reaches statistical significance, the Wald test indicates that overall the association between family structure and the amount of time given to parents does not differ by race; I fail to reject the null hypothesis (F=0.44; p=0.82). Figure 6 plots this interaction model. In a fully interacted model, due to data restrictions for small sample sizes, I used a continuous measure of the total amount of miles between the adult child's family and all living parents. In this model, I find that I cannot reject the null hypothesis here (F=1.36; p=.15).

The fourth column in Table 7 presents the results for the regression analysis predicting the amount of dollars given to parents by the adult child's family structure among those who gave any money to parents. The Wald test for this model shows that I fail to reject the null hypothesis; this means that I cannot accept the alternative hypothesis that there are significant interaction effects between race and childhood family structure ($F=1.80$; $p=0.11$); Figure 7 plots this interaction model. In a fully interacted model, I also find that I cannot reject the null hypothesis for this model ($F=1.43$; $p=.11$).

Tobit Analyses

The multivariate OLS regressions for adult children with at least one living parent were conditional on their giving any time or money to a parent. Next, I will use Tobit models to test amount of time and money given to parents among those with at least one living parent, which are presented in Table 7. In Model 1, I find that married adult children, compared to never married children, are predicted to spend 83 fewer hours with their parents, holding all other variables constant ($p<.05$). Results for Model 2, when both parent and adult child characteristics are controlled, I find a significant association for married adult children ($p<.001$), long-term cohabiters ($p<.05$), and divorced/separated adult children ($p<.01$), compared to never married adult children. In addition, the reduction in hours for married adult children grows larger once we control for demographic characteristics, suggesting a suppression effect. This suppression effect can be examined by thinking about what we know about race, marriage, and giving; in my sample, Black adult children are less likely to be married and they are more likely to give time to parents. Turning briefly to controls in Model 2, Black adult children have an estimated difference of 146 more hours in the expected number of hours given to their parents per year compared to White adult children, holding all other variables constant ($p<.01$). In addition, for

each addition parent in poor health, there is an estimated difference of 149 hours of time to parents per year, holding all other variables constant ($p<.01$). In Model 3, adult child's family income is associated with a reduction in hours of time to parents per year ($p<.05$). In Model 4, each additional parent household that is greater than 10 miles away is associated with an estimated reduction of 180 hours of time to parents per year, holding all other variables constant ($p<.001$). However, in the final Model, 5, only physical distance is associated with a reduced in the expected value of hours given to parents per year ($p<.001$).

In Model 5, my final model, I find that among all adult children with at least one living parent, married adult children have an estimated difference of 112 fewer hours in the expected value of yearly hours given to parents compared to never married adult children, holding all other variables constant ($p<.05$). Additionally, divorced adult children, compared to never married children, give an estimated 128 hours less per year compared to married adult children, holding all other variables constant ($p<.05$). Black adult children, compared to White adult children, give an estimated 116 hours more per year to parents, holding all other variables constant ($p<.05$). Each additional parent in poor health is associated with an expected increase of 184 hours per year to parents, holding all other variables constant ($p<.001$). And each additional parent household that is further than 10 miles away from the adult child, there is an estimated reduction of 178 hours given to parents per year, holding all other variables constant ($p<.001$).

Table 8 presents results for the Tobit models predicting the amount of money given to parents per year for the whole sample of adult children with at least one living parent. Similar to the OLS regressions, this Tobit model also shows no significant association between the adult child's family structure and giving of money to parents among my whole sample of adult children with at least one living parent. For brevity, I will focus on Model 5, my final model.

While family structure was not a significant predictor of the amount of money given to parents, some control variables are important. Blacks, as compared to Whites, give an estimated 2152 dollars more to their parents per year, holding all other variables constant ($p<.001$). Each additional parent in poor health leads to an estimated difference of 185 hours more dollars per year to parents, holding all other variables constant ($p<.05$).

Comparing Model 1 for Tobit models (Table 7) to Model 1 in the OLS regression (Table 5), I find that among all adult children with at least one living parent, only married adult children have a significant reduction in hours given to parents. In the OLS model, with the restricted sample of adult children who give any hours at all, I find that married adult children, compared to never married adult children, give roughly 68 hours less per year; this compares to the 83 hours found in the Tobit models. Comparing the final Model 5, of the OLS regression and the Tobit models, I find that when looking across my whole sample of adult children with at least one living parent, only married adult children and divorced adult children compared to never married adult children are expected to give fewer hours per year to parents. This is similar to the OLS models estimated on the sample of those who gave some money to their parents where married, long-term cohabiters, and divorcees all reduce their time to parents. While both the OLS and the Tobit models show an increase in the estimated hours given for Blacks and for each additional parent in poor health, interestingly, the mediators which are significant in the final model change. In the OLS, among those who gave any to parents, more income is associated with a reduction in hours given, but in the Tobit, among the whole sample, it is increased physical distance between adult children and their parents that is significantly associated with an expected reduction in hours given to parents.

While the adult child's marital status is not a significant predictor of giving money to parents, the final models suggests that perhaps married, long-term cohabiters, and divorcees, compared to their non-married counterparts, may actually give more money to parents, though this is not significant. This is suggestive of a potential replacement model, whereby married, long-term cohabiter and divorced adult children give money as opposed to time to parents. I plan to test this in additional analyses down the line.

Sensitivity Analyses

I run three additional analyses. The first set of analyses look at only men in the sample. Within the PSID dataset, the data is organized so that men are the head of household automatically, with very few cases in which a female is marked as head of household. Therefore, in the models, controlling for gender in addition to who was the survey respondent may cause an issue with confounding the two items. I repeat the analysis for Tables 3 and 4 here with only males. Table 10 presents the odds ratios for giving any time to any parent among males only. In Model 1, I find that married men have a 27% reduction in the odds of giving any time to any parents compared to never married men (e^{β}=0.73; p<.05) and long-term cohabiter men have a 34% reduction in the odds of giving any time to any parent compared to never married men (e^{β}=0.66; p<.05). For brevity, I will discuss the final model. In Model 5, I find that there is a slight suppression effect in my models, with the odds of giving any time to parents for married, male adult children decreasing even further. Married, male adult children, compared to never married adult males, are 32% less likely to give any time to any parents (e^{β} =0.68; p<. 05). Turning briefly to control variables, if the male head answered the survey, his odds of answering that parents received any time are lower than if another family member answered the survey (e^{β} =0.76; p<.01). Each additional year older for parents is associated with

a slight increase in the odds of providing any time (e^{β} =1.02; p<.05), as well as each additional parent in poor health being associated with a 27% increase in odds of giving time (e^{β} =1.27; p<.05). In the final model, each additional parent who lives 10 miles or further from the adult child is associated with a 40% reduction in odds of giving any time (e^{β} =0.60; p<.001). When looking across the entire set of models in Table 10, I find that the mediator of physical distance between the adult child and parents helps to explain part of the marital status relationship. That is, physical distance is cofounded with marital status in my sample.

Table 11 presents the results for the odds of giving any money to any parents among males only. In the bivariate analyses, model 1, marital status among men in my sample is not associated with a change in odds for giving any money to parents. For brevity, turning to the final model, Model 5, I find that marital status is not associated with a difference in odds for giving any money, but several control variables are. Black males have a 254% increase in odds of giving any money to any parents compared to White males (e^{β} =2.54; p<.001). Each year of additional educational attainment is associated with a small increase, 7%, in the odds of giving any money (e^{β} =1.07; p<.05), and each additional parent in poor health is associated with a 29% increase in odds of giving any money to parents (e^{β} =1.29; p<.05).

