Inheritances and the distribution of wealth or whatever happened to the great inheritance boom?

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Abstract Using data from the Survey of Consumer Finances (SCF), we found that on average over the period from 1989 to 2007, about one fifth of American households at a given point of time reported a wealth transfer and these accounted for quite a sizeable figure, about a quarter of their net worth. Over the lifetime, about 30 percent of households could expect to receive a wealth transfer and these would account for close to 40 % of their net worth near time of death. However, there is little evidence of an inheritance "boom." In fact, from 1989 to 2007, the share of households reporting a wealth transfer fell by 2.5 percentage points, a time trend statistically significant at the one percent level. The average value of inheritances received among all households did increase but at a slow pace, by 10 %; the time trend is not statistically significant. Wealth transfers as a proportion of current net worth fell sharply over this period, from 29 to 19 %, though the time trend once again is not statistically significant. We also found that inheritances and other wealth transfers tend to be equalizing in terms of the distribution of household wealth, though a number of caveats apply to this result.

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1 Introduction

Previous estimates indicate that inheritances and gifts have accounted for about a quarter of total household wealth accumulation in the U.S. Wealth transfers are also a source of both business and home ownership. The conventional wisdom is that inheritances contribute to the overall inequality of household wealth. Moreover, it is commonly believed that inheritances impede intergenerational wealth mobility and play an important role in accounting for the intergenerational transmission of economic and social privilege.

On the theoretical front, several papers have developed models to show why inheritances increase wealth inequality and serve as a major factor in explaining why wealth inequality is so much higher than income inequality (see, for example, the theoretical and simulation work of [28, 33].

This paper will investigate two main questions. First, have inheritances and other wealth transfers become more important over time? Second, how much, if at all, do inheritances and other wealth transfers contribute to overall wealth inequality? Calculations will be performed from 1989 through the year 2007 on the basis of the Federal Reserve Board's Survey of Consumer Finances (SCF).[1]

With regard to the first question, there is some reason to think that the share of wealth transfers in net worth has been rising over time because the current generation of elderly is now the richest in history (see [42]). Moreover, the baby-boom generation has now reached the prime inheritance age group of 50 to 59 (see [40, 41]). For both reasons, the baby-boomers may be the first generation to inherit a considerable amount of money both in terms of the percentage of families inheriting as well as the amount inherited. Indeed, Avery et al. [3] almost 20 years ago predicted that an inheritance boom would occur for baby boomers over the decade of the 2000s. More recently, Schervish and Havens [36] forecast that over the 55-year period from 1998 to 2052, a minimum of \$41 trillion (in 1998 dollars) would pass from the older generation to the younger one. Nonetheless, we do not find much evidence that the value of inheritances rose over the years that we examine. Indeed, if anything, inheritances and other wealth transfers as a share of household net worth fell over this period. As we will show, calculations from the SCF indicate that the present value of wealth transfers (gifts and inheritances) as a share of current net worth plummeted from 29 to 19 % between 1989 and 2007.

The results reported below for the second question suggest that wealth transfers decrease wealth inequality rather than increasing it. We provide several rationales for this finding in Section 5 below. Moreover, in Section 6, we reconsider this finding in light of the counterfactual case in which all wealth transfers are eliminated.

The next section of the paper (Section 2) reviews the literature on inheritances. Section 3 provides a description of the SCF. Section 4 delves into inheritance and gift patterns in the U.S. over the period 1989–2007. In Section 5, we investigate the effects of wealth transfers on overall wealth inequality. The last section (Section 6) presents concluding remarks.

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[1]A similar set of calculations to those reported below was performed on the basis of the Panel Study of Income Dynamics (PSID) from 1984 through 2007. The results from the two datasets are remarkably similar. See Wolff et al. [43] for details.

2 Literature review on inheritances

2.1 Theoretical considerations

There is a sizeable theoretical literature on bequest behavior. However, almost all this literature focuses on the issue from the point of view of the donor rather than the recipient. The models can be conveniently divided into three groups: (i) altruism, (ii) exchange, and (iii) insurance. In the altruism model, as developed by Barro [5] and Becker [6], the transfer of income is directly linked to financial need. In particular, these models predict that the level of private transfers received declines as the income of the recipient increases because the recipient's financial need correspondingly decreases.[2] In the exchange model, wealth transfers may not be motivated by pure altruism but instead by exchange or self-interest (impure altruism). In the exchange model, as developed by Bernheim et al. [8] and Cox [12], parents may give their children a gift or the promise of a future bequest in exchange for housework, companionship, eldercare, or the like. In the insurance model, as developed by Cox [13] and Cox and Jappelli [14], a person may give a transfer to a financially stricken relative or friend as insurance for receiving similar (*quid pro quo*) help in the future when that person also faces a financial emergency.

