PASSING ON THE WEALTH: INTERGENERATIONAL FINANCIAL TRANSFERS FROM OLDER AMERICANS*

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ABSTRACT

Exchange relationships are central to social and economic life, forming the basis of institutions from the family to the market. This paper considers one form of transfer that is part of such an exchange relationship: financial transfers from older parents to their children and grandchildren. Intergenerational relationships and financial transfers have each formed the basis of past theory and research. Similarly, social exchange theory treats the structural bases of power differentials in exchange relationships. This paper brings together social exchange theory, economic theories of altruism and exchange, and family sociology to generate predictions about the effects of parental characteristics on financial transfers. Analyses of data from the Health and Retirement Study show that the probability of parents giving money increases as income or wealth increase, but that the effects of income and wealth depend on the marital status of the parents. The probability of transferring for unmarried parents (either divorced or widowed) is more responsive to income than that for married parents, while the reverse is true for wealth. All groups increase their probability of transferring when children spend time helping them; among the unmarried parents, children helping also increases the effect of income.

Exchange relationships are central to social and economic life. Being so, they have been fundamental to theorizing about human action and social structure across the social sciences in the 20th century (Becker 1991; Blau 1964; Homans 1958; Mauss 2000 [1954]). Non-negotiated exchange relationships (those not involving formal agreements about the terms of exchange) are particularly important, persistent, and dense within the family. Hogan, Eggebeen and Clogg (1993) estimate that 50% of adult Americans engage in some form of exchange with their parents, a statistic that undoubtedly underestimates the total amount of exchange in the family by looking only at non-coresident parents and adult children. The family is therefore a rich research site for examining exchange. Within economics and family sociology, extensive empirical research tells us a great deal about patterns of exchange, while within social psychology, theory and experimental research tells us a great deal about exchange relationships more broadly conceived. Yet, as Steelman and Powell (1996) argued ten years ago, while families are quintessential small groups, empirical studies of family have been largely independent of the theoretically rigorous social psychological work on group processes.

This article focuses on one form of intergenerational exchange in American families, *financial transfers from parents to adult children*. Intergenerational financial transfers are a key determinant of the persistence of wealth inequality across generations in the United States (Avery and Rendall 2002; Davies 1982; Keister 2000; Keister and Moller 2000; Kotlikoff and Summers 1981; but see Gokhale et al. 2001 and Gokhale and Kotlikoff 2002). Wealth has important effects on social status (Domhoff 1990), as well as health and mortality (Bond et al. 2003; Hayward and Gorman 2004; Hurd and Kapteyn 2003; Martikainen et al. 2003), and the education of children (Ceroni 2001). Over the past half century, wealth inequality has been dramatically increasing (Keister 2000; Wolff 2002) while at the same time, older families have

changed dramatically in ways that should change their propensity to transfer money to their children. Levels of marital disruption have increased across age groups, with divorce rates rising through the 1970s and then leveling off in the late 1980s (US Census Bureau 2003). This leads to substantial change in the marital status of the population of older adults. In 1970, roughly 19% of those ages 55-74 were widowed, while only 4% were divorced (authors' calculations based on the 1970 Census of the Population). In 2005, approximately 13% of US adults ages 55-74 are currently divorced and 11% are widowed (authors' calculations based on the March 2005 Current Population Survey).

In the contexts of high levels of exchange and changing marital status among older parents, this paper asks what determines financial transfers from parents to children, and how patterns differ by marital status of the parent. We draw on three related literatures, recognizing that downward intergenerational financial transfers are a special case of several general social processes. We draw first on the family sociology literature on the consequences of divorce and widowhood for intergenerational relations. Second, we draw on the economic demography literature on interhousehold (and other private) transfers. Finally, we draw on the social psychology literature on power in exchange relationships. These three perspectives produce sometimes overlapping and sometimes contradictory predictions about the results of models.

We test these predictions using data from the 1998-2002 waves of the Health and Retirement Study. We estimate the effects of sociodemographic characteristics, past transfers (from children or to children) of income and time, and current wealth on the probability of a parental household transferring to children or grandchildren between 2000 and 2002. We find very different levels and determinants of transfers across groups, with married respondents more likely to transfer than unmarried respondents, regardless of income. Across groups, transfers of

time spent by children with their parents had a sizable positive effect on transfers of money from parents to children. Overall, we find that social psychological theories of power in exchange relations help explain intergenerational transfers, and that analyses of these family exchanges can provide important real-world tests of social exchange theory. Our findings also suggest important qualifications to economic theories, which do not consider social structural sources of power differentials in exchange relationships.

Background

Consequences of Divorce and Widowhood

Studies of the consequences of divorce and widowhood for intergenerational relations and support (social and financial) given to elderly parents provide a natural starting point for our consideration of intergenerational financial transfers in the context of changing older families. Widows (and to a lesser extent divorced parents) need more social and other support from their children than do married couples. Specifically, studies of support (broadly defined) have shown that widows in the US receive more support from their children than do married people (Eggebeen 1992; Eggebeen and Davey 1998; Roan and Raley 1996). Widowhood has also been shown to lead to a decrease in support given from parents to adult children (Cooney and Uhlenberg 1992; Eggebeen 1992).

Divorce has been shown to lead to strained relationships between parents and children (Bumpass and Sweet 1991; Cooney and Uhlenberg 1990; Goldscheider 1990; Kaufman and Uhlenberg 1998; Marks 1991; Spitze and Miner 1992). Adult children of divorced parents report less contact (Amato and Booth 1991; Aquilino 1994; Booth and Amato 1994; Cooney 1994; Lye et al. 1995; Lye 1996) and are less likely to be involved in exchanges of instrumental or emotional support than are adult children of married parents (Amato et al. 1995; Furstenberg et

al. 1995; Marks 1995; Pezzin and Schone 1999; Spitze et al. 1994; Umberson 1992). And, in terms of transfers from children to parents, children are much more likely to provide support to their mothers than their fathers (Hogan and Eggebeen 1995; Spitze and Logan 1989). Lee and Aytac (1998) conclude that parents who survive and live together are more likely than those who live separately or are widowed to provide financial assistance to their children, but these authors offer no theoretical explanation for these differences. Similarly, an analysis by Furstenberg et al. (1995) shows that adult children whose parents are divorced are less likely than those whose parents are married to receive financial or practical assistance from their parents, particularly from their fathers.

Previous research also indicates that the amount and type of transfers given by parents differs by gender. Furstenberg et al. (1995) find that divorced mothers are more likely than divorced fathers to give time and money to their children, and that this gender difference also holds for widowed parents. They also find that when fathers do provide transfers to their children, divorced fathers are more likely to give money than time, while widowed fathers are more likely to give time than money. Transfers from divorced and widowed women to their children, on the other hand, are more likely to be in the form of time than money. This finding is consistent with previous studies that have found that mothers are more likely than fathers to provide non-monetary forms of support to their adult children (Lawton et al. 1994; Parish et al. 1991; Rossi and Rossi 1990; Spitze et al. 1994).

These analyses have focused on the patterns of exchange of financial and other forms of support between parents and adult children, as they vary by the gender and marital status of parents. The gender differences appear to be largely due to mothers' financial disadvantage and to fathers' lack of skill in emotional support. Some portion of the higher propensity of married

parents to transfer money is likely also attributable to their advantaged financial position. We turn now to two other theoretical traditions to begin to consider the motivations of parents to transfer, and how those vary across married, divorced and widowed older Americans.

Private Financial Transfers

While studies of the consequences of divorce and widowhood have primarily examined intergenerational affective relations and both monetary and non-monetary support given to aging parents, a largely unconnected literature within economics (particularly economic demography) has focused on private financial transfers. Private financial transfers include transfers between individuals or between households that take place outside of the market (Schoeni 1997). Most relevant here is theory and research on migrant remittances and on intergenerational transfers. These two literatures are relatively independent of each other, but they rest on the same theoretical foundation. In each case, the transfer is seen to represent either altruistic behavior or the manifestation of an informal contract (Cox and Rank 1992; VanWey 2004). Altruism in these studies is formally defined as the inclusion of the utility of a potential transfer recipient in the utility function of a potential giver. It does not imply any selfless action, and can indeed result from coercive social norms or from the multigenerational family functioning as a corporate group with a single decision-maker (Becker 1991; Stark 1999).