For the second additional analyses (results not presented in tables here), I test whether a collapsed, dichotomous version of family structure is associated with giving. The independent variable for family structure is collapsed into those who are in a couple (married, long-term and short-term cohabiters = 1) compared to those who are not (divorced, separated, and widowed). I will briefly present findings here, focusing on only the association between family structure and giving. In logistic regression models predicting giving any time at all, I find that being in a couple is not statistically associated with the odds of giving any time to parents (e^{β} =0.88,

p=0.08). However, in the final model, controlling for adult child and parent characteristics along with mediators, being in a couple is significantly associated with a reduction in the odds of giving any time to parents (e^{β} =0.58, p<.001). In logistic regression models predicting giving any money at all, I find no association between being in a couple in the bivariate results. In the final model, being in a couple is not associated with the likelihood of giving any money.

In OLS regression models predicting the amount of time given to parents, being in a couple is associated with a reduction in the amount of time given to parents, compared to adult children not in a couple (b=-83, p<.001). In the final model, controlling for adult child and parent characteristics along with mediators, shows that coupled families reduce the hours they give to parents per year compared to never married children (b=-.66, p<.05). In OLS regression models predicting the amount of money given to parents, being in a couple is not associated with the amount of money provided to parents. In final models, controlling for adult child and parent characteristics along with mediators, being in a couple is not associated with the amount of money provided to parents.

For the third and final additional analyses (results not presented in tables here), I test whether the adult child's history of ever experiencing a divorce is significantly associated with their giving of time and money to parents. Artis (2016) finds that adult children who have ever divorced are less likely to transfer time to parents than those children who have not been previously married. In my study, this item is measured using marital history and respondents are given a 1 if they have ever divorced or separated, and a 0 if they have not. It is relatively common among my sample, with 25% having ever been divorced or separated. Ever having divorced or separated was not associated with the likelihood or the amount of time or money given to parents.

Discussion

As the population ages, the needs for family care will increase (Olson 1994; Wolinsky et al. 2011). Adult children are one of the most common sources of family help for aging parents, but families today are more diverse than in the past. These changing family structures may present different norms about family obligation, including for intergenerational transfers (Cherlin 2010; Silverstein and Giarrusso 2010). Using the PSID, I investigate three main research questions. First, is family structure associated with giving to parents and does it differ by particular family structure. More specifically, is cohabitation as greedy as marriage, and does the fractured nature of divorce also affect giving to parents. Second, if family structure is associated with giving can these associations be partially explained by family income and physical distance? Third, does family structure work different for association with giving between Blacks and Whites?

Overall, I find that the adult child's family structure is significantly associated with the likelihood of giving any time to any parents. It is important to point out that collapsing all couples into one category does also show the same significant results, but my results stress the importance of separating out different types of couples. My findings lends support to the idea that marriage is indeed greedy (Sarkisian and Gerstel 2008), reducing the likelihood of giving any time to any parents compared to never married adult children, even accounting for the adult child and parents characteristics. In addition, long-term cohabiting is similarly greedy in the likelihood of giving any time to parents. This supports the extension of the marriage as a greedy institution theory for cohabiters, with a caveat; the length of time that cohabiters are together matters for this association, with long-term cohabiters reducing the likelihood while short-term cohabiters have no significant difference compared to never married adult children.

Interestingly, being divorced also reduces the likelihood of giving any time to any parents (Shapiro 2012). This supports the literature that points to the reduction in resources for a divorced adult child and how this may translate to a reduction in help provided to parents. Because the divorced child is focusing on reorganizing their own life, spending their time and money on this life course transition, they cannot provide for their parents in the same way that never married adult children can. Not only are married, long-term cohabiters, and divorcées less likely to give time at all, they each also give less time overall when they do give time, compared to never married adult children and even after controlling for adult child and parent characteristics and mediators.

This finding is important in two distinct ways. First, regarding cohabitation, it does suggest that cohabiters behavior mirrors those in married families. They are, perhaps, investing their resources within the relationship, instead of in other relationships. While this may seem like cause for alarm for the aging population, it could also be argued that it is a positive sign about the investments that adults are making into their relationships, even if they are not the traditional form of marriage. Second, regarding divorce, my finding does support the idea that a divorce severs family ties in different ways; here, divorce reduces the time that these adult children provide to their parents, perhaps because they are recovering from the damage a divorce causes within their own life.

I find no significant association between the adult child's family structure and the likelihood of giving any money to parents, nor in the prediction of the amount of money they do give. This could be because financial transfers are rare and limited in size. This is interesting to consider in light of studies that have combined time and help into one category; I argue that my findings show that time and money are distinct types of help and should be kept separate in

analyses if possible. While married, cohabiting, and divorced adult children reduce their giving of time to parents, the fact that there is no association with money is positive news, suggesting that adult children who may not be able to provide time will provide other means, like financial transfers. This is important for government programming that relies on families to supplement the costs of the programs (Olson 1994).

The findings by race present some interesting results. Overall, I find that marriage is similarly greedy for both Blacks and Whites in terms of the likelihood of giving any time to any parent, and there is no association for either regarding money. When predicting the amount of time, it is interesting that among Blacks short-term cohabiters reduce their transfers of time to parents more than never married adult children, compared to Whites where it is the long-term cohabiters who reduce the amount of time they give to parents. While family structure is not significantly associated with giving to parents in the full sample, the conditional analyses by race so that Blacks who are married or long-term cohabiting reduce the amount of money they provide to parents, compared to never married adult children. Both of these findings lend credibility to the idea that coupled adult children are investing in their relationships, but the difference by type of cohabitation deserves further study.

This study is not without limitations. First, by averaging parent's age, I may be missing some particular relationships between adult children and giving patterns. Future research should consider ways in which these relationships may work differentially by particular parent characteristics along a spectrum. Second, the data I use is cross-sectional, so I may be missing some transfers that occur infrequently or even those that happen across time. Third, another limitation of this study is in the removal of co-residential parents and adult children. Never married adult children are more likely to co-reside (Gerstel and Sarkisian 2007) as well as Black

families (Peek et al. 2000). Thus, I might be truncating the amount of giving seen within families. In earlier analyses I did include adult children who co-reside with at least one parent and found that the general relationship between marital status and giving did not change, but that those who did co-reside reported higher levels of giving time to parents. Co-residence is seen as a form of high exchanges (Furstenberg et al. 1995) and future research could investigate the way that co-residence differs from other types of giving. Fourth, because the items are measured the way they are, I might be missing relationships between who is giving, especially in cohabiting relationships.

There is much left to be explored in future research. Some studies suggest that there is not only a race difference, but that perhaps there is also a race by gender by family structure difference (Hoyert 1991; Spitze and Logan 1990). Only one study that I am aware of has specifically investigated this phenomenon and found that White married daughters reduced their giving, but that Black married daughters did not (Laditka and Laditka 2001).

Another area of exploration for this topic and particularly with the PSID is the ways in which employment is related to giving. In earlier tests, I tested hours worked and found that those who over-work, or work more than 50 hours per week (Cha 2010) were more likely to transfer money to parents. Future research should explore the ways in which family structure and employment factors may be associated with giving to parents.

Another potential area for future research is regarding reciprocal giving, with can impact the giving adult children provide for their parents (Cheng et al. 2013). Because this is a topic unto itself, I did not include it here and suggest that it be an area for future research. Given the extension of emerging adulthood, parents may be investing in their children longer which could

in turn impact adult children's ability to give back to parents (Albertini et al. 2007; Furstenberg et al. 1995).

Overall, my findings suggest that marriage, long-term cohabitation, as well as divorce all reduce giving of time to parents by adult children, compared to their never married counterparts. While this may be cause for alarm for programming that relies on families to provide for aging parents, the null results regarding money suggest that families, of all forms, continue to support parents when they are in financial need. Going forward, research should continue to pay attention to the ways in which diverse family structures differ in their intergenerational relationships.