A key distinction among these three models is the relationship between the utility of the donor and that of the recipient. In the altruism model, the donor is directly concerned with the recipient's utility. In other words, the recipient's utility enters directly into the donor's utility function. In the exchange model, the donor is concerned about the recipient's utility, too, but also cares about the services received in exchange for the wealth transfer. In the insurance model, it is assumed that the donor has no concern for the donee's utility, so that the latter's utility does not enter into the donor's utility function. Rather, the donor and recipient implicitly enter into a reciprocity agreement to receive financial help when needed. The empirical literature testing the various models finds little support for the pure altruism model but does find some support for the exchange and insurance models (see, for example, [27]).

The implications of the models for the relationship between bequests and wealth inequality are of interest. In a pure altruism model, bequests tend to be equalizing and any policies that interfere with bequests are likely to raise inequality [16]. Much less attention has been paid to the impact of non-altruistic bequest behavior on wealth inequality. The effects are apt to be complex and assumption-dependent, and require simulation to study [17].

Relatedly, the three models offer different predictions about which recipients are more likely to receive wealth transfers. The altruism model predicts that greater transfers go to lower income families. The insurance model, on the other hand, would predict that wealth transfers are more likely to go to higher income families because of their greater likelihood of providing resources in exchange when the need arises. There are no clear predictions from the exchange model.

From the point of view of the recipient side, Beverly et al. [9] note that the monies received can be saved, they can be invested in education, or used to buy a home, which is normally expected to have future capital gains and hence expand wealth. However, the funds can also be used for immediate consumption, particularly for unexpected needs like a

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[2]See also Becker and Tomes [7]. As elaborated in Tomes [38], the situation is more complicated when considering effects on the entire distribution. Holding parental income constant, transfers will tend to go to lower income families, but the positive correlation between parents and children works in the opposite direction.

large medical bill or to pay for regular consumption in the face of an adverse event like job loss. The availability or expectation of such wealth transfers can also lower wealth holdings. Insofar as families rely on private transfers to meet their emergency needs, rather than on their own savings, then their actual savings will be lower on average.

2.2 Empirical evidence

Direct survey evidence and econometric tests on household survey data (or probate records) have been used to assess the importance of bequests in wealth accumulation. Projector and Weiss [35], using the 1963 Survey of Financial Characteristics of Consumers, reported that only 17 % of families had received any inheritance. This compares with a figure of 18 %, reported by Morgan et al. [32]. The Projector and Weiss study also found that only 5 % of households had received a "substantial" proportion of their wealth from inheritance. However, this latter proportion did rise with household wealth, with 34 % of families with net worth exceeding half a million dollars indicating a substantial bequest. Barlow et al. [4] found from a 1964 Brookings study on the affluent, covering families with incomes of $10,000 or more, that only 7 % of the sample mentioned gifts and inheritance alone as the source of most of their present assets. They estimated that about one seventh of the total wealth of this group came from inheritance.

Menchik and David [30], using probate records of men who died in Wisconsin between 1947 and 1978, obtained an estimate of $7,500 (in 1967 dollars) for the average intergenerational bequest among decedents, which amounted to less than one fifth of average household wealth in 1967 and about 10 % of the average household wealth of families with a head 65 or over in age. Hurd and Mundaca [22], analyzing data from both the 1964 Survey on the Economic Behavior of the Affluent and the 1983 SCF, found from the 1964 data that only 12 % of households in the top 10 % of the income distribution reported that more than half their wealth came from gifts or inheritances. The corresponding figure from the 1983 data was only 9 %.

Gale and Scholz [21], in contrast, using the 1983–1986 SCF, estimated that at least 51 % of household wealth was accounted for by inheritances and other "intentional" wealth transfers. Their method, however, is a hybrid of direct survey data analysis and simulation. In particular, they estimated that *inter-vivos* transfers were the source of at least 20 % of aggregate wealth and bequests accounted for an additional 31 %. The inheritance estimate was based on accumulating them at a real rate of return of 4.5 % per year.

Brown and Weisbenner [10], using the 1998 SCF, estimated that 19 % of households that year received some kind of wealth transfer and that one fifth to one fourth of aggregate household wealth was traceable to wealth transfers, depending on the interest rate used to capitalize past inheritances. Laitner and Sonnega [29], using the 1992–2008 Health and Retirement Survey (HRS), estimated that 30 to 40 % of households eventually receive an inheritance. They also surmise that inheritances reflect a mixture of intentional and accidental bequests, with the latter twice as prevalent.