In contrast to altruistic motivations for transfers, many economists posit several forms of contractual (or exchange) motivations.[1] Several studies of remittances and intergenerational transfers find individuals acting altruistically (Agarwal and Horowitz 2002), though they most often appear to also be forming contractual relationships (Lucas and Stark 1985; VanWey 2004). The literature on remittances suggests that migrants send money back to their families as part of three types of contracts. First, they are pursuing a long-term exchange strategy, either repaying

their families for past investments (support during schooling or migration) or remitting to secure future inheritance (Hoddinott 1994; Stark and Lucas 1988; VanWey 2004). Second, they are engaging in a short-term exchange relationship, paying families for childcare or for taking care of the migrant's assets in the home community (Secondi 1997). Third, remittances are payouts on informal insurance contracts; migration is viewed as a family investment in informal insurance, by diversifying family members across economic sectors or geographic locations subject to varying levels and types of risk (de la Brière et al. 2002; Stark 1991; Stark and Bloom 1985).

The literature specifically examining intergenerational transfers makes a similar distinction between altruistic and exchange motivations (Frankenberg, Lillard and Willis 2002; Lee, Parish and Willis 1994; Lillard and Willis 1997). Because this literature is more explicitly focused on exchanges between parents and adult children, most often in the developing world, it usually focuses on motivations for support given by adult children to aging parents. This support can take the form of coresidence, financial transfers, or time transfers. Altruistic motivations in this tradition are primarily linked to norms of filial piety or to dynastic altruism, in which the patriarch or matriarch redistributes resources between family members to ensure the highest utility for the entire family (Becker 1991). Adult children also support parents in exchange for parents providing childcare for grandchildren and inheritance at their death.

While much of the work (described above) within economic demography on intergenerational transfers (covering help, coresidence and money) and remittances has been done in the developing world, economists have been studying intergenerational and other interhousehold financial transfers in the United States (Altonji, Hayashi, and Kotlikoff 1997; Cox and Rank 1992; Schoeni 1997). This work has argued that *inter vivos* transfers (between

living parents and children) should be considered separately from bequests (left to children at the death of the parent) (McGarry 1999). One influential line of research links bequests to children's support of parents (time, emotional support and help with needs); parents hold the promise of a bequest as an incentive for children to assist them throughout their old age (Bernheim, Shleifer, and Summers 1985; Brown 2006; Cox 1987). Inter vivos transfers are similarly seen as parents providing incentives for children to spend time with them, as well as allowing wealthier parents to avoid inheritance taxes (McGarry 2001; Page 2003). Extensive work in this tradition has further examined the selection of the recipient of the bequest or the transfer, focusing on gender differences in receipt and on competition among children for transfers (e.g. Altonji, Hayashi and Kotlikoff 1997; Light and McGarry 2004; McGarry and Schoeni 1997). However, we draw less from this work, focusing instead on the overall propensity of parents to transfer to any child.

These studies of transfers suggest that parents act altruistically in some situations, transferring to children in need, but that the majority of the transfers are part of exchange relationships. We expect that indicators of children's need (lower income, more grandchildren) as well as of parents' income and wealth will capture the altruistic effects. The more parents have and the more children need, the more likely parents are to transfer. The exchange relationship will then be captured by the effects of indicators of transfers of time and money *from* children *to* parents. Theoretically, all of these *relationships* should be the same across married, divorced and widowed parents. Differences in the transfer behavior between these groups should reflect differences in the *characteristics* of these groups, specifically differences in average age, health, income, and wealth.

Social Exchange in Small Groups

Finally, our analyses of intergenerational transfers draw on the literature in social psychology on reciprocal exchange in small groups. In the same way that intergenerational transfers are a special case of private transfers, they are a special case of small group processes studied by social psychologists, and social exchange theory brings several lessons to the study of intergenerational transfers. The transfers we consider in this paper are part of a particular type of exchange relationship with two different network structures considered by social exchange theorists (see Molm and Cook 1995 for an overview). To use the terminology of this literature, we are studying *reciprocal* exchanges between parents and children. Such exchanges are not the result of explicit negotiation, and transfers can be unidirectional at a given point in time. For example, parents may give to children in hopes of reciprocation, but reciprocity of each transfer is not guaranteed. We treat parents as a single *actor* when they are married, and as two separate actors if they are divorced, assuming that decisions about transfers are made within a household. We make the simplifying assumption that children (and their children) are a group actor, giving to and receiving from parents. We make this assumption because the children are all in the same structural position vis-à-vis parents, and because we are particularly interested in the actions of parents in this paper. While parents have individual relationships with each child and grandchild, we assume that the characteristics of the parents primarily affect their probability of making a transfer to any child. The parental resource of interest is money, which is exchanged for time from children. We also make the simplifying assumptions that the exchange relationships are stable because of the temporal depth of the parent-child relationship, and that we are capturing multiple rounds of exchange (i.e. multiple opportunities for transfers in both directions) in our observation window of two years. Thus, we estimate how parental characteristics, child transfer behavior, and changes in the *structure* and *value* of relations

between parents and children following widowhood or divorce (of the parents) affect parental transfer of money to children.

The key process into which social exchange theory gives us insight is power in relationships (Emerson 1962, 1987; Molm, Peterson and Takahashi 1999). *Power* is a function of both the *value* of the resource that the other party possesses and the *structure* of the network of relations, specifically the *dependence* of an actor on a particular exchange partner for a specific resource (inversely related to the availability of alternative exchange partners) (Emerson 1962; Molm, Peterson and Takahashi 1999). The relative value of the resources and the dependence of each actor upon each other determine the relative power in the relationship. Based on these principles, we expect the children to have more power in all types of relationship, but the magnitude of the power to vary by marital status of the parents. Parents exchange money, a resource which children typically get from a variety of sources, for filial support, generally available only from children. The structure of the relations between parents and children, by marital status of parents, is shown in Figure 1. Between children and married parents, and between children and widowed parents, we see a dyadic relationship. Thus, there is no *structural* source of power inequality in these relationships. However, we expect that the children will have more power in relationships with widowed parents, because, in the absence of spousal support, the widowed parents will assign higher *value* (than will married parents) to filial support. The divorced parents, however, do have a higher level of *structural* dependence on children, in addition to arguably placing the same higher *value* on filial support. Children of divorced parents generally have access to two parental households for support from parents, but have a finite amount of time to give support to parents now living separately. Thus, moving from left to right in Figure 1, we expect to see higher levels of *power use* among children, in this

case manifested by higher baseline probabilities of parents transferring money to children and by larger effects of available resources (income and wealth) on a parent's probability of transferring. Experimental research on reciprocal exchanges, using simulated exchanges and usually using college students as subjects, has found results consistent with the principles on which we base these arguments (Cook, Emerson, Gillmore and Yamagishi 1983; Molm, Peterson and Takahashi 1999, 2001; Molm 2003). This paper provides a real-world empirical test of these theoretically-derived propositions.

Summary of Theoretical Predictions

These three lines of research together give us eight hypotheses about the effects of children's transfers to parents, income, wealth, parental gender and parental marital status on parental transfers to children. All three research traditions posit some sort of exchange relationship, with empirical research on the United States suggesting that parents' transfers of money should be positively related to children's transfers of non-monetary support.

> H_1: Children spending time helping parents positively affects the probability of parents transferring money to children.

Assuming the altruistic motivations examined by economic theories of transfers are correct, we should see positive effects of income and wealth on transfers (as well as positive effects of indicators of children's need).

> H_2: Parents' income positively affects the probability of parents transferring money to children.
> H_3: Parents' wealth positively affects the probability of parents transferring money to children.
> H_4: Parents will be more likely to transfer money to children when they have low income children or many grandchildren.

Based on empirical research, we should expect men to be more likely to transfer money than women. If due to men's economic advantage, this effect should disappear with controls for

income and wealth. However, if due to women's advantage in interpersonal relations, this effect should persist with the introduction of controls.

> H_5: Among unmarried parents, fathers will have a higher probability of transferring than mothers.

The three approaches do have inconsistent predictions about differences across marital status. The literature on intergenerational exchange in the United States suggests that married parents are more likely than unmarried parents to give money to their children, but provides no theoretical motivation for this (beyond the fact that married parents have more resources, on average). This suggests this difference should disappear with controls for the economic resources available to parents. Similarly, the exchange propositions derived from economics suggest that differences across marital status would also be due to differences in resources and other characteristics.

> H_6: After controlling for income and wealth, married and unmarried parents should be equally likely to transfer money to children.