Table 1. Descriptive Statistics

	Range	Mean or proportion	Whites	Blacks
Giving to Parents				
Time				
At all		47.4%	47.0%	47.4%
Total Hours (per year)	0-9,360	123.4	105.7	210.9
Money				
At all		16.0%	13.7%	27.2%
Total Dollars (per year)	0-43,800	216.1	192.4	332.9
Adult Child Family Structure				
Never Married		24.7%	20.0%	48.4%
Married		51.6%	57.2%	24.2%
Long Term Cohabiters		5.0%	4.5%	7.3%
Short Term Cohabiters		1.9%	2.0%	1.6%
Divorced/Separated		15.7%	15.3%	17.8%
Widowed and Single		1.1%	1.1%	1.0%
Adult Child Characteristics				
Black		16.8%		
Male		75.6%	79.5%	56.3%
Age	18 - 79	43.6	44.4	39.6
Number of Siblings	0 - 22	2.5	2.3	3.8
Years of Education	4 - 17	14.1	14.3	13.2
Family Income	0 - 343,600	79,782	88,025	39,000
Number of Children	0 - 9	0.7	0.7	0.8
Head Respondent		67.2%	65.0%	77.8%
Parent Characteristics				
Age of Living Parents	29-103	68.9	70.0	63.3
Parents in Poor Health	0 - 3	0.17	0.18	0.13
Miles btwn Adult Child/Parent	0 - 4,918	239	260	138

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=5,493

Table 2: Means of Giving Time and Money by Adult Child's Family Structure

	TIME		MONEY	
	Any Time	Amount of Time	Any Money	Amount of Money
Adult Child's Family Structure				
Never Married	0.51 (0.02)	143.9 (19.1)	0.18 (0.02)	202.0 (36.4)
Married	[a] 0.45 (0.01)	104.3 (11.9)	0.14 (0.00)	246.7 (46.0)
Long-term Cohabiters	0.43 (0.03)	139.8 (30.3)	0.13 (0.02)	244.0 (143.9)
Short-term Cohabiters	0.51 (0.05)	75.6 (17.0)	0.14 (0.03)	106.2 (47.5)
Divorced/Separated	0.46 (0.03)	129.1 (17.9)	0.17 (0.19)	163.4 (35.1)
Widowed	0.61 (0.09)	113.0 (46.7)	0.10 (0.04)	84.5 (47.7)

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=5,473; Standard Errors are in Parentheses

a=significantly different from never married children, p<.05

Table 3: Logistic Regression Models (odds ratios) for Giving Any Time to Any Parent(s)

	Model 1		Model 2		Model 3		Model 4		Model 5	
Adult Child Family Structure										
(never married omitted)										
Married	0.82 (0.08)	*	0.52 (0.08)	***	0.54 (0.78)	***	0.42 (0.06)	***	0.42 (0.06)	***
Long Term Cohabiters	0.75 (0.11)	†	0.56 (0.10)	**	0.57 (0.10)	**	0.42 (0.08)	***	0.42 (0.08)	***
Short Term Cohabiters	1.02 (0.22)		1.07 (0.23)		1.07 (0.23)		1.02 (0.23)		1.02 (0.23)	
Divorced/Separated	0.83 (0.11)		0.68 (0.98)	**	0.68 (0.98)	**	0.63 (0.09)	**	0.63 (0.09)	**
Widowed and Single	1.48 (0.57)		1.11 (0.45)		1.14 (0.47)		0.97 (0.04)		0.99 (0.40)	
Control variables										
Black			1.04 (0.11)		1.04 (0.11)		0.89 (0.10)		0.89 (0.10)	
Male			1.28 (0.16)	*	1.29 (0.16)	*	1.31 (0.17)	*	1.31 (0.17)	*
Age			1.00 (0.00)		1.00 (0.00)		1.00 (0.00)		1.00 (0.00)	
Number of Siblings			0.98 (0.02)		0.98 (0.02)		0.99 (0.02)		0.99 (0.02)	
Years of Education			1.00 (0.02)		1.01 (0.02)		1.05 (0.02)	*	1.05 (0.02)	**
Number of Children			1.00 (0.03)		1.01 (0.03)		0.97 (0.03)		0.97 (0.03)	
Head Respondent			0.77 (0.67)	**	0.78 (0.07)	**	0.77 (0.07)	**	0.78 (0.07)	**
Avg. Age of Parents			1.02 (0.00)	*	1.02 (0.00)	*	1.02 (0.00)	**	1.02 (0.00)	**
# of P. in Poor Health			1.19 (0.10)	*	1.19 (0.10)	*	1.16 (0.11)		1.16 (0.11)	
Mediators										
Adult Child's Family Income					1.00 (0.00)				1.00 (0.00)	
# Par. > 10 mi.							0.53 (0.03)	***	0.53 (0.03)	***
Constant	1.03 (0.08)		0.38 (0.14)	**	0.35 (0.13)	**	4.53 (1.88)	***	4.28 (1.79)	*

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=4,983; Standard Errors are in Parentheses;
Note: Avg. = Average; P. = Parent; # Par. > 10 mi. = Number of Parents Further than 10 Miles; *** p<.001,** p<.01, * p<.05, † = p<.06

Table 4: Logistic Regression Models (odds ratios) for Giving Any Money to Any Parent(s)

	Model 1		Model 2		Model 3		Model 4		Model 5	
Adult Child Family Structure										
(never married omitted)										
Married	0.79 (0.10)	†	0.86 (0.16)		0.81 (0.16)		0.82 (0.16)		0.77 (0.15)	
Long Term Cohabiters	0.66 (0.14)	†	0.71 (0.18)		0.69 (0.18)		0.66 (0.17)		0.64 (0.17)	
Short Term Cohabiters	0.72 (0.20)		0.92 (0.27)		0.93 (0.27)		0.92 (0.27)		0.92 (0.27)	
Divorced/Separated	0.89 (0.15)		1.00 (0.18)		1.00 (0.18)		0.98 (0.18)		0.99 (0.18)	
Widowed and Single	0.49 (0.25)		0.58 (0.30)		0.53 (0.30)		0.57 (0.30)		0.51 (0.29)	
Control variables										
Black			2.81 (0.37)	***	2.84 (0.37)	***	2.73 (0.36)	***	2.74 (0.36)	***
Male			1.17 (0.20)		1.16 (0.20)		1.17 (0.20)		1.16 (0.20)	
Age			1.00 (0.01)		1.01 (0.01)		1.00 (0.01)		1.00 (0.01)	
Number of Siblings			1.00 (0.03)		1.00 (0.03)		1.00 (0.03)		1.00 (0.03)	
Years of Education			1.12 (0.03)	***	1.10 (0.03)	***	1.13 (0.03)	***	1.12 (0.03)	***
Number of Children			0.97 (0.04)		0.96 (0.04)		0.96 (0.04)		0.96 (0.04)	
Head Respondent			0.96 (0.11)		0.94 (0.11)		0.96 (0.11)		0.94 (0.11)	
Avg. Age of Parents			1.00 (0.01)		1.00 (0.01)		1.00 (0.01)		1.00 (0.01)	
# of P. in Poor Health			1.34 (0.15)	**	1.33 (0.15)	*	1.33 (0.15)	*	1.31 (0.15)	*
Mediators										
Ad. Child's Fam. Income					1.00 (0.00)	†			1.00 (0.00)	*
# of Par. > 10 mi.							0.86 (0.05)	*	0.85 (0.05)	**
Constant	0.03 (0.01)	***	0.03 (0.01)	***	0.03 (0.02)	***	0.05 (0.03)	***	0.06 (0.04)	***