A similar type of analysis was conducted on French data by Kessler and Masson [24]. Using a 1975 survey of 2,000 French families, they found that 36 % reported receiving an inheritance. Of the total wealth of the population, they estimated that 35 % originated from inheritances or gifts. Klevmarken [25] computed that 34 % of Swedish households reported receiving a gift or inheritance in the 1998 Swedish HUS wealth survey. Using a three percent capitalization rate, he calculated that 19 % of the wealth of Swedish households in 1998 originated in wealth transfers.

Generally speaking, the results on the importance of bequests in household wealth accumulation are mixed. However, on the basis of the studies reviewed above, one might guess that about 20 to 30 % of household wealth emanates from inheritances and other forms of wealth transfers.

Also relevant are a number of studies that examined how the receipt of wealth transfers varies by socio-economic characteristic. Altonji et al. [1], McGarry and Schoeni [31], and Schoeni [37] all reported that higher income individuals receive lower transfers than lower-income ones, while Cox [12] and Cox and Rank [15] reported exactly the opposite. Several studies have investigated interracial differences in inheritances. Cox and Rank [15], using the 1987–1988 National Survey of Families and Households (NSFH), found that black families are less likely to receive transfers than white families but they did not find a significant difference in the level of transfers received. Similar findings were reported by Cox [12], Gale and Scholz [21], and McGarry and Schoeni [31]. Schoeni [37], on the basis of the 1988 PSID, found that nonwhite families receive less monetary support than white families. Wilhelm [39], using the 1987–1989 PSID, reported that white households had only a slightly higher incidence of transfer receipt but a substantially larger amount received, conditional on receipt.

In more recent work, in a monumental study, Piketty [34] tracked annual inheritance flows (including gifts) in France from 1820 to 2010. His main finding was that annual inheritances as a share of national income was about 20 to 25 % between 1820 and 1910, fell to less than 5 % in 1950, and then rebounded to 15 % in 2010. For the period under consideration here, the share rose from about 6 % in 1980 to about 13 % in 2010. This analysis differs from those reported above in that only annual inheritance flows were calculated, rather than the capitalized value of current and past wealth transfers, and these were computed as a fraction of national income instead of total household wealth. Piketty also found that the ratio of private wealth to national income rose from about 300 % in 1980 to about 550 % in 2005. As a result, the ratio of annual inheritance flows to private wealth probably remained pretty constant at about two percent from 1980 to 2010. Likewise, using a similar methodology, Alvaredo et al. [2] found an increase in the ratio of annual inheritance flows to national income since 1990 or so and likewise an increase in the ratio of annual inheritance flows to private wealth over the period.

3 Data sources and methods

This study uses the 1989, 1992, 1995, 1998, 2001, 2004, and 2007 SCF. Each survey consists of a core representative sample combined with a high-income supplement. The high-income supplement was selected as a list sample from statistical records (the Individual Tax File) derived from tax data by the Statistics of Income Division of the Internal Revenue Service (SOI). This second sample was designed to disproportionately select families that were likely to be relatively wealthy (see [23], for a more extended discussion of the design of the list sample in the 2001 SCF). The advantage of the high-income supplement is that it provides a much fuller sample of high income and therefore potentially very wealthy families than does a representative sample.

The wealth concept used here is marketable wealth (or net worth), which is defined as the current value of all marketable assets less the current value of debts. Total assets are defined as the sum of the value of: (1) houses; (2) other real estate; (3) bank demand deposits, certificates of deposit, and money market accounts; (4) government and corporate bonds and other financial securities; (5) the cash surrender value of life insurance plans; (6)

the cash surrender value of pension plans, including IRAs, Keogh, and 401(k) plans; (7) corporate stock and mutual funds; (8) unincorporated business equity; and (9) trust funds. Total liabilities are the sum of: (1) mortgage debt, and (2) consumer and other debt.

This measure reflects wealth as a store of value and therefore a source of potential consumption. We believe that this is the concept that best reflects the level of well-being associated with a family's holdings. Thus, only assets that can be readily converted to cash (that is, "fungible" ones) are included. As a result, consumer durables such as automobiles, televisions, and the like are excluded here, since these items are not easily marketed or their resale value typically far understates the value of their consumption services to the household. The other notable exclusion is the value of future Social Security benefits the family may receive upon retirement (usually referred to as "Social Security wealth"), as well as the value of retirement benefits from private defined benefit pension plans ("pension wealth"). Even though these funds are a source of future income to families, they are not in their direct control and cannot be marketed. Moreover, with the possible exception of lump-sum payments from defined benefit plans, these assets cannot be inherited.

The SCF provides detailed information not only on holdings of assets and liabilities by individual households but also on bequests and gifts received. The method of data collection is based on recall. Households are asked to record both the amount of the transfer received and the year of receipt. In addition, they are asked to indicate for selected asset holdings (real estate, businesses, and trust funds) whether the original source of the holding was from an inheritance or gift.