In contrast, based on social exchange theory, we argue that widowed parents will value children's time more and that divorced parents will both value children's time more and be in a structurally weaker position than married parents. These patterns should lead to higher average levels of transferring, and to larger effects of income, wealth and children's transfers to parents, with the highest levels of these among divorced parents and the lowest among married parents.

> H_7: After controlling for income and wealth, widowed parents will be more likely to transfer money to children than married parents, and divorced parents will be more likely than widowed parents to transfer money to children.
> H_8: Income and wealth will have larger positive effects on the probability of transferring money to children for divorced parents than for widowed parents, and for widowed parents than for married parents.

Data and Measures

Data

To test these hypotheses, we analyze data from the HRS (Health and Retirement Study) /AHEAD (Assets and Health Dynamics of the Oldest Old) project (see http://hrsonline.isr.umich.edu/ for detailed documentation and bibliography). The AHEAD project and the HRS began as separate studies, focusing on two age-defined segments of the over-50 population in the United States. However, they have since been merged and can be used as a single dataset. These data include multiple interviews with individuals in multiple birth cohorts, making them representative of the population born prior to 1948. The AHEAD study had an initial sample of respondents aged 70 years or older (and their spouses, if married) in 1993. The HRS began in 1992 with a sample of respondents in the 1931-1941 birth cohort (and their spouses, if married). In 1998, AHEAD respondents (from the 1924-1930 birth cohort) were moved into the HRS, and a new sample from the 1942-47 birth cohort was added. Follow-up interviews are conducted every other year (with the exception of AHEAD respondents interviewed in 1995 and then in 1998 at incorporation into the HRS).

Our analysis sample includes (living) respondents in the 2002 wave of data collection who have valid data on relevant independent and dependent variables and who have at least one living child.[2] To analyze transfers, which are measured at the household level, we keep only one respondent per household. We split our sample into married and unmarried (divorced or widowed) respondents. To avoid a variety of complications, we only include respondents who have been married once. The unmarried sample includes widows who did not remarry, as well as divorced respondents who did not remarry. [3] While it is possible that the other partner in the divorce remarried (and therefore is not included in our sample), or that one or both members of a married couple brought their own children (born out of marriage) to the marriage, the majority of

the respondents have had a traditional family form, simplifying our thinking about transfers to children.

Measures

We measure monetary transfers between respondents and their children or grandchildren both as dependent variables and as independent variables. As our models focus on the motivations of older adults to give money to younger generations, based on their own characteristics, we measure transfers to and from both children and grandchildren (but often write only "children" in the interests of brevity). The survey collects information from living respondents about transfers of money to and from children and grandchildren since the previous interview date. These variables are measured using a question that asks whether the respondent (or their spouse) has given money to their children or grandchildren in the last two years and how much it amounted to. In models described below, the dependent variable is a dummy variable indicating transfers to children/grandchildren during the 2000 – 2002 interval. Table 1 shows that 32% of married respondents and 25% of unmarried respondents gave money to their children in that interval. However, there are differences by gender and marital status (within the unmarried group, not shown in Table 1). Thirty-four percent of widowed men, 21% of widowed women, 36% of divorced men, 24% of divorced women transferred money in the 2000 to 2002 interval.

We also include measures of transfers to/from children/grandchildren as independent variables. These allow the estimation of relationships between children and parents, and the persistence of transfers from parents to children. Each model includes a dummy variable indicating whether the respondent received monetary transfers from a child or grandchild between 1998 and 2000, and a dummy indicating whether they transferred to children or

grandchildren between 1998 and 2000.[4] Differences across samples reflect differences in the socioeconomic position of the groups and gendered patterns of transfer behavior. More than 37% of married respondents transferred to children or grandchildren while only 3% of them received transfers. Among unmarried respondents, however, 28% transferred to children or grandchildren and 8% received transfers.

To control for the effect of transfers that are not monetary, we also include a measure of transfers of time and/or assistance from children/grandchildren to respondents. This type of assistance includes helping with household chores and errands, providing transportation, etc. Respondents were asked whether or not they had received these kinds of assistance from their children/grandchildren in the past two years. We measure these types of transfers between 2000 and 2002, in order to account for the fact that some of the financial transfers between 2000 and 2002 could be part of a short-term exchange relationship in which parents are "purchasing" assistance from their children.[5] The prevalence of transfers of assistance varies depending on the respondent's marital status, with roughly 52% of unmarried respondents receiving assistance from their children, compared to only 24.4% of married respondents.

Household wealth is a key determinant of the ability to transfer. It is notoriously difficult to measure, particularly among a population with a higher incidence of mental impairment. The HRS is designed to elicit the highest possible quality of information by interviewing the most knowledgeable respondent in a household and by using innovative question design (particularly bracketing wealth into categories when the respondent does not know the exact dollar value) (Moon and Juster 1995). The measure of household wealth we use is one of the created variables in the RAND data set based on questions about a large number of types of wealth. Net value of total wealth is calculated as the sum of all wealth components (housing, including primary

residence and other real estate, vehicles, businesses, retirement accounts, investment accounts, stocks, mutual funds, bonds and T-bills, and other bank accounts) minus all debts (including mortgages and other forms of debt). Thus, wealth does not capture the value of social security, pension benefits, or life insurance. We use the natural log of per capita wealth in the year 2000 to predict transfers between 2000 and 2002.[6] Wealth variation across marital status is pronounced. Married couples have an average logged per capita household wealth in the year 2000 of 11.15 ($69,845). Unmarried respondents, on the other hand, average 9.86 ($19,057).

We draw again on the preparatory work done by researchers at RAND and use their measure of household income. This variable measures the sum of all income in the household: individual earnings, household capital income (stocks/bonds, rental income, self-employment, etc.), pension and annuity, disability or supplemental security income, Social Security Retirement, unemployment or workers compensation, food stamps or other government transfers, and all other sources of income (such as alimony, veterans benefits, etc.). We use the value of per capita household income ($1000s) in 2000 to predict transfers between 2000 and 2002.[7] Like wealth, household income varies by marital status. Married individuals have an average per capita household income of $33,167, while unmarried respondents average $27,541.

Unmarried models include indicators of gender and whether the respondent is divorced (widowed being the reference category).[8] In the unmarried sample, 79% of respondents are women and 26% of respondents are divorced.

Models also control for a variety of variables that should affect the ability or the desire to transfer. In models of married households, we include the age (in years) of both spouses, their (self-reported) health status in 2000 and the change in their health between 2000 and 2002, and dummy variables indicating if each spouse is white. The model for unmarried respondents

controls for the age of the respondent, health status (self-reported) in 2000 and change in self-reported health between 2000 and 2002, a dummy variable indicating if the respondent is white. Health status is measured on a five-point scale (1 = excellent, 2 = very good, 3 = good, 4 = fair, 5 = poor) in the year 2000, and then the change on that scale between 2000 and 2002. Self-reported health in these samples averages between very good and good, with married respondents (and their spouses) having slightly better health than divorced or widowed respondents. As is expected in an older population, the change in self-reported health between 2000 and 2002 is positive on average (reflecting a decline in health), with this change being smaller for married respondents than for divorced or widowed respondents.

The models for married and unmarried include measures of the current living situation of the respondent(s) (with children, in a facility of some sort, or independent living), and characteristics of the children. Measures of the living situation of the respondent in 2002 are based on survey questions about whether the respondent lives with children, in a nursing home or in a retirement community. The majority of respondents live independently, though unmarried respondents are more likely than married respondents to be living either with children or in some sort of facility (nursing home or continuum of care retirement community). The children's characteristics included are measures of the number of sons and number of daughters, as well as the number of grandchildren a respondent had in 2002. On average, married respondents had slightly fewer sons/daughters than divorced or widowed respondents. For both groups, the average number of grandchildren is 5. We also include a measure of the children's average education, a dummy variable for having children earning less than $10,000 and a dummy variable for having children earning more than $70,000. Unmarried respondents are slightly less likely than married respondents to have children earning over $70,000 (25% and 33%,

respectively). However, an equal percentage of both groups (18% of unmarried and 19% of married respondents) report having children earning less than $10,000. The average parent in both samples has children with an average of just over 13.5 years of education.

Models

For the married and unmarried samples, we estimate separate logistic regression models predicting the probability of transferring any money to children or grandchildren between 2000 and 2002 as a function of the variables described above.[9] In the models for unmarried respondents, we estimate the effect of being divorced, as well as two interaction effects (one two-way interaction and one three-way interaction). We interact wealth and divorced status (relative to being a widow), and gender, income and transfers of help from children.[10] We tested the comparable interaction effects for all samples and only retained the significant ones in the final models. Intermediate models are available from the authors.