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=5,473; Standard Errors in Parentheses;
Note: Ad.=Adult; Avg. = Average; Fam.=Family; P. = Parent; # Par. > 10 mi. = Number of Parents Further than 10 Miles;
*** p<.001,** p<.01, * p<.05, † = p<.06

Table 5: OLS Regression Models for Giving Amount of Time to Parents Among Those Who Gave Any)

	Model 1		Model 2		Model 3		Model 4		Model 5	
Adult Child Family Structure										
(never married omitted)										
Married	-67.8 (28.1)	*	-113.0 (38.3)	**	-92.8 (38.3)	*	-122.1 (40.5)	**	-100.7 (40.6)	*
Long Term Cohabiters	-84.7 (35.9)	*	-109.7 (47.0)	*	-99.4 (46.5)	*	-117.0 (47.9)	*	-106.1 (47.5)	*
Short Term Cohabiters	-121.2 (32.1)	***	-58.9 (33.8)		-61.8 (33.9)		-59.3 (33.9)		-62.1 (34.1)	
Divorced/Separated	39.6 (42.0)		-50.3 (49.0)		-49.0 (48.7)		-53.1 (49.1)		-51.5 (48.9)	
Widowed and Single	-41.5 (71.8)		-211.7 (86.1)	*	-177.0 (88.9)	*	-215.9 (86.6)	*	-181.5 (89.1)	*
Control variables										
Black			149.4 (42.4)	***	148.3 (42.2)	***	145.4 (42.2)	***	144.7 (41.9)	**
Male			-71.8 (34.9)	*	-68.6 (34.7)	*	-71.4 (34.8)	*	-68.3 (34.7)	*
Age			5.71 (2.55)	*	5.33 (2.52)	*	5.82 (2.57)	*	5.44 (2.54)	*
Number of Siblings			-2.06 (5.64)		-2.35 (5.61)		-1.79 (5.60)		-2.11 (5.57)	
Years of Education			-17.6 (5.70)	**	-14.0 (5.76)	*	-16.2 (5.89)	*	-12.8 (5.94)	*
Number of Children			-0.46 (13.7)		0.37 (13.7)		-1.42 (13.4)		-0.50 (13.3)	
Head Respondent			-47.8 (28.6)		-44.9 (28.5)		-48.3 (28.7)		-45.4 (28.5)	
Avg. Age of Parents			0.27 (2.79)		0.72 (2.77)		0.37 (2.78)		0.80 (2.76)	
# of P. in Poor Health			73.0 (29.5)	*	77.6 (29.7)	**	71.6 (29.7)	**	76.3 (29.9)	*
Mediators										
Ad. Child's Fam. Income					-0.00 (0.00)	**			-0.00 (0.00)	**
# of Par. > 10 mi.							-18.8 (12.2)	**	-16.5 (12.1)	
Constant	228.2 (24.0)	***	297.9 (122.4)	*	239.4 (122.8)	*	368.6 (129.9)	*	303.2 (129.7)	*

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=2,554; Standard Errors are in Parentheses;
Note: Ad.=Adult; Avg. = Average; Fam.=Family; P. = Parent; # Par. > 10 mi. = Number of Parents Further than 10 Miles;
*** p<.001,** p<.01, * p<.05, † = p<.06

Table 6: OLS Regression Models for Giving Amount of Money to Parents Among Those Who Gave Any

	Model 1	Model 2	Model 3	Model 4	Model 5
Adult Child Family Structure					
(never married omitted)					
Married	31.6 (209.5)	-72.4 (391.0)	-133.8 (391.5)	-79.7 (375.9)	-146.4 (375.9)
Long Term Cohabiters	-19.1 (511.3)	122.1 (601.7)	113.9 (600.7)	113.6 (601.4)	100.3 (600.7)
Short Term Cohabiters	-259.9 (331.1)	12.3 (339.4)	18.5 (337.4)	17.8 (343.9)	27.5 (341.5)
Divorced/Separated	-33.9 (237.8)	-100.9 (299.0)	-94.9 (296.7)	-104.4 (297.1)	-100.9 (295.0)
Widowed and Single	-93.3 (245.0)	-329.1 (373.9)	286.3 (367.0)	-331.7 (374.0)	-290.5 (367.3)
Control variables					
Black		370.8 (161.8) *	392.8 (161.5) *	366.1 (163.9) *	384.9 (163.8) *
Male		335.7 (241.8)	312.6 (239.0)	334.1 (242.1)	309.8 (239.4)
Age		-23.0 (20.8)	-23.2 (20.7)	-23.0 (20.8)	-23.1 (20.7)
Number of Siblings		-52.7 (40.3)	-51.0 (40.0)	-52.1 (41.3)	-50.0 (41.0)
Years of Education		49.7 (30.1)	38.3 (30.2)	51.2 (33.4)	40.8 (33.5)
Number of Children		-125.4 (63.0)	-140.8 (62.2) *	-126.1 (64.7) †	-142 (64.0) *
Head Respondent		118.2 (225.2)	95.9 (224.9)	119.2 (229.2)	97.6 (228.5)
Avg. Age of Parents		42.8 (21.0) *	42.5 (20.9) *	43.2 (21.6) *	42.0 (21.5) *
# of P. in Poor Health		114.3 (210.7)	123.3 (209.8)	112.9 (205.3)	121.2 (204.6)
Mediators					
Ad. Child's Fam. Income			0.00 (0.00) *		0.00 (0.00) **
# of Par. >10 mi.				-22.4 (140.3)	-37.0 (140.1)
Constant	936.5 (158.6) ***	-1903.4 (982.3)	-1732.3 (985.0)	-1827.3 (904.5) *	1606.0 (904.0)

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=1,039; Standard Errors in Parentheses;
Note: Ad.=Adult; Avg. = Average; Fam.=Family; P. = Parent; # Par. > 10 mi. = Number of Parents Further than 10 Miles;
*** p<.001,** p<.01, * p<.05, † = p<.06

Table 7: Interaction Results for Race and Adult Child's Family Structure

	Any Time (N=5,473)	Any Money (N=5,473)	Hours (N=2,554)	Dollars (N=1,039)
Adult Child Family Structure (never married omitted)				
Married	0.73 (0.12) †	0.94 (0.21)	-60.77 (39.36)	291.83 (432.73)
Long Term Cohabitors	0.85 (0.18)	0.86 (0.28)	-62.43 (41.18)	876.25 (880.94)
Short Term Cohabitors	1.14 (0.28)	1.07 (0.35)	-45.09 (35.01)	309.20 (380.32)
Divorced/Separated and Single	0.69 (0.12) *	1.11 (0.27)	-41.62 (46.28)	111.94 (318.82)
Widowed and Single	1.26 (0.59)	0.55 (0.41)	-186.59 (91.20) *	32.69 (339.07)
Control variables				
Black	0.98 (0.18)	3.03 (0.68) ***	157.16 (57.31) **	806.23 (316.08) *
Male	1.31 (0.17) *	1.17 (0.20)	-66.41 (35.50)	345.03 (234.50)
Age	0.99 (0.01)	1.00 (0.01)	4.53 (2.43)	-29.58 (21.16)
Number of Siblings	0.99 (0.02)	1.00 (0.03)	-1.72 (5.50)	-39.71 (39.97)
Years of Education	1.04 (0.02) *	1.12 (0.03) ***	-10.36 (5.83)	61.86 (35.11)
Number of Children	1.02 (0.03)	0.97 (0.04)	0.84 (13.16)	-139.74 (60.05) *
Head Respondent	0.76 (0.07) **	0.94 (0.11)	-51.38 (28.44)	75.89 (222.97)
Average Age of Living Parents	1.02 (0.01) *	1.00 (0.01)	0.66 (2.73)	44.89 (20.85) *
# of Parents in Poor Health	1.32 (0.12) **	1.38 (0.16) **	87.67 (29.48) **	167.58 (223.01)
Mediators				
Adult Child's Family Income	1.00 (0.00)	1.00 (0.00) *	-0.00 (0.00) **	0.00 (0.00) **
# of Par. > 10 mi.	0.58 (0.03) ***	0.82 (0.05) **	-56.05 (12.36) ***	-218.78 (116.77)
A.C. Family Structure * Black (never married omitted)				
Married	0.76 (0.18)	0.93 (0.26)	-68.33 (86.61)	-936.33 (354.36) **
Long Term Cohabitors	0.76 (0.28)	0.77 (0.35)	-2.53 (110.96)	1344.65 (848.31)
Short Term Cohabitors	0.61 (0.39)	0.51 (0.33)	-91.58 (81.99)	671.70 (548.44)
Divorced/Separated and Single	1.49 (0.43)	0.83 (0.28)	-2.39 (114.55)	-192.63 (407.62)
Widowed and Single	0.88 (0.59)	1.09 (0.98)	114.45 (223.10)	-411.69 (507.37)
Constant	0.43 (0.16) *	0.03 (0.02) ***	253.57 *	-2108.45 (1045.44) *
F	1.38	0.29	0.44	1.80
Prob>F	0.23	0.92	0.82	0.11