Questions on inheritances and gifts are asked in two different ways. First, there are several questions on what we call "general wealth transfers." These questions presumably refer to any type of gift or inheritance. Second, there are specific questions on inheritances and gifts of real estate and businesses. These are asked in the sections of the questionnaire which deal specifically with the value of homes, other properties, and businesses. In principle, the questions on general wealth transfers should also capture the specific transfers indicated in the questions on real estate and businesses. Indeed, as one of the experts on the Survey of Consumer Finances indicated in an email, every effort was made during the editing of the SCF file to make sure that the answers to the general wealth transfer questions were consistent with the specific wealth transfer information. However, in our data analysis, we did find a few discrepancies between the two sets of questions. To be on the conservative side, we therefore included the value of the specific wealth transfers only when no general wealth transfer was reported.

The recall or recollection method is likely to have serious under-reporting problems and estimates of inheritances reported below are very likely to be biased downward. However, it is difficult to ascertain whether there is a systematic bias in under-reporting by wealth class, by income class, or by demographic characteristics of the respondent.[3]

On the basis of both the reported value of wealth transfers and the dates of the transfers, we compute the present value of all inheritances as of the survey year which were received up to the time of the survey by accumulating them at real interest rate r.[4] The value of

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[3]Of course, if the under-reporting bias is greater for richer households, then the equalizing effect of wealth transfers found below will be overstated (or even overturned).

[4]Technically, the date of receipt is rounded off to the nearest fifth year in the Public Use version of the SCF, so that some error is introduced into the calculations. There is also no date of receipt provided for the category "other gifts and inheritances." Again, to be on the conservative side, we assume the wealth transfer in that case was received in the year of the survey.

inheritances is then converted to 2007 dollars.[5] In particular, for survey year y, the present value of wealth transfers received, PVWT, is given by:

$$PVWT_y = \sum_{t=t_0}^{y} WT_t \cdot e^{r(y-t)}$$

where WT_t is the wealth transfer received in year t, t_0 is the earliest year that wealth transfers are recorded (about 60 years prior to the survey year), and r the capitalization rate.

There is a debate about how past inheritances should be valued relative to current wealth. In particular, should the dividends, interest and capital gains received on past inheritances be counted as part of inheritances or as part of savings? Our basic procedure here is to use a "normal rate" of return, including dividends, interest, and capital gains, to capitalize assets received from wealth transfers. This amount is counted in the "inheritance portion" of current wealth. Returns on inherited assets above this normal rate are implicitly treated as part of savings. This is, of course, a somewhat arbitrary division and represents a shortcoming of our analysis. However, as we note in the next paragraph, we use alternative rates of return to capitalize inheritances received to test the sensitivity of our results to a range of treatments of capital gains.

The base real rate of return used in this procedure is 3 percent.[6] We also use four other capitalization factors: (1) real rate of return of 2 %; (2) real rate of return of 4 %; (3) period-specific capitalization rates; and (4) variable rates of return depending on household wealth and income. Selected results of four alternative choices are reported below for 2007 (see Table 4).

It should be noted at the outset that there appears to be a lot of sample variation from year to year. This is to be expected since inheritances and other wealth transfers are received by a small fraction of the population and their distribution is very skewed (as we shall see below). We are particularly interested in whether there are any notable time trends and we will point these out in the ensuing discussion.

It should be stressed as well that, unfortunately, it is not possible to simulate what the distribution of wealth would have been in the complete absence of gifts and inheritances. This simulation depends on the elasticity of savings with respect to transfers for different income, wealth, and demographic groups, as well as on the impact of the elimination of transfers on the savings behavior of potential donors. For the former, we are able to examine the sensitivity of our results to a range of elasticities. However, we do provide some speculative thoughts about how the elimination of wealth transfers (from, say, a 100 % gift and estate tax) would affect our results.

4 Trends in wealth transfers

Some general statistics are provided in Table 1 on wealth transfers by type and source. Depending on the year, between 80 and 90 % of households who received some type of wealth transfer received an inheritance (see Panel A). On average, 14 % received a gift and 6 % a trust fund or other type of transfer. Among households receiving a transfer, 79 % of

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[5]We trimmed the sample slightly by capping all inheritances at $20,000,000 (there were two such transfers in the 2004 SCF from trust funds; one such in the 2007 SCF).

[6]According to the calculations of Wolff et al. [44], the average real rate of return on the average household wealth portfolio between 1989 and 2007 was 3.15 %.