Results

Table 2 shows the results of the logistic regression models for married and unmarried samples. Stars on the end of each row indicate effects of variables that are included in models for both samples that are significantly different between the two samples (or between the married sample and subgroups within the unmarried sample, where indicated). Hypothesis H_8 stated that the effects of income and wealth would differ by marital status, while H_5 stated that the probability of transferring varies by gender among the unmarried parents. For the effect of wealth, we tested whether effects were significantly different between married couples, divorced respondents, and widowed respondents. For the effect of income, we tested whether the effect of income was different across married couples, unmarried women who did not receive help from children, unmarried women who did receive help, unmarried men who did not receive help and

unmarried men who did receive help. The effect of wealth is significantly different between married respondents and divorced respondents (and between widowed and divorced, as shown by the significance of the interaction term), but not between married and widowed. The effect of income is significantly different between married respondents and all groups except unmarried women who did not receive help from children.

As predicted by H_1, there is clear evidence for exchange relationships between parents and children. These involve an exchange of time on the part of children for money on the part of parents. While a transfer of time from a child in the interval 2000-2002 increases the odds of a parent transferring money by 47% for married parents and by varying amounts (depending on gender and income) for unmarried parents, a transfer of money by the child has no significant effect on a parent transferring money. However, there is also evidence of persistence in the transferring behavior of parents, even after controlling transfers from children and other characteristics of both parents and children. Having transferred in the 1998-2000 interval increases the odds of transferring in the 2000-2002 interval by a factor of more than four for married respondents and almost five for unmarried respondents.[11] This suggests that there is something else going on, potentially indicating that past transfers create norms encouraging future transfers.

As hypothesized in H_2 and H_3, parental income and wealth have positive effects on the probability of transferring. Indeed, in models not shown of the amount transferred (conditional on having transferred anything), income and wealth had the only significant effects. Also as hypothesized in H_5, unmarried men are more likely to transfer than unmarried women, though this is shown in the model not as a direct effect of gender but as a stronger effect of income on men's transferring than on women's.

Turning to the differences across marital status, we see some expected results. Assuming that income and wealth represent the ability of the parents to transfer, hypothesis H_8, based on social exchange theory, posits that income and wealth should have a larger effect on transfers when parents are more disadvantaged vis-à-vis children (structurally or because of changes in the value they place on filial support). That is to say, income and wealth should have a larger positive effect on transfers among unmarried respondents than among married respondents, and among divorced parents than among widowed parents. Figure 2, showing the effects of income on transferring, supports this argument. This figure shows the predicted probability of transferring as a function of income for married respondents and for unmarried respondents classified by gender and whether their children helped them between 2000 and 2002, holding all other variables at their sample means. While married respondents have a higher probability of transferring at the low end of the income distribution, they are overtaken by all groups other than unmarried women who receive no help from children. The rate of increase in the probability of transferring as a function of income for the unmarried who receive help, and for unmarried men who do not receive help, is dramatically high. Further supporting the idea that this income effect reflects disadvantage in an exchange relationship is the effect of receiving help from children. Those parents who do receive help are substantially more likely to transfer at any given level of income, and the rate of increase is higher for those who receive help.

Figure 3, however, shows little support for either hypothesis about group differences. This figure shows the predicted probability of transferring as a function of per capita wealth for married, divorced, and widowed respondents. Contrary to hypotheses H_6 and H_7, married respondents have the highest predicted probability of transferring at all levels of wealth. The figure provides only partial support for the assertion that divorced respondents are structurally

disadvantaged in their negotiations with children, and therefore should be more likely to transfer than widowed respondents. This is only the case for respondents with less than approximately $18,000 in wealth (between the 25th and 50th percentiles). Above this level of wealth, widowed respondents are more likely to transfer than divorced respondents. In contrast to the predictions of hypothesis H_8, throughout the range of wealth above the very lowest levels, the rate of increase in the probability of transferring as a function of wealth is also higher for widowed respondents than for divorced respondents.

Discussion and Conclusions

Analyses of HRS data show that families engage in substantial levels of exchange. Of the parents in our sample, 32% of the married couples and 25% of the unmarried parents gave money to their children or grandchildren between 2000 and 2002. Similarly, 25% of the married couples and 52% of the unmarried parents received non-monetary assistance from their children or grandchildren. These transfers are linked, as predicted by hypothesis H_1, with children providing assistance positively affecting parents giving money. Similarly, as predicted by hypotheses H_2, H_3, and H_4, parents appear to be acting altruistically. Income and wealth positively affect transfers, as does having low income children. Among unmarried parents, men are more likely to transfer at any given level of income, confirming hypothesis H_5.

Beyond these five hypotheses, none are completely confirmed. Even after controlling for income and wealth, married and unmarried parents have different probabilities of transferring. Further, the effects of income and wealth vary by marital status of the parents in unexpected ways. Per capita wealth has a larger effect on the probability of giving money to children for married parents than for divorced parents and for widowed parents than for divorced. This effect is inconsistent with our expectations (H_6, H_7, and H_8) based on economic and social

psychological theories of exchange. Economic theories predict that differences in the probability of transferring should result from differences in the average age, health, or economic status of the parents, but these variables are all controlled in the model. Social psychological theories would suggest the opposite ordering of groups: parents should be more disadvantaged vis-à-vis children when widowed, and even more when divorced, relative to married parents. This should lead to the highest probabilities of transfers to children (and the largest effects of wealth) among the divorced, followed by the widowed.

In contrast, the effects of income are consistent with principles of social psychological theory. Income has large positive effects for divorced respondents, smaller positive effects for widowed respondents and even smaller effects for married respondents. Further, the effects of income depend on whether the children provided assistance to the parents. The effects of income are even stronger for unmarried parents whose children helped them, with predicted probabilities passing 30% by the 75th percentile of the income distribution for men who received help, versus reaching almost 25% by the 75th percentile for men who did not receive help.

What do we make of these findings? Differences across groups, particularly the opposite ordering of the wealth and income effects across groups, suggest that economic theories of exchange are missing something important for understanding intergenerational transfers. There does not appear to be a change in the preferences of parents for transferring that occurs when they are divorced or widowed. The income effects suggest that the power of children relative to parents, determined by the relative value of resources provided by the parties in the exchange and by the structure of the relationships, is an important determinant of intergenerational transfers. This is consistent with the economic literature that argues that inter vivos transfers (as opposed to bequests) are motivated by exchange rather than altruism (Altonji, Hayashi and

Kotlikoff 1997; Cox and Rank 1992; Schoeni 1997). The contrary finding regarding the effects of wealth across groups suggests the need for a linked examination of transfers and bequests in future work, and possibly a more complex model of the dynamics of multiple types of transfers over time (as suggested by McGarry 1999, with a focus on inequality in transfers and bequests across children). Wealth may be used as a strategic bequest (Bernheim, Shleifer and Summers 1985) while income is used for inter vivos transfers as part of an exchange relationship (Cox and Rank 1992). To understand this pattern, we would need to examine time transfers from children over time, inter vivos transfers to children over time, and bequests at the death of parents.

We cannot, however, ignore the inconsistency between some of the results and predictions based on social exchange theory in this test that leaves the clean laboratory setting. There appear to be social norms and characteristics of the ongoing family relationships that cannot be adequately captured in the laboratory setting, even when incorporating repeated interactions between actors. This is a rich area for future theory development and testing, given the growing availability of datasets with detailed measures on transfers and relationships. The social psychological approach pushed our models in directions we would not have anticipated, and we hope our models can also spark further development of theory in this area.

Our models also speak to the development of theory about the implications of intergenerational transfers for public policy. Past work in this area, beginning with the influential work of Becker (1974), has pointed out that to the extent that inter vivos transfers are altruistic, public transfers (e.g. Social Security) will crowd out private transfers and eliminate the desired redistributive effects of public transfers. However, support for this argument has been mixed, with weak evidence of such crowding out in developed countries and somewhat stronger evidence in developing countries (Cox, Hanson and Jimenez 2004). Our models show that the

effects of income (including Social Security and other government transfer income) depend importantly on other indicators of the relative power of parents and children, in this case the marital status of parents. Future work in this area must consider other sources of power together with income in an exchange framework to assess whether government transfers crowd out support from children or in fact compensate somewhat for the disadvantaged position of parents vis-à-vis children.