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics; Standard Errors in Parentheses;
*** p<.001,** p<.01, * p<.05, † = p<.06

Table 8: Tobit Regression Models for Giving Time to Parents

	Model 1	Model 2	Model 3	Model 4	Model 5
Adult Child Family Structure (never married omitted)					
Married	-83.60 (38.11) *	-226.46 (57.34) ***	-209.37 (57.03) ***	-123.76 (52.97) *	-112.94 (53.05) *
Long Term Cohabitors	-76.74 (63.71)	-168.47 (77.51) *	-159.37 (77.30) *	-48.11 (74.00)	-42.99 (73.99)
Short Term Cohabitors	-85.76 (61.83)	-31.93 (62.30)	-33.38 (62.17)	-31.99 (62.00)	-33.07 (61.93)
Divorced/Separated and Single	-59.97 (50.63)	-155.34 (58.67) **	-155.07 (58.58) **	-128.48 (56.67) *	-128.52 (107.14) *
Widowed and Single	35.26 (99.17)	-130.36 (111.29)	-111.66 (112.83)	-105.21 (106.00)	-92.30 (107.14)
Control variables					
Black		146.03 (48.57) **	144.46 (48.41) **	117.22 (46.61) *	116.39 (46.53) *
Male		15.98 (43.04)	18.56 (42.98)	15.76 (42.22)	17.57 (42.17)
Age		2.88 (3.11)	2.72 (3.10)	0.18 (2.93)	0.08 (2.92)
Number of Siblings		-8.76 (7.61)	-9.18 (7.61)	-8.23 (7.54)	-8.52 (7.54)
Years of Education		-8.45 (7.84)	-5.14 (8.04)	4.23 (8.41)	6.39 (8.56)
Number of Children		6.60 (19.14)	7.63 (19.15)	9.92 (18.99)	10.61 (19.00)
Head Respondent		-112.81 (38.41) **	-109.92 (38.33) **	-121.11 (38.56) **	-119.06 (38.52) **
Average Age of Living Parents		5.10 (3.25)	5.37 (3.24)	4.81 (3.13)	5.00 (3.13)
Number of Parents in Poor Health		149.85 (41.96) ***	151.67 (42.01) ***	184.08 (43.35) ***	184.93 (43.38) ***
Mediators					
Adult Child's Family Income			-0.00 (0.00) *		-0.00 (0.00)
Number of Parents Living Further than 10 mi.				-180.28 (22.53) ***	-178.54 (22.38) ***
Constant	-159.91 (37.61) ***	-391.97 (170.48) *	-441.84 (173.34) *	-315.86 (166.37) †	-350.87 (168.43) *
/Sigma	709.11 (64.81) ***	697.16 (63.59) ***	696.56 (63.59) ***	688.92 (63.59) ***	688.58 (63.59) ***

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=5,473; Standard Errors in Parentheses; *** p<.001,** p<.01, * p<.05, † = p<.06

Table 9: Tobit Regression Models for Giving Money to Parents

	Model 1	Model 2	Model 3	Model 4	Model 5
Adult Child Family Structure (never married omitted)					
Married	-309.04 (265.53)	-39.53 (419.60)	-202.59 (412.04)	228.28 (457.09)	80.33 (447.47)
Long Term Cohabitors	-579.83 (530.35)	-266.31 (594.34)	-326.76 (588.35)	46.05 (619.02)	10.19 (612.97)
Short Term Cohabitors	-770.95 (573.72)	-119.13 (385.57)	-102.77 (566.44)	-107.84 (571.84)	-88.79 (563.62)
Divorced/Separated and Single	286.03 (362.74)	11.28 (385.57)	24.56 (381.37)	88.56 (388.60)	108.26 (384.43)
Widowed and Single	-1488.53 (1040.07)	-1113.39 (1023.26)	-1261.95 (1097.02)	-1012.39 (1018.44)	-1161.75 (1096.46)
Control variables					
Black		2216.22 (459.26) ***	2225.11 (461.98) ***	2148.52 (443.80) ***	2152.35 (445.92) ***
Male		446.70 (352.94)	405.26 (348.28)	449.43 (351.99)	407.02 (347.05)
Age		-3.20 (20.89)	-3.30 (20.78)	-9.84 (21.57)	-10.49 (21.49)
Number of Siblings		-18.99 (54.57)	-12.59 (54.14)	-15.85 (54.74)	-8.89 (54.31)
Years of Education		239.53 (68.79) **	201.64 (66.74) **	274.53 (76.51) ***	237.97 (74.17) **
Number of Children		-131.60 (101.65)	-156.30 (102.72)	-121.33 (100.05)	-146.44 (101.14)
Head Respondent		29.66 (272.99)	-8.58 (269.32)	21.48 (271.28)	-19.34 (267.25)
Average Age of Living Parents		18.47 (22.53)	16.57 (22.33)	17.91 (22.33)	15.90 (22.11)
Number of Parents in Poor Health		739.71 (342.02) *	724.44 (342.35) *	819.10 (358.89) *	811.43 (359.84) *
Mediators					
Adult Child's Family Income			0.002 (0.001) ***		0.002 (0.001) ***
Number of Parents Living Further than 10 mi.				-436.20 (180.88) *	-476.24 (184.24) **
Constant	-4225.89 (902.88) ***	-9707.59 (2386.71) ***	-9056.75 (2350.06) ***	-9610.02 (2353.59) ***	-8923.53 (2309.41) ***
/Sigma	4201.28 (786.09) ***	4117.42 (767.81) ***	4072.87 (773.87) ***	4106.16 (760.56) ***	4058.18 (766.00) ***

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=5,473; Standard Errors in Parentheses; *** p<.001,** p<.01, * p<.05, † = p<.06

Table 10: Logistic Regression Models (odds ratios) for Giving Any Time to Any Parent(s), Males only