Table 1 Distribution of wealth transfer received by type and source of transfer, 1989–2007

	1989	1992	1995	1998	2001	2004	2007	Average
A. Percent of wealth transfer recipients receiving indicated type of transfer [%][a]								
1. Inheritances	88.7	91.4	79.2	79.7	82.4	85.8	82.3	84.2
2. Gifts	4.2	7.3	17.2	19.4	17.8	15.4	18.2	14.2
3. Trust funds or other transfers.	10.7	5.0	8.0	4.4	4.6	4.3	4.5	5.9
B. Present value of transfer received by type as a percent of total wealth transfers[b]								
1. Inheritances	76.9	78.6	87.4	79.7	83.6	66.4	78.8	78.8
2. Gifts	1.7	2.5	5.6	10.8	7.2	5.5	10.3	6.2
3. Trust funds or other transfers.	21.4	19.0	7.0	9.5	9.2	28.1	10.9	15.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
C. Percent of wealth transfer recipients receiving transfer by donor [%][a]								
1. Parents	71.3	61.7	68.2	71.3	70.2	66.3	72.6	68.8
2. Grandparents	17.4	21.1	16.8	17.4	19.0	19.4	19.6	18.7
3. Other relatives	19.6	30.0	23.8	19.6	16.9	22.9	17.6	21.5
4. Friends and others	4.7	5.4	5.0	4.7	3.5	3.3	2.7	4.2
D. Present value of transfer received by donor as a percent of total wealth transfers[b]								
1. Parents	56.3	61.9	57.8	64.3	73.0	55.0	76.5	63.5
2. Grandparents	17.5	11.5	6.8	23.0	15.3	35.3	13.3	17.5
3. Other relatives	16.1	22.0	33.9	9.7	9.9	8.2	9.8	15.6
4. Friends and others	10.1	4.6	1.5	3.0	1.7	1.5	0.5	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
E. Percent of households receiving wealth transfer by source [%]								
1. General wealth transfer	23.1	20.5	21.3	20.3	17.8	20.3	21.0	20.6
1. Owner-occupied housing	2.8	2.2	3.2	3.1	3.0	2.7	2.8	2.8
2. Other real estate	4.1	2.3	4.4	3.1	2.7	3.2	3.5	3.3
3. Business	0.6	0.3	0.5	0.4	0.3	0.3	0.7	0.4
4. Real estate or business	7.6	5.0	7.8	6.5	5.9	6.1	6.5	6.5

Note: own computations from the 1989, 1992, 1995, 1998, 2001, 2004, and 2007 SCF. Tabulations are only for general wealth transfer questions except for Panel E

[a] The column sum may be greater than 100 % since a household may receive more than one type of transfer

[b] The figures are based on the present value of all transfers as of the survey year which were received up to the time of the survey and accumulated at a real interest rate of 3.0 % for inheritors only

the value of these transfers on average came from inheritances, 6 % from gifts, and 16 % from trusts or other transfers (Panel B). The importance of gifts rose sharply over time from 1989 to 2007 while that of trusts has declined. Indeed, it is noteworthy that the share of *all* households reporting receipt of an *inter-vivos* transfer climbed from 1.0 to 3.8 % over this period, while its present value in 2007 dollars among recipients increased more than seven-fold. There is no noticeable time trend for inheritances.[7] The large rise in gifts, particularly relative to inheritances, may reflect, in part, the increasing life expectancy of donors.

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[7] The year 2004 is particularly anomalous, when the share from trusts was 28 % (and the share from inheritances was down to 66 %). This reflected two very large transfers from trust funds in that year, noted above.

On average, 64 % of all wealth transfers came from parents, 18 % from grandparents, 16 % from other relatives, and 3% from friends and other sources (see Panel D). The contribution from parents alone rose from 56 % of the total value of wealth transfers in 1989 to 76 % in 2007 and that from parents and grandparents together increased from 74 % in 1989 to 90 % in 2007, while the share from other relatives, friends, and other sources slipped.

Panel E of Table 1 also tabulates the responses to the general wealth transfer questions and the questions on specific receipts of real property and businesses. On average, over the 1989–2007 period, 20.6 % responded "yes" to the questions on general wealth transfers, 2.8 % indicated receiving their own home as a gift or inheritance, 3.3 % said "yes" for other real estate, 0.4 % "yes" for their own business, and 6.5 % for either real estate or a business.

As shown in Table 2, 21 % of all households, on average, over the years 1989 to 2007, reported receiving a wealth transfer. This figure is comparable to those from previous U.S. surveys but lower than the corresponding figures from French and Swedish household surveys. The fraction of households receiving a wealth transfer declined from 24 % in 1989 to a low point of 18 % in 2001, but then rose to 21 % in 2007. The difference between 1989 and 2007 is statistically significant at the 1 % level, as shown in Table 2. The results suggest that over the full 18-year period there was a moderate drop in the share of households receiving an inheritance.