ENDNOTES

[1] The use of the term motivations in this discussion reflects the prevalent terminology in the literature. We do not imply that we have knowledge of people's thought processes.
[2] We take advantage of much preparatory work done by researchers at the RAND corporation, using their version of the HRS data and merging in additional information from the more complete data files available from the HRS website.
[3] The analysis sample includes respondents who have been divorced or widowed since before their entry into the HRS/AHEAD data, so not all have divorced or widowed after age 50. The HRS does not include a measure of the date of the divorce or death of a spouse, preventing us from studying the effects of the timing of these events on exchange relationships.
[4] Models excluding the indicator of whether the respondent transferred between 1998 and 2000 show substantively similar results, with some changes in which variables have significant effects but negligible changes in the magnitude of effects.
[5] A measure of whether children or grandchildren spent time helping in the previous interval (1998-2000) had no significant effect on the probability of transferring between 2000 and 2002, suggesting that the exchange of money for time is a short term exchange relationship. Models including the financial transfers from children between 2000 and 2002 also showed no significant effect of these transfers.
[6] The value of this variable is the natural log of household wealth plus one dollar to account for zeros on household wealth. The natural log of wealth captures the non-linearity in the relationship between wealth and the probability of transferring. Alternative models using linear, quadratic or cubic specifications of wealth provided a worse fit to the data. Alternative models using the total wealth in place of the per capita wealth (only relevant in the married sample) produced the same substantive results.
[7] Models using total income in place of per capita income show a slightly different pattern of differences across groups by inflating the differences between married and unmarried respondents.
[8] We tested models including an indicator of whether the husband or wife was the respondent in models for the married sample. This indicator never had a significant effect and was dropped from final models.
[9] We estimated comparable tobit models of the amount transferred, including zero values for those who did not transfer. These models produced substantively the same results as we present here. These models are available upon request from the authors.
[10] In models not shown, we estimated models for subsamples of married couples, divorced women, divorced men, widowed women and widowed men. These models showed significantly different effects of wealth across marital status and significantly different effects of income across genders, but few other significant differences across groups.
[11] We tested models using the amount of the previous transfers from parents to children and from children to parents (money and time). Models using the indicator of any transfers were preferred over models using the amount of transfers, according to the BIC, for all of these measures.

REFERENCES

Agarwal, R. and A. W. Horowitz. 2002. "Are international remittances altruism or insurance? Evidence from Guyana using multiple-migrant households." *World Development* 30:2033-2044.

Altonji, J. G., F. Hayashi, and L. J. Kotlikoff. 1997. "Parental altruism and inter vivos transfers: Theory and evidence." *Journal of Political Economy* 105:1121-1166.

Amato, P.R. and A. Booth. 1991. "Consequences of Parental Divorce and Marital Unhappiness for Adult Well-Being." *Social Forces* 69:895-914.

Amato, P. R., S. J. Rezac, and A. Booth. 1995. "Helping between Parents and Young-Adult Offspring - the Role of Parental Marital Quality, Divorce, and Remarriage." *Journal of Marriage and the Family* 57:363-374.

Aquilino, W.S. 1994. "Later Life Parental Divorce and Widowhood: Impact on Young Adults' Assessment of Parent-Child Relations." *Journal of Marriage and the Family* 56:902-922.

Avery, R. B. and M. S. Rendall. 2002. "Lifetime inheritances of three generations of whites and blacks." *American Journal of Sociology* 107:1300-1346.

Becker, Gary S. 1974. "A Theory of Social Interactions." *Journal of Political Economy* 82:1063-1093.

—. 1991. *A Treatise on the Family*. Cambridge: Harvard University Press.

Bernheim, B.D., A. Shleifer, and L.H. Summers. 1985. "The Strategic Bequest Motive." *Journal of Political Economy* 93(6):1045-1076.

Blau, Peter M. 1964. *Exchange and Power in Social Life*. New York: Wiley.

Bond, S.A., P.M. Krueger, R.G. Rogers, and R.A. Hummer. 2003. "Wealth, race, and mortality." *Social Science Quarterly* 84(3):667-684.

Booth, A. and P.R. Amato. 1994. "Parental Marital Quality, Parental Divorce, and Relations with Parents." *Journal of Marriage and the Family* 56:21-34.

Brown, M. 2006. "Informal care and the division of end-of-life transfers." *Journal Of Human Resources* 41:191-219.

Bumpass, L. and J. Sweet. 1991. "The effect of marital disruption on intergenerational relationships." NSFH Working Paper No. 40, Center for Demography and Ecology, University of Wisconsin, Madison, Wisconsin.

Ceroni, C.B. 2001. "Poverty traps and human capital accumulation." *Economica* 68(270):203-219.

Cook, K. S., R. M. Emerson, M. R. Gillmore, and T. Yamagishi. 1983. "The Distribution of Power in Exchange Networks - Theory and Experimental Results." *American Journal of Sociology* 89:275-305.

Cooney, T.M. 1994. "Young Adults' Relations with Parents: The Influence of Recent Parental Divorce." *Journal of Marriage and the Family* 56:45-56.

Cooney, T.M. and P. Uhlenberg. 1990. "The Role of Divorce in Men's Relations with Their Adult Children After Mid-Life." *Journal of Marriage and the Family* 52:677-688.

Cooney, T. M. and P. Uhlenberg. 1992. "Support From Parents Over The Life Course - The Adult Childs Perspective." *Social Forces* 71:63-84.

Cox, D. 1987. "Motives for Private Income Transfers." *Journal of Political Economy* 95:508-546.

Cox, D., B. E. Hansen, and E. Jimenez. 2004. "How responsive are private transfers to income? Evidence from a laissez-faire economy." *Journal of Public Economics* 88:2193-2219.
Cox, D. and M.R. Rank. 1992. "Inter-Vivos Transfers and Intergenerational Exchange." *Review of Economics and Statistics* 74(2):305-314.
Davies, J.B. 1982. "The Relative Impact of Inheritance and Other Factors on Economic-Inequality." *Quarterly Journal of Economics* 97(3):471-498.
de la Brière, B., E. Sadoulet, A. de Janvry, and S. Lambert. 2002. "The roles of destination, gender, and household composition in explaining remittances: an analysis for the Dominican Sierra." *Journal of Development Economics* 68:309-328.
Domhoff, G.W. 1990. *The Power Elite and the State: How Policy is Made in America*. New Tork: Aldine de Gruyter.
Eggebeen, D.J. 1992. "Family-Structure and Intergenerational Exchanges." *Research on Aging* 14: 427-447.
Eggebeen, D.J. and A. Davey. 1998. "Do Safety Nets Work? The Role of Anticipated Help in Times of Need." *Journal of Marriage and the Family* 60:939-950.
Emerson, R. M. 1962. "Power-Dependence Relations." *American Sociological Review* 27:31-41.
—. 1987. "Toward a Theory of Value in Social Exchange." Pp. 11-46 in *Social Exchange Theory*, edited by K. S. Cook. Newbury Park, CA: Sage.
Frankenberg, E., L. Lillard, and R. J. Willis. 2002. "Patterns of Intergenerational transfers in southeast Asia." *Journal of Marriage and the Family* 64:627-641.
Furstenberg, F.F., S.D. Hoffman, L. Shrestha. 1995. "The Effect of Divorce on Intergenerational Transfers: New Evidence." *Demography* 32: 319-333.
Gokhale, J. and L. J. Kotlikoff. 2002. "Simulating the transmission of wealth inequality." *American Economic Review* 92:265-269.
Gokhale, J., L. J. Kotlikoff, J. Sefton, and M. Weale. 2001. "Simulating the transmission of wealth inequality via bequests." *Journal of Public Economics* 79:93-128.
Goldscheider, F.K. 1990. "The Aging of the Gender Revolution: What Do We Know and What Do We Need to Know." *Research on Aging* 12:531-45.
Hayward, M.D. and B.K. Gorman. 2004. "The long arm of childhood: The influence of early-life social conditions on men's mortality." *Demography* 41(1):87-107.
Hogan, D.P. and D.J. Eggebeen. 1995. "Sources of Emergency Help and Routine Assistance in Old Age." *Social Forces* 73:917-936.
Hogan, D.P., D.J. Eggebeen, and C.C. Clogg. 1993. "The Structure of Intergenerational Exchanges in American Families." *American Journal of Sociology* 98(6):1428-1458.
Homans, George C. 1958. "Social Behavior as Exchange." *The American Journal of Sociology* 63:597-606.
Hurd, M. and A. Kapteyn. 2003. "Health, wealth, and the role of institutions." *Journal of Human Resources* 38(2):386-415.
Kaufman, G. and P. Uhlenberg. 1998. "Effects of Life Course Transitions on the Quality of Relationships between Adult Children and Their Parents." *Journal of Marriage and the Family* 60: 924-938.
Keister, L.A. 2000. *Wealth in America: Trends in Wealth Inequality*. New York: Cambridge University Press.
Keister, Lisa A. and Stephanie Moller. 2000. "Wealth Inequality in the United States." *Annual Review of Sociology* 26:63-81.