	Model 1		Model 2		Model 3		Model 4		Model 5	
Adult Child Family Structure (never married omitted)										
Married	0.73 (0.10)	*	0.49 (0.08)	***	0.51 (0.08)	***	0.67 (0.11)	**	0.68 (0.11)	*
Long Term Cohabiters	0.66 (0.12)	*	0.55 (0.11)	**	0.56 (0.11)	**	0.77 (0.15)		0.78 (0.16)	
Short Term Cohabiters	0.85 (0.25)		0.89 (0.27)		0.89 (0.27)		0.91 (0.28)		0.90 (0.28)	
Divorced/Separated	0.97 (0.20)		0.72 (0.16)		0.72 (0.16)		0.78 (0.17)		0.78 (0.17)	
Widowed and Single	0.34 (0.26)		0.19 (0.16)	*	0.18 (0.16)	*	0.24 (0.19)		0.24 (0.19)	
Control variables										
Black			0.92 (0.12)		0.92 (0.12)		0.85 (0.12)		0.85 (0.12)	
Age			1.00 (0.01)		1.00 (0.01)		0.99 (0.01)		0.99 (0.01)	
Number of Siblings			0.98 (0.02)		0.98 (0.02)		0.98 (0.02)		0.98 (0.02)	
Years of Education			0.99 (0.02)		1.00 (0.02)		1.03 (0.02)		1.03 (0.02)	
Number of Children			1.00 (0.04)		1.01 (0.39)		1.02 (0.04)		1.02 (0.04)	
Head Respondent			0.78 (0.07)	**	0.78 (0.07)	**	0.76 (0.07)	**	0.76 (0.07)	**
Avg. Age of Parents			1.02 (0.01)	*	1.02 (0.01)	*	1.02 (0.01)	*	1.02 (0.01)	*
# of P. in Poor Health			1.14 (0.11)		1.14 (0.11)		1.27 (0.13)	*	1.27 (0.13)	*
Mediators										
Ad. Child Fam. Income					1.00 (0.00)	†			1.00 (0.00)	
# Parents > 10 mi.							0.61 (0.03)	***	0.60 (0.03)	***
Constant	1.17 (0.14)		0.53 (0.21)		0.48 (0.19)		0.64 (0.26)		0.60 (0.24)	

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=3,963; Standard Errors in Parentheses;
Note: Ad.=Adult; Avg. = Average; Fam.=Family; P. = Parent; # Par. > 10 mi. = Number of Parents Further than 10 Miles;
*** p<.001,** p<.01, * p<.05, † = p<.06

Table 11: Logistic Regression Models (odds ratios) for Giving Any Money to Any Parent(s), Males only

	Model 1		Model 2		Model 3		Model 4		Model 5	
Adult Child Family Structure *(never married omitted)*										
Married	0.84 (0.15)		0.79 (0.17)		0.74 (0.16)		0.87 (0.19)		0.82 (0.19)	
Long Term Cohabiters	0.71 (0.18)		0.71 (0.19)		0.68 (0.19)		0.78 (0.21)		0.76 (0.21)	
Short Term Cohabiters	0.88 (0.32)		1.03 (0.39)		1.05 (0.39)		1.04 (0.39)		1.06 (0.40)	
Divorced/Separated	1.14 (0.31)		1.03 (0.29)		1.03 (0.29)		1.06 (0.30)		1.07 (0.30)	
Widowed and Single	1.48 (1.54)		1.15 (1.15)		1.19 (1.20)		1.26 (1.27)		1.32 (1.35)	
Control variables										
Black			2.55 (0.41)	***	2.59 (0.41)	***	2.51 (0.40)	***	2.54 (0.41)	***
Age			1.01 (0.01)		1.01 (0.01)		1.00 (0.01)		1.01 (0.01)	
Number of Siblings			1.02 (0.03)		1.02 (0.03)		1.02 (0.03)		1.02 (0.03)	
Years of Education			1.07 (0.03)	*	1.05 (0.03)		1.08 (0.03)	**	1.07 (0.03)	*
Number of Children			1.00 (0.05)		0.99 (0.05)		1.00 (0.05)		1.00 (0.05)	
Head Respondent			0.96 (0.12)		0.94 (0.12)		0.95 (0.12)		0.93 (0.11)	
Avg. Age of Parents			1.00 (0.01)		1.00 (0.01)		1.00 (0.01)		1.00 (0.01)	
# of P. in Poor Health			1.25 (0.16)		1.25 (0.16)		1.29 (0.16)	*	1.29 (0.17)	*
Mediators										
Ad. Child Fam. Income					1.00 (0.00)				1.00 (0.00)	
# Parents > 10 mi.							0.85 (0.05)	*	0.84 (0.05)	**
Constant	0.21 (0.03)	***	0.03 (0.02)	***	0.04 (0.02)	***	0.03 (0.02)	***	0.04 (0.02)	***

Data: Multiply imputed, weighted data from Panel Survey of Income Dynamics, N=3,963; Standard Errors in Parentheses;
Note: Ad.=Adult; Avg. = Average; Fam.=Family; P. = Parent; # Par. > 10 mi. = Number of Parents Further than 10 Miles;
*** p<.001,** p<.01, * p<.05, † = p<.06

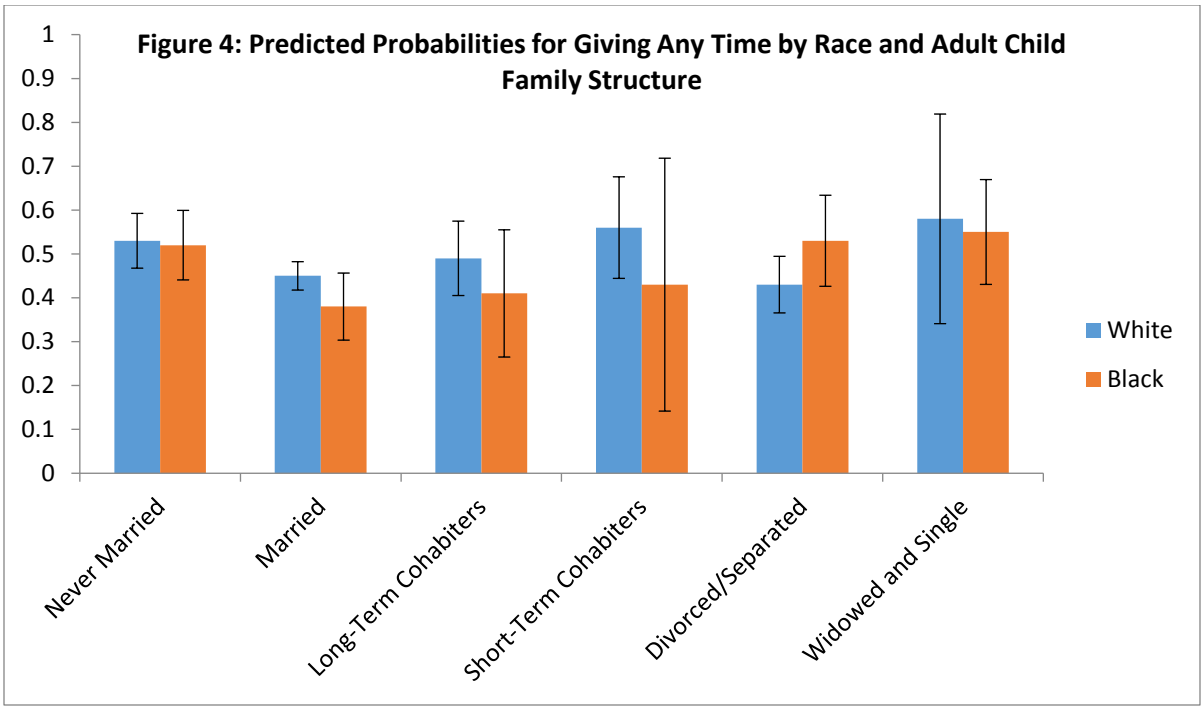


Figure 4: Predicted Probabilities for Giving Any Time by Race and Adult Child Family Structure
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Never Married
Married
Long-Term Cohabiters
Short-Term Cohabiters
Divorced/Separated
Widowed and Single
White
Black