The mean present value of wealth transfers received by recipients only was $323,500 (in 2007 dollars) in 1998. The mean value declined sharply between 1989 and 1998 – over 16 %. However, from 1998 to 2007, the situation reversed and the mean value climbed by 47 %. Over the full 18-year period, it rose by 23 %. However, the change between the two years is not statistically significant. The median present value of transfers received shows a 36 % increase from 1989 to 2007. Here the difference in median transfers among recipients between the two years is statistically significant at the one percent level.

Row 4 puts together trends in mean wealth transfers among recipients with trends in the share of households receiving transfers to yield mean inheritances among all households. Overall mean transfers were down by 28 % from 1989 to 1998 and then up by 54 % from 1998 to 2007, for a net gain of 10 %. This compares to a 23 % increase for mean transfers among recipients only. The difference between 1989 and 2007 is not statistically significant.

Row 5 shows the present value of wealth transfers received as a percent of the current net worth of households. This ratio provides a rough gauge of the importance of inheritances, gifts, and other wealth transfers in household wealth accumulation. The unweighted average over the whole 1989 to 2007 period was 23 %. These figures are comparable to previous estimates for U.S households and for Swedish households (19 % in 1998) but lower than the figure of 35 % for French households in 1975. However, since net worth rose during the 1990s in the U.S. and the mean value of wealth transfers dipped, this proportion also fell rather sharply over the years from 1989 to 1998, from 29 to 19 %. From 1998 to 2007, the mean value of wealth transfers rose by 52 % while mean net worth rose about the same degree, so that this ratio remained unchanged at 19 %. Over the full 18-year period, this ratio fell rather sharply, from 29 to 19 %, but the difference is not statistically significant.[8]

Table 3 shows the same set of statistics as in Table 2, except the tabulations are averaged over time and shown by group. There is significant variation in the proportion of households

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[8]As an alternative calculation, we also included the value of vehicles (the only consumer durable available in the SCF) in the definition of household wealth, as is commonly done. The results are materially unchanged. The ratio of wealth transfers to net worth now dips from 27.9 % in 1983 to 18.0 % in 2007, though the difference is once again not statistically significant.

Table 2 Time trends in wealth transfers among all households, 1989–2007 (Figures are in 1000s, 2007 dollars)

Variable	1989	1992	1995	1998	2001	2004	2007	Unwtd. Average 1989–2007	Two-tailed z-test 1989 = 2007?[d]	Time trend Coef.[e]
1. Percent of households with a transfer[a]	23.5 (0.64)	20.7 (0.61)	21.4 (0.61)	20.4 (0.60)	17.9 (0.56)	20.3 (0.58)	21.1 (0.59)	20.7	−2.8**	−0.25** (5.79)
2. Mean present value of transfers received, Recipients Only[b]	387.1 (30.3)	402.8 (64.3)	406.7 (64.0)	323.5 (52.9)	378.6 (30.0)	485.3 (113.0)	475.0 (52.9)	408.4	1.4	72.46 (1.59)
3. Median present value of transfers received, Recipients Only[b]	66.1 (3.74)	63.6 (3.22)	65.0 (4.44)	71.0 (4.94)	86.2 (5.78)	73.6 (6.37)	89.7 (8.52)	73.6	2.5**	
4. Mean present value of transfers received, all households[b]	91.0 (10.2)	83.3 (19.6)	86.8 (20.2)	65.8 (16.1)	67.6 (8.4)	98.4 (34.2)	100.0 (16.7)	84.7	0.5	12.41 (1.04)
5. Mean present value of transfers as percent of net worth, all households[c]	28.9 (11.4)	26.0 (5.4)	31.2 (5.2)	19.1 (26.3)	15.2 (15.9)	22.1 (17.8)	18.7 (6.5)	23.0	−0.8	0.013 (0.04)
Sample size	3143	3906	4299	4305	4442	4519	4418	29032		

Note: own computations from the 1989, 1992, 1995, 1998, 2001, 2004, and 2007 SCF. Standard errors are shown in parentheses

[a] The figures record the proportion of households who indicate receiving a wealth transfer at any time before the time of the survey

[b] The figures show the present value of all transfers as of the survey year which were received up to the time of the survey and accumulated at a real interest rate of 3.0 %

[c] The figures show the present value of all wealth transfers as of the survey year which were received up to the time of the survey and accumulated at a real interest rate of 3.0 % as a ratio to net worth

[d] Significance levels: # – 10 %. * – 5 %. ** – 1 %

[e] The time trend coefficient is estimated from a pooled sample from years 1989, 1992, 1995, 1998, 2001, 2004, and 2007. The regression uses a constant and time trend as independent variables. t-ratios are shown in parentheses below the coefficient estimate. Key: Significance levels: # – 10 %. * – 5 %. ** – 1 %