Kotlikoff, L.J. 1988. "Intergenerational Transfers and Savings." *Journal of Economic Perspectives* 2(2):41-58.
Kotlikoff, L.J. and L.H. Summers. 1981. "The Role of Intergenerational Transfers in Aggregate Capital Accumulation." *Journal of Political Economy* 89(4):706-732.
Lawton, L., M. Silverstein, and V.L. Bengston. 1994. "Solidarity between generations in families." In *Intergenerational Linkages: Hidden Connections in American Society*, ed. V.L. Bengston, R.A. Harootyan, pp. 19-42. New York: Springer.
Lee, Y. J. and I. A. Aytac. 1998. "Intergenerational financial support among Whites, African Americans, and Latinos." *Journal of Marriage and the Family* 60:426-441.
Lee, Y. J., W. L. Parish, and R. J. Willis. 1994. "Sons, Daughters, and Intergenerational Support in Taiwan." *American Journal of Sociology* 99:1010-1041.
Light, A. and K. McGarry. 2004. "Why parents play favorites: Explanations for unequal bequests." *American Economic Review* 94:1669-1681.
Lillard, Lee and Robert J. Willis. 1997. "Motives for Intergenerational Transfers: Evidence from Malaysia." *Demography* 34:115-134.
Lucas, Robert E. B. and Oded Stark. 1985. "Motivations to Remit: Evidence from Botswana." *Journal of Political Economy* 93:901-918.
Lye, D. N. 1996. "Adult child-parent relationships." *Annual Review of Sociology* 22:79-102.
Lye, D. N., D. H. Klepinger, P. D. Hyle, and A. Nelson. 1995. "Childhood Living Arrangements And Adult Childrens Relations With Their Parents." 32:261-280.
Marks, N.F. 1995. "Midlife Marital Status Differences in Social Support Relationships with Adult Children and Psychological Well-Being." *Journal of Family Issues* 16:5-28.
Martikainen, P., J. Adda, J.E. Ferrie, G.D. Smith, and M. Marmot. 2003. "Effects of income and wealth on GHQ depression and poor self rated health in white collar women and men in the Whitehall II study." *Journal of Epidemiology and Community Health* 57(9):718-723.
Mauss, Marcel. 2000 [1954]. *The Gift: The Form and Reason for Exchange in Archaic Societies*. New York: W. W. Norton and Company.
McGarry, K. 1999. "Inter vivos transfers and intended bequests." *Journal of Public Economics* 73:321-351.
—. 2001. "The cost of equality: unequal bequests and tax avoidance." *Journal of Public Economics* 79:179-204.
McGarry, K. and R.F. Schoeni. 1995. "Transfer Behavior in the Health and Retirement Study - Measurement and the Redistribution of Resources within the Family." *Journal of Human Resources* 30:S184-S226.
McGarry, K. and R. F. Schoeni. 1997. "Transfer behavior within the family: Results from the Asset and Health Dynamics study." *Journals of Gerontology Series B-Psychological Sciences and Social Sciences* 52:82-92.
Molm, L. D. 2003. "Theoretical comparisons of forms of exchange." *Sociological Theory* 21:1-17.
Molm, Linda D. and Karen S. Cook. 1995. "Social Exchange and Exchange Networks." in *Sociological Perspectives on Social Psychology*, edited by K. S. Cook, G. A. Fine, and J. S. House. Boston: Allyn and Bacon.
Molm, L. D., G. Peterson, and N. Takahashi. 1999. "Power in negotiated and reciprocal exchange." *American Sociological Review* 64:876-890.
—. 2001. "The value of exchange." *Social Forces* 80:159-184.

Moon, M. and F.T. Juster. 1995. "Economic Status Measures in the Health and Retirement Study." *Journal of Human Resources* 30:S138-S157.
Page, B. R. 2003. "Bequest taxes, inter vivos gifts, and the bequest motive." *Journal of Public Economics* 87:1219-1229.
Parish, W. L., L. Hao, and D. P. Hogan. 1991. "Family Support Networks, Welfare, And Work Among Young Mothers." *Journal Of Marriage And The Family* 53:203-215.
Pezzin, L. E. and B. S. Schone. 1999. "Parental marital disruption and intergenerational transfers: An analysis of lone elderly parents and their children." *Demography* 36:287-297.
Roan, C.L. and R.K. Raley. 1996. "Intergenerational Coresidence and Contact: A Longitudinal Analysis of Adult Children's Response to Their Mother's Widowhood." *Journal of Marriage and the Family* 58: 708-717.
Rossi, A.S. and P.H. Rossi. 1990. *Of Human Bonding: Parent-Child Relations Across the Life Course.* Hawthorne, NY: Aldine.
Schoeni, R. F. 1997. "Private interhousehold transfers of money and time: New empirical evidence." *Review of Income and Wealth* 43:423-448.
Secondi, Giorgio. 1997. "Private Monetary Transfers in Rural China: Are Families Altruistic?" *Journal of Development Studies* 33:487-511.
Soldo, B.J. and M.S. Hill. 1995. "Family Structure and Transfer Measures in the Health and Retirement Study - Background and Overview." *Journal of Human Resources* 30:S108-S137.
Spitze, G. and J.R. Logan. 1989. "Gender Differences in Family Support: Is There a Payoff?" *Gerontologist* 29:108-113.
Spitze, G., J. R. Logan, G. Deane, and S. Zerger. 1994. "Adult Children's Divorce and Intergenerational Relationships." *Journal of Marriage and the Family* 56:279-293.
Spitze, G. and S. Miner. 1992. "Gender Differences in Adult Child Contact among Black Elderly Parents." *Gerontologist* 32:213-218.
Stark, Oded. 1991. *The Migration of Labor*. Cambridge, MA: Basil Blackwell.
—. 1999. *Altruism and Beyond: An Economic Analysis of Transfers and Exchanges within Families and Groups*. New York: Cambridge University Press.
Stark, Oded and David E. Bloom. 1985. "The New Economics of Labor Migration." *American Economic Review* 75:173-178.
Stark, Oded and Robert E. B. Lucas. 1988. "Migration, Remittances, and the Family." *Economic Development and Cultural Change* 36:465-481.
Steelman, Lala Carr and Powell, Brian. (1996) "The Family Devalued: The Treatment of The Family in Small Groups Literature." Pp. 213-238 In *Advances in Group Processes, Volume 13*, edited by Barry Markovsky, Michael Lovaglia, and Robin Simon. Greenwich, CT: JAI Press.
Umberson, D. 1992. "Relationships between Adult Children and Their Parents: Psychological Consequences for Both Generations." *Journal of Marriage and the Family* 54:664-674.
U.S. Census Bureau. 2003. "Marital Status: 2000." U.S. Census Bureau, Washington, DC.
VanWey, L. K. 2004. "Altruistic and contractual remittances between male and female migrants and households in rural Thailand." *Demography* 41:739-756.
Wolff, E.N. 2002. *Top Heavy: The Increasing Inequality of Wealth in America and What Can Be Done About It*. New York: The New Press.

Table 1a. Summary Statistics for Married Individuals: Health and Retirement Study (HRS), N=2099.