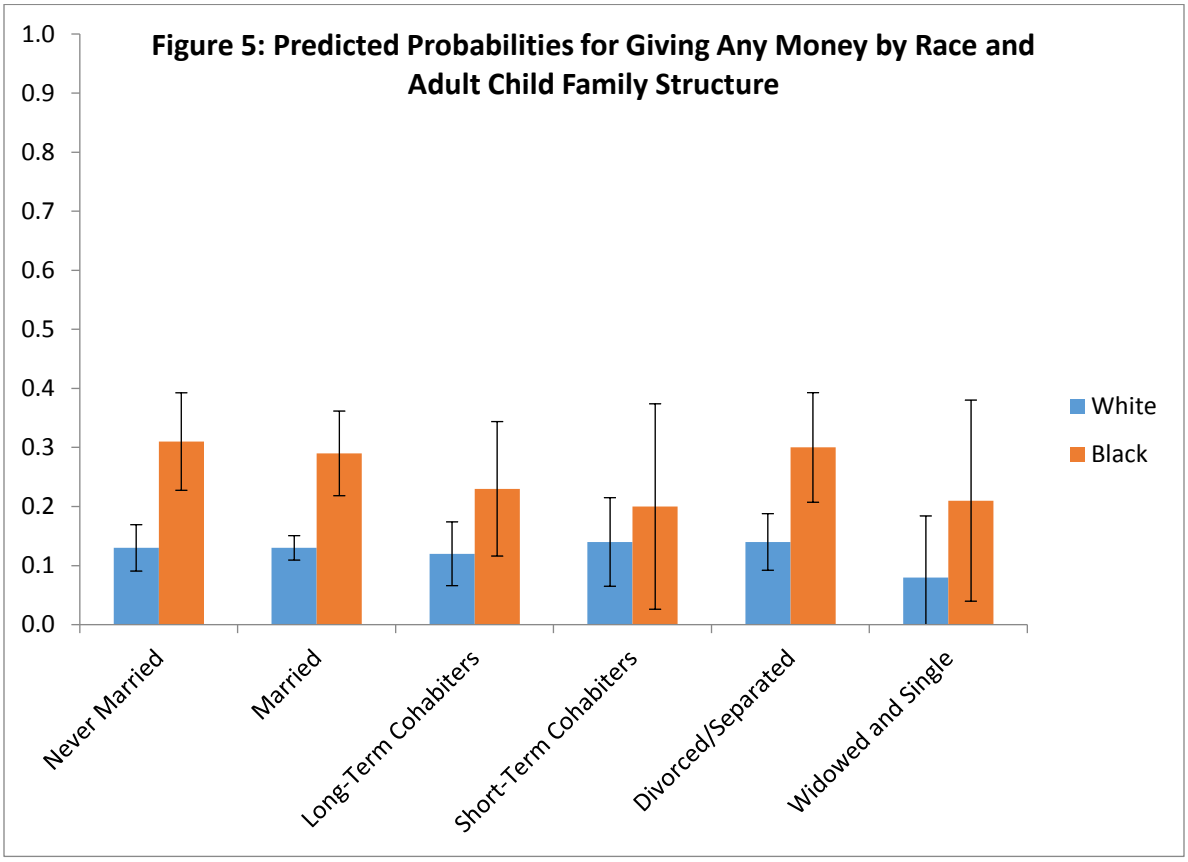


Figure 5: Predicted Probabilities for Giving Any Money by Race and Adult Child Family Structure
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Never Married
Married
Long-Term Cohabiters
Short-Term Cohabiters
Divorced/Separated
Widowed and Single
White
Black

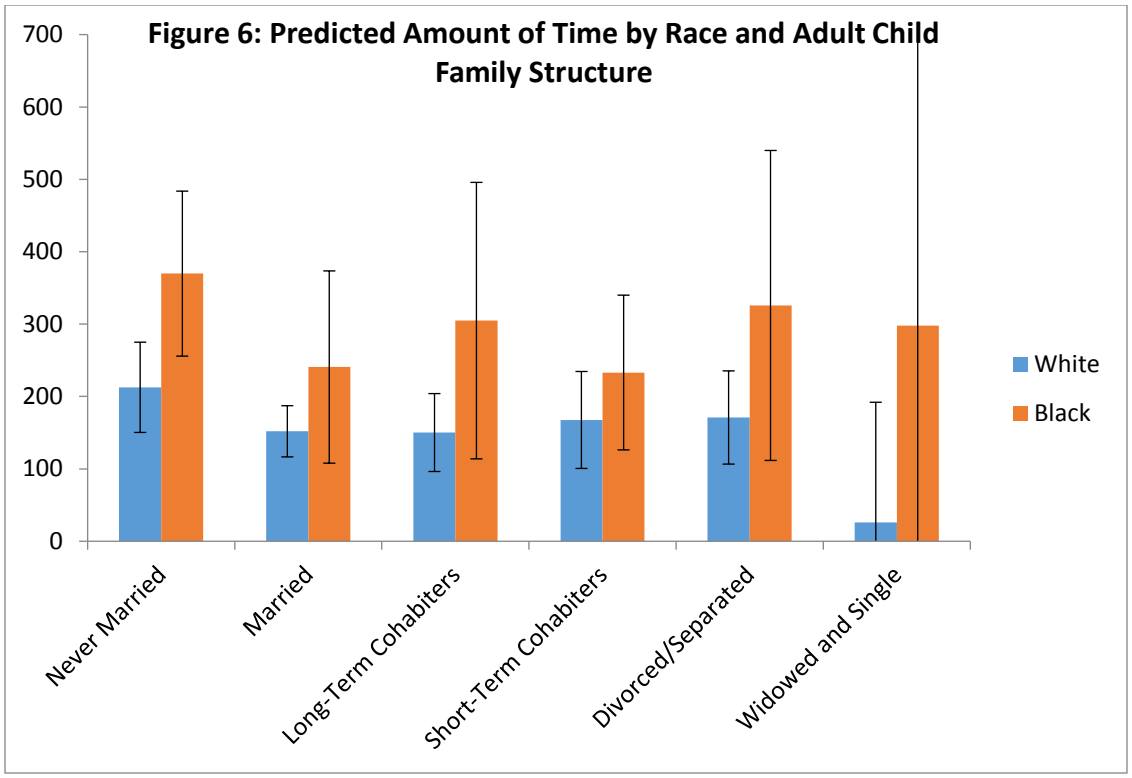


Figure 6: Predicted Amount of Time by Race and Adult Child Family Structure
700
600
500
400
300
200
100
0
Never Married
Married
Long-Term Cohabiters
Short-Term Cohabiters
Divorced/Separated
Widowed and Single
White
Black