Table 3 Average wealth transfers by group, 1989–2007 (Period Averages)

Category	Percent of households receiving transfer[a]	(Std. err.)	Mean present Value of transfers, recipients only[b]	(Std. err.)	Mean present Value of transfers, all HHs in Group[b]	(Std. err.)	Present value of transfers as percent of net worth[c]	(Std. err.)	Pooled sample size
All households	20.7	(0.24)	408.4	(23.8)	84.7	(7.3)	23.0	(5.2)	29032
A. Income level (1998$)									
Under $15,000	14.7	(0.31)	279.9	(11.7)	42.2	(3.0)	63.8	(10.0)	4613
$15,000–$24,999	18.7	(0.37)	209.6	(7.7)	38.1	(2.1)	33.7	(9.8)	3389
$25,000–$49,999	20.1	(0.33)	267.4	(9.4)	53.0	(2.9)	31.0	(4.9)	6550
$50,000–$74,999	23.3	(0.40)	317.9	(16.9)	72.4	(5.6)	24.5	(4.2)	3842
$75,000–$99,999	26.2	(0.51)	448.9	(19.1)	122.7	(7.6)	26.6	(1.9)	2057
$100,000–$249,999	31.1	(0.53)	678.5	(32.3)	209.9	(13.7)	18.2	(1.0)	3515
$250,000 or more	38.4	(0.82)	2957.9	(297.5)	1134.0	(142.6)	17.8	(2.3)	5066
B. Wealth level (1998$)									
Under $25,000	9.0	(0.22)	59.2	(2.0)	5.2	(0.3)	–	(10.0)	8400
$25–000–$49,999	20.2	(0.44)	125.4	(5.8)	24.3	(1.7)	52.0	(5.0)	1843
$50,000–$99,999	21.0	(0.41)	164.7	(7.3)	34.3	(2.3)	37.1	(2.5)	2616
$100–000–$249,999	26.0	(0.40)	217.7	(8.1)	54.6	(2.8)	26.5	(1.9)	3884
$250,000–$499,999	33.7	(0.51)	318.6	(10.7)	103.6	(4.8)	23.1	(1.4)	2663
$500,000–$999,999	41.7	(0.61)	680.8	(25.6)	293.2	(14.2)	33.3	(1.9)	2103
$1,000,000 or over	44.7	(0.65)	1932.1	(127.0)	860.9	(68.9)	18.4	(1.2)	7523
Top 1 % of Wealth	44.3	(0.93)	4793.4	(386.4)	2027.7	(199.8)	18.0	(1.8)	4465
C. Race									
Non-Hispanic whites	24.6	(0.28)	414.0	(25.6)	101.1	(8.9)	23.3	(5.6)	23383
Non-Hispanic	10.2	(0.31)	238.4	(11.2)	25.3	(2.2)	31.8	(6.3)	2816

Table 3 (continued)

Category	Percent of households receiving transfer[a]	(Std. err.)	Mean present Value of transfers, recipients only[b]	(Std. err.)	Mean present Value of transfers, all HHs in Group[b]	(Std. err.)	Present value of transfers as percent of net worth[c]	(td. err.)	Pooled sample size
African-Americans									
Hispanics[d]	5.5	(0.26)	372.7	(18.7)	20.3	(2.3)	24.5	(1.5)	1746
Asian and other races	12.2	(0.45)	347.7	(16.7)	45.2	(4.0)	12.8	(8.1)	1087
D. Age class[e]									
Under 35	12.4	(0.28)	146.2	(6.7)	18.4	(1.4)	26.5	(6.8)	5338
35–44	16.5	(0.33)	293.7	(16.5)	48.5	(4.3)	21.3	(4.1)	5979
45–54	21.4	(0.38)	410.3	(33.8)	86.8	(10.6)	19.1	(4.4)	6408
55–64	27.4	(0.44)	440.4	(36.2)	120.1	(13.8)	17.7	(5.3)	5091
65–74	30.1	(0.48)	538.7	(34.6)	163.0	(14.2)	27.6	(10.2)	3668
75 & over	29.1	(0.49)	597.7	(50.3)	171.8	(20.0)	39.7	(9.3)	2547
E. Education[e]									
Less than 12 years	13.6	(0.31)	205.3	(7.0)	28.3	(1.7)	23.9	(8.1)	4165
12 years	18.0	(0.31)	258.9	(13.2)	46.0	(3.7)	24.6	(5.9)	7022
13–15 years	20.6	(0.36)	315.6	(15.0)	64.0	(4.6)	23.6	(8.3)	5733
16 years or more	28.8	(0.38)	629.4	(45.4)	181.6	(17.5)	24.4	(2.7)	12112

Note: own computations from the 1989, 1992, 1995, 1998, 2001, 2004, and 2007 SCF. Each year given equal weight