Variable Description	Mean	Standard Deviation	Minimum	Maximum
Dependent Variable				
Transfers to Children/Grandchildren (between 2000 and 2002)	0.32	0.47	0	1
Independent Variables				
Financial Measures (per capita)				
Log of Wealth (2000)	11.15	2.34	0	16.81
Household Income in $1000s (2000)	33.17	41.71	0	656.06
Health Measures				
Change in Self-Reported Health (between 2000 and 2002)	0.04	0.86	-3	3
Self-Reported Health (2002)	2.64	1.08	1	5
Respondent Characteristics				
Age (2002)	63.15	4.78	34.25	90.58
Race (1=White, Non-Hispanic)	0.85	0.35	0	1
Spouse Characteristics				
Spouse's Age	65.60	5.93	37.42	84.42
Spouse's Race	0.86	0.35	0	1
Spouse's Change in Self-Reported Health (between 2000 and 2002)	0.08	0.87	-4	4
Spouse's Self-Reported Health (2002)	2.64	1.07	1	5
Transfers Measures				
Transfers from Children/Grandchildren (between 1998 and 2000)	0.03	0.17	0	1
Transfers to Children/Grandchildren (between 1998 and 2000)	0.37	0.48	0	1
Time Transfers from Children / Grandchildren (between 2000 and 2002)	0.24	0.43	0	1
Family Structure Measures				
Number of Sons	0.68	1.15	0	11
Number of Daughters	0.69	1.20	0	8
Number of Grandchildren	5.53	5.17	0	58
Living Arrangements				
Living with Children	0.21	0.41	0	1
Living in Facility	0.01	0.11	0	1
Children's Characteristics				
Average Education of Children (years)	13.88	1.89	0	17
Children's Incomes (dummy for having any children earning less than $10,000)	0.19	0.39	0	1
Children's Incomes (dummy for having any children earning more than $70,000)	0.33	0.47	0	1

Table 1b. Summary Statistics for Unmarried Individuals: Health and Retirement Study (HRS), N=3229.

Variable Description	Mean	Standard Deviation	Minimum	Maximum
Dependent Variable				
Transfers to Children/Grandchildren (between 2000 and 2002)	0.25	0.43	0	1
Independent Variables				
Financial Measures (per capita)				
Log of Wealth (2000)	9.86	3.94	0	16.17
Household Income in $1000s (2000)				
Women, no help from children	10.23	25.97	0	522.38
Women, received help	9.79	25.67	0	628.99
Men, no help from children	5.27	28.35	0	1044.02
Men, received help	2.25	11.78	0	359.18
Health Measures				
Change in Self-Reported Health (between 2000 and 2002)	0.13	0.95	-3	4
Self-Reported Health (2002)	2.95	1.13	1	5
Respondent Characteristics				
Age (2002)	72.23	10.57	38	104.33
Race (1=White, Non-Hispanic)	0.78	0.41	0	1
Gender (1=female)	0.80	0.40	0	1
Marital Status (1=divorced, 0=widowed)	0.26	0.44	0	1
Transfers Measures				
Transfers from Children/Grandchildren (between 1998 and 2000)	0.08	0.27	0	1
Transfers to Children/Grandchildren (between 1998 and 2000)	0.29	0.45	0	1
Time Transfers from Children / Grandchildren (between 2000 and 2002)	0.52	0.50	0	1
Family Structure Measures				
Number of Sons	1.55	1.33	0	10
Number of Daughters	1.58	1.33	0	10
Number of Grandchildren	6.10	6.24	0	77
Living Arrangements				
Living with Children	0.27	0.45	0	1
Living in Facility	0.07	0.26	0	1
Children's Characteristics				
Average Education of Children (years)	13.58	2.09	0	17
Children's Incomes (dummy for having any children earning less than $10,000)	0.18	0.39	0	1
Children's Incomes (dummy for having any children earning more than $70,000)	0.25	0.43	0	1

Table 2. Results of Logistic Regression Model of Probability of Parent to Child Transfers, HRS 2000-2002.

	Married	Unmarried	Significant Differences
Financial Measures (per capita)			
Log of Wealth (2000)	0.11**	0.14**	* (div vs. marr)
	(3.11)	(5.79)	
Household Income in $1000s (2000)	0.003		
	(1.96)		
Women, no help from children		0.002	
		(1.09)	
Women, received help		0.01**	* (vs. married)
		(3.89)	
Men, no help from children		0.01**	* (vs. married)
		(3.44)	
Men, received help		0.02**	* (vs. married)
		(3.67)	
Health Measures			
Change in Self-Reported Health (between 2000 and 2002)	-0.02	-0.01	
	(0.35)	(0.25)	
Self-Reported Health (2002)	-0.08	-0.09	
	(1.30)	(1.71)	
Respondent Characteristics			
Age (2002)	0.008	-0.03**	*
	(0.62)	(4.23)	
Race (1=White, Non-Hispanic)	0.25	0.16	
	(0.79)	(1.22)	
Gender (1=Female)		-0.23	
		(1.37)	
Marital Status (1=divorced, 0=widowed)		1.18**	
		(3.25)	
Spouse Characteristics			
Spouse's Age	-0.02		
	(1.92)		
Spouse's Race	-0.02		
	(0.07)		
Spouse's Change in Self-Reported Health (between 2000 and 2002)	0.03		
	(0.41)		
Spouse's Self-Reported Health (2002)	-0.01		
	(0.15)		
Transfers Measures			
Transfers from Children/Grandchildren (between 1998 and 2000)	-0.06	-0.37	
	(0.19)	(1.81)	

Transfers to Children/Grandchildren (between 1998 and 2000)	1.42**	1.56**	
	(13.52)	(16.23)	
Time Transfers from Children/Grandchildren (between 2000 and 2002)	0.38**	0.04	*
	(3.06)	(0.26)	
Family Structure Measures			
Number of Sons	0.09	0.003	
	(1.79)	(0.06)	
Number of Daughters	0.10	-0.12*	*
	(1.78)	(2.43)	
Number of Grandchildren	-0.04**	0.02	*
	(2.84)	(1.89)	
Living Arrangements			
Living with Children	0.02	-0.12	
	(0.16)	(1.04)	
Living in Facility	0.70	-0.07	*
	(1.46)	(0.33)	
Children's Characteristics			
Average Education of Children (years)	0.05	0.10**	
	(1.38)	(3.33)	
Children's Incomes (dummy for having any children earning less than $10,000)	0.28*	0.38**	
	(1.98)	(2.83)	
Children's Incomes (dummy for having any children earning more than $70,000)	-0.06	0.03	
	(0.47)	(0.31)	
Wealth*Marital Status Interaction		-0.12**	
		(3.77)	
Constant	-2.462**	-2.746**	
	(2.58)	(4.37)	
Observations	2099	3229	