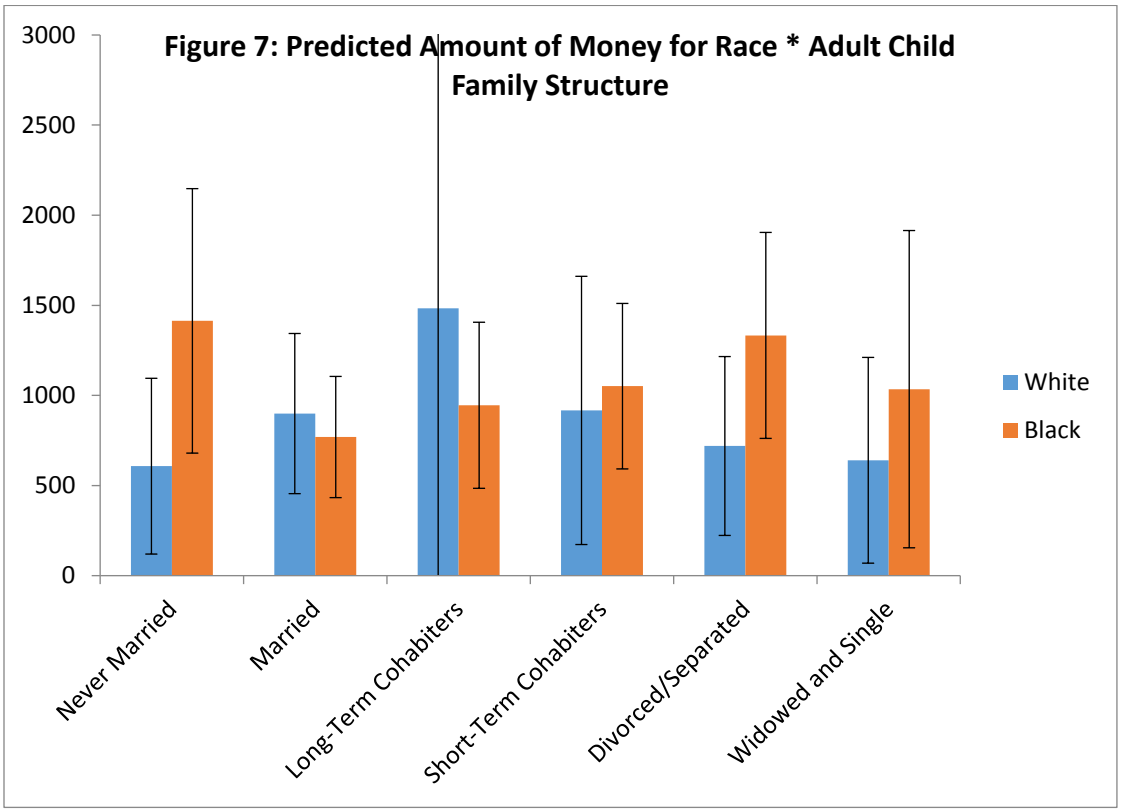


Figure 7: Predicted Amount of Money for Race * Adult Child Family Structure
3000
2500
2000
1500
1000
500
0
Never Married
Married
Long-Term Cohabiters
Short-Term Cohabiters
Divorced/Separated
Widowed and Single
White
Black

Chapter 5: Discussion and Conclusion

Help provided by adult children is becoming increasingly important as the population ages and puts increasing pressure on families to provide help in a way that government and social service agencies cannot. My three studies provide a look at attitudes regarding eldercare as well as the ways in which adults are currently providing help, including time and money, to their parents. I want to know whether increasing family structure changes will impact the care trends we see for adult children and their parents.

In my first chapter, I explore attitudes regarding eldercare: adult children are an important source of help for their parents, and who should help the elderly with daily tasks. There is overall general consensus in the support for adult children caring for their aging parents among my full sample and between my groups of interest. This news should come as a relief to policy makers who may worry that changes in the family in the U.S. may loosen family obligations (Cherlin 2010; Silverstein 2016). While there is still strong support for filial obligations, results did show group differences in regards to which institution should provide help to the elderly. Black respondents in my sample were more supportive of government intervention for the elderly, compared to White respondents. This does create a puzzle for future research regarding race and eldercare attitudes. Even though Blacks are more likely to support government interventions compared to Whites, Blacks are also more likely to report low satisfaction with non-family care compared to Whites (LaVeist et al. 2000). This disconnect suggests that there may be some omitted variables that should be explored in future research, or alternatively, that the attitudes that Blacks support does not align with their lived experience, leading to an expression of greater dissatisfaction; this too should be tested further in future research. My

finding by education mirrors recent work by Cherlin (2014), who argues that education is increasingly tied to family structure in the U.S. I find that this extends to eldercare attitudes.

Considering that most Americans think that adult children should help parents, it was no surprise to find that helping parents by giving them time is quite common among the adult population in my sample. My second chapter questions whether experiencing childhood divorce has a "long reach" into later intergenerational relationships. While, one out of five adult children in my sample have experienced a family divorce or separation during childhood, overall, I find that CFS is not associated with later giving of time or money to parents. This should come as good news to theorists who argue that divorce can have a "long reach" into later relationships; my findings show that this is not the case. Americans expect adult children to care for aging parents and my results suggest, even when experiencing family disruptions in early life, that they do provide help for parents.

Finally, in my third chapter, I test the association between diverse family structures for the adult child and giving to parents. Previous studies have been limited by using simple or only traditional definitions of adult children's family structures; I expand on previous research by investigating a broader range of family structures. I find no significant association between the adult child's family structure and the likelihood or amount of giving any money to parents. This is an important and positive finding for government programming that rely on families to supplement the costs of their programs with family care and financial help (Olson 1994). Future research should compare the two to further explore whether adult children "trade off" one for the other, and what helps to explain that pattern if so.

I find that the adult child's family structure is significantly associated with the likelihood of giving any time to any parents, particularly for married, long-term cohabiting, and divorced

adult children. This finding lends support to the idea that marriage is indeed greedy, as well as long-term cohabitation. My finding for divorced adult children supports family disruption theory, in that being divorced also reduces the likelihood of giving any time to any parents. Married, long-term cohabiting, and divorced adult children are less likely to give time to parents, and when they do give, they give less than their non-married counterparts. This suggests that my first two hypotheses are supported. Marriage and long-term cohabitation take time away from giving relationships with parents, and divorce reduces the adult child's ability to give as much to parents, compared to never-married adult children.

There are some main, overall limitations to my dissertation. First, the data sources I use are limited in the specificity that they provide on attitudes and giving. Neither specify directly who is giving within the families. While the PSID does provide an indicator within married families, early analyses showed that this was not significant in the reports on giving. In my models, I control for who answered the survey in an attempt to correct for this issue. This variable was often not significant in the models, signaling that the respondent was not predicting how the questions were answered. Second, many of my research questions required analyses of sub-samples with few cases, thus limiting the power. This may also explain why previous literature has combined all help into one but I think they are quite different as illustrated by my findings. Third, each study uses cross-sectional data, which limits the ability to see changes over time. Longitudinal data give a clearer picture of family change and the impact on transfers to parents by their adult children.

There is much left to be discovered about help adult children provide to their parents. Many scholars have pointed out that converging trends between smaller families to care for more elderly in addition to changes in household employment between men and women are going to

increase the "unknowns" around future caregiving arrangements (Fine 2007). While I was not able to delve into gender as much as I would have liked in this study (due to survey design), this is an area ripe for research in many ways. Women continue to bear the weight of caregiving, despite increases in their work (Pavalko and Wolfe 2015). This signals that instead of a "care deficit," instead, there will be an increased care burden placed on women, potentially leading to further social disadvantage for women.

In addition, there is more research to be done regarding the association between employment and the provision of eldercare. In an initial listwise deletion sample using the PSID, I found that "overwork," defined as 50 hours per week or more (Cha 2010), was associated with more provisions of money to parents. This relationship could be working in two ways. First, it could be that those who have jobs that require them to work many hours (lawyers for example) are more likely to have the resources to transfer money to their parents. On the other hand, it could be that adult children who work low-income jobs and therefore work more hours because they are working many different jobs, are doing so because they need to provide care for their parent.

Finally, parent death may be affecting my models, as well as previous findings. While looking across a wide age range of adult children helps correct for some of the parental death biases introduced by using older samples (Lin 2008), I was unable to control for selection effects for death. Divorce is associated with reduced health and could potentially be selecting these families out of the population I am studying. Future research should further test how the factors associated with giving to parents may also be associated with early parental death.

In sum, my dissertation provides some insight into attitudes toward eldercare and behavior. Americans continue to believe that adult children should care for their parents, but are

more ambivalent when it comes to helping with daily tasks. In my sample of adult children with parents, I find that they do often help with time for parents, but less so with financial help. While childhood family structure does not affect later giving, married, long-term cohabiting, and divorced adult children all reduce their time to parents compared to never married adult children. This suggests that early family experiences may not "reach" into later life, but that adult children's own family status does.

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