Figure 1. Structure of Parent Child Relations, by Parental Marital Status

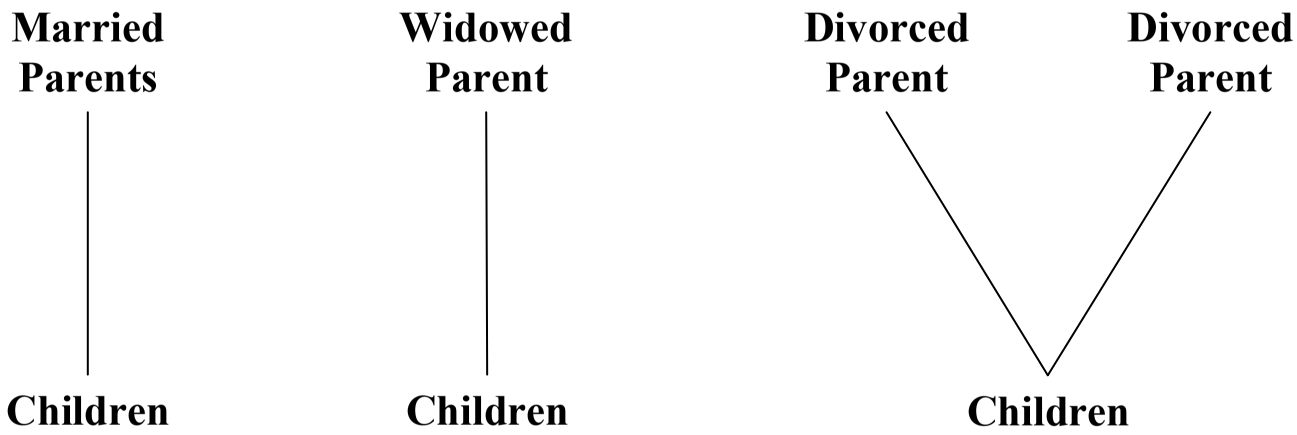
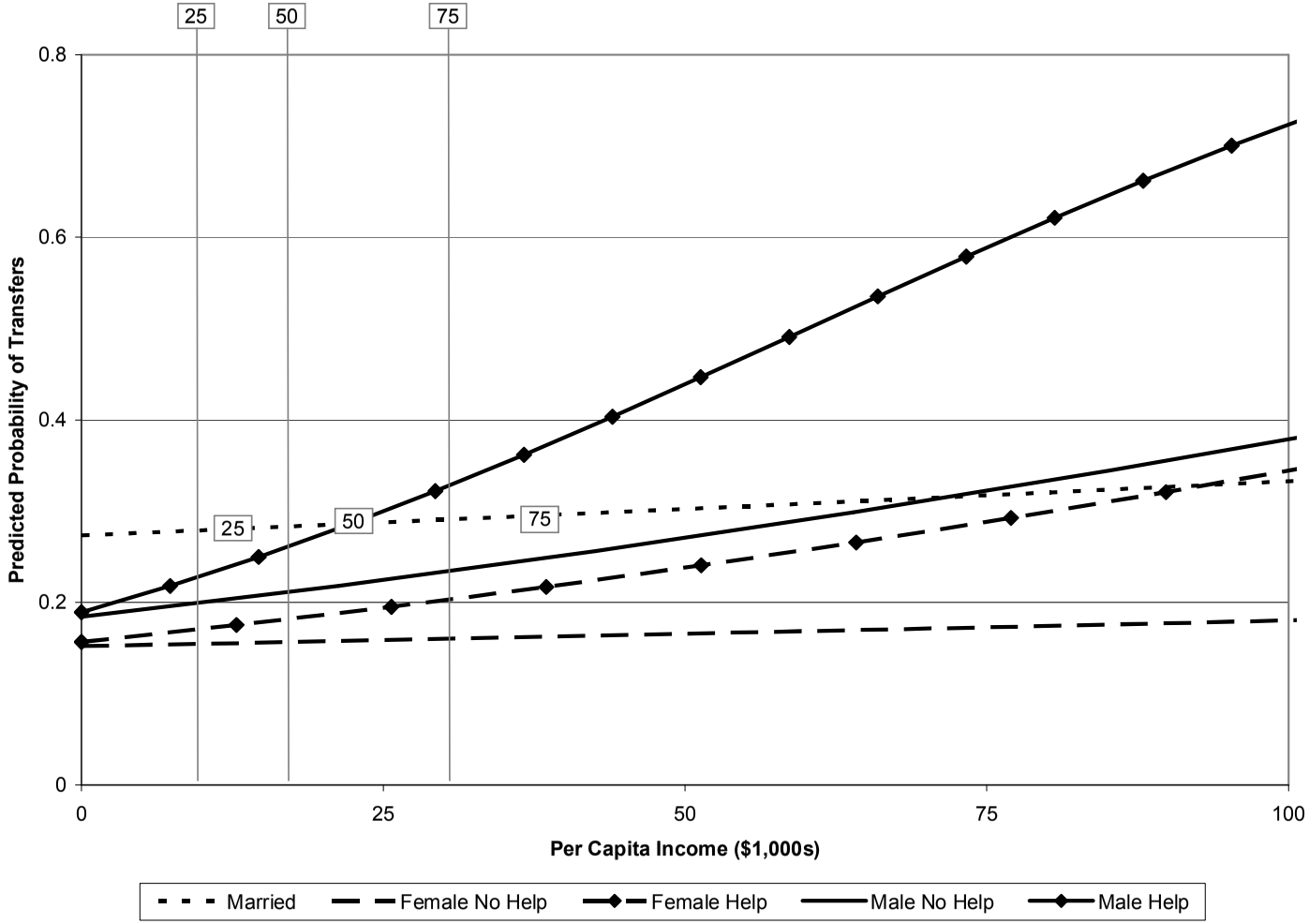
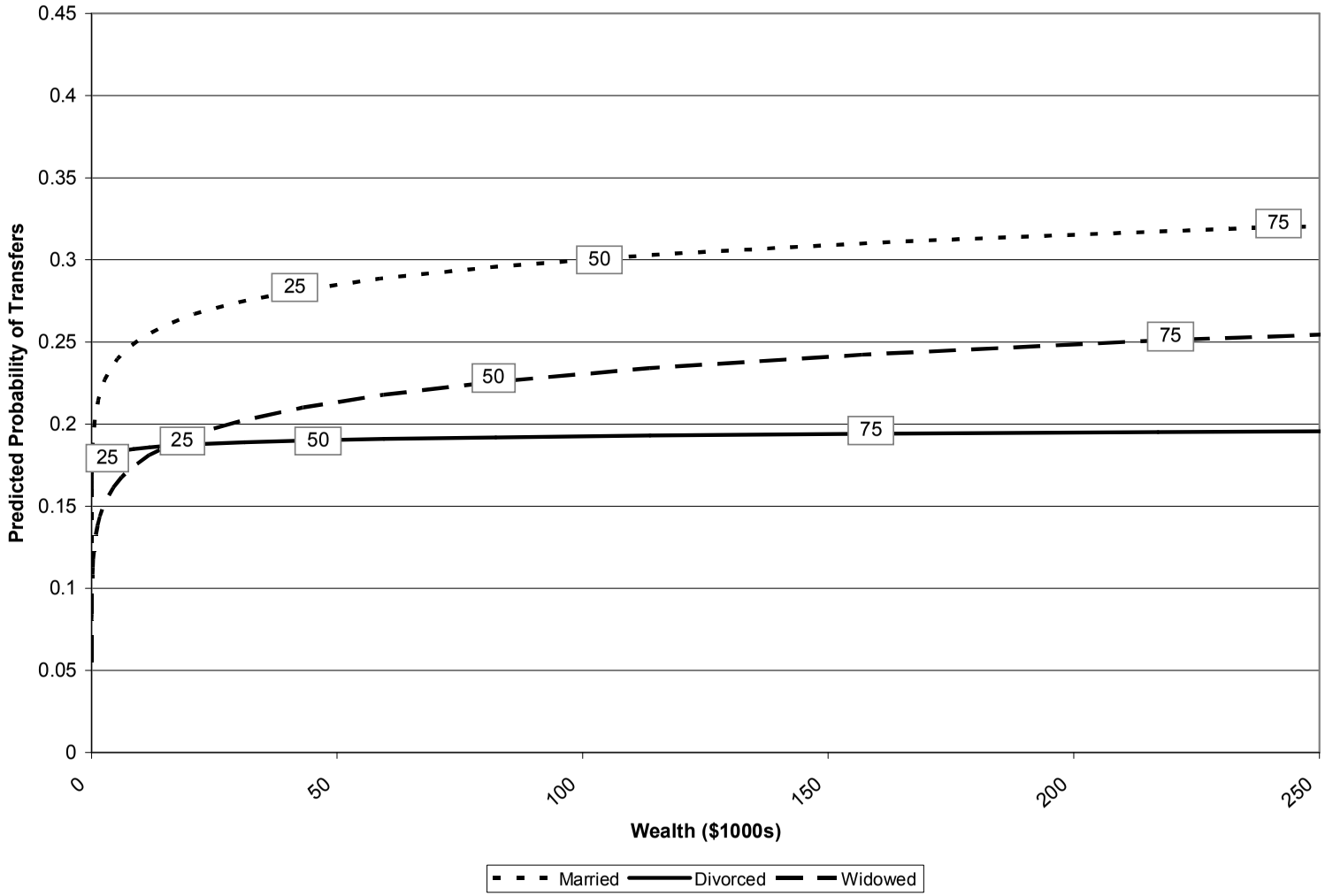


Figure 2. Predicted Probability of Parent to Child Transfers as a Function of Income, by Parental Marital Status and Child Provision of Help, HRS 2000-2002.



NOTES: All variables other than income, parental marital status and child help held at sample means in calculating predicted probabilities. Boxes with 25, 50 and 75 indicate the 25th, 50th, and 75th percentiles of the income distribution for married respondents. Lines marked with 25, 50 and 75 indicate the 25th, 50th, and 75th percentiles of the income distribution for unmarried respondents.

Figure 3. Predicted Probability of Parent to Child Transfers as a Function of Wealth, by Parental Marital Status, HRS 2000-2002.



NOTES: All variables other than wealth and marital status held at sample means in calculation of predicted probabilities. Boxes with 25, 50 and 75 indicate the 25th, 50th, and 75th percentiles of the wealth distribution for a given marital status group. Graph is truncated at $250,000, while actual range goes to approximately $20 million for married respondents and $8 million for unmarried respondents.