[a] The figures record the proportion of households who indicate receiving a wealth transfer at any time before the time of the survey

[b] The figures show the present value of all transfers as of the survey year which were received up to the time of the survey and accumulated at a real interest rate of 3.0 %

[c] The figures show the present value of all wealth transfers as of the survey year which were received up to the time of the survey and accumulated at a real interest rate of 3.0 % as a ratio to net worth

[d] Hispanics can be of any race

[e] Households are classified according to the age and education of the head of household

receiving a wealth transfer by income, wealth, and demographic class (column 1). As expected, the share of recipients rises very strongly with income and wealth level. On average over the seven years, 38 % of households in the highest income bracket ($250,000 or more) reported a wealth transfer, compared to only 15 % in the lowest income bracket (less than $15,000); and 45 % of households in the highest wealth bracket ($1,000,000 or more) received a transfer, compared to 9 % in the lowest wealth bracket (less than $25,000). The difference between the top and bottom income classes is significant at the 1 % level and that between the top and bottom wealth classes is also significant at the one percent level.[9]

The proportion of non-Hispanic white households reporting a wealth transfer was on average more than twice as great as the share of non-Hispanic African-Americans (25 versus 10 %). Only 6 % of Hispanic households, on average, reported a wealth transfer, while the figure was higher, 12 %, for Asian and other races. The differences in the shares receiving a wealth transfer between whites and the other racial/ethnic groups are significant at the 1 % level.

As expected, the likelihood of receiving a wealth transfer also rises with age. On average, the share of households under age 35 receiving a transfer was 12 %, compared to 29 % of those in age bracket 75 and over. This pattern reflects both life-cycle effects (the parents of older persons are more likely to have died than those of younger persons), as well as cohort effects (parents of those persons 75 and over were more likely to have been poorer than parents of younger people). The difference in the share receiving a wealth transfer is statistically significant at the one percent level between the oldest age group on the one hand and most of the other age groups. If the 75 and over age group is considered to represent the "end of lifetime," it appears that about 29 % of households received some type of wealth transfer over their lifetime.

The likelihood of inheriting or receiving a gift also rises with education – from 14 % for those with less than four years of high school to 29 % for college graduates. This result is consistent with the patterns found by income and wealth class. Here, too, the difference in the share receiving a wealth transfer is significantly different between the college educated group, on the one hand, and the other educational groups, on the other.

Similar patterns are evident for the mean present value of wealth transfers received by recipients only. The mean value of wealth transfers tends to rise with household income, and there is a huge jump for the highest income class. On average, the mean present value of wealth transfers for the top income class was 10.6 times as great as for the lowest. Wealth transfers increase monotonically with wealth, with again a big jump for the top wealth class. On average, the mean present value of wealth transfers for the highest wealth class was more than 32 times as great as for the lowest. Indeed, the ratio was 81 for mean values between the top one percent of wealth holders and the bottom wealth class. The difference in mean transfers between the top income and wealth class and all the others is significant at the 1 % level.

Wealth transfers are also higher for (non-Hispanic) whites than for African-Americans. On average, the ratio of means among recipients was 1.74. Hispanics ranked second and

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[9]The so-called Forbes 400 (the 400 richest Americans) are purposely excluded from the SCF sample. However, an analysis conducted by Forbes Magazine found that 30 % of this group in 2012 inherited their wealth and the remaining 70 % were "self-made." On the other hand, United for a Fair Economy calculated from the same data that 40 % of the Forbes 400 in 2012 inherited a "sizeable asset from a spouse or family member," though this figure was down from 50 % in 1997 (see [20], for more details), It should be noted that these analyses were made without capitalizing previous inheritances and computing them as a share of current wealth.

Asians third in terms of mean wealth transfers. The difference in means is significant at the one percent level between whites and blacks and between whites and Asians but is not significant between whites and Hispanics.

Not surprisingly, the value of wealth transfers rises with age. On average over the seven years, the mean transfer for households age 75 and over was 4 times as great as that for the youngest age group. The differences are significant at the one or five percent level in all cases except one. Wealth transfers also rise with education and are particularly high for college graduates. On average, the mean for this group was 3.1 times as great as that of households with less than a high school education. Once again, the difference in mean transfers among recipients is statistically significant at the one percent level, between college graduates and the other three educational groups.

The next column shows mean transfers among all households within each group. We now see a much greater spread than among recipients alone. This pattern reflects the positive correlation between the likelihood of receiving a wealth transfer and the value of the transfer conditional on receipt. On average over the seven years, the ratio of mean transfers received between the top and bottom income class was 27 to 1, compared to an 11 to 1 ratio among recipients only. Differences are significant at the one percent level between the top income class and the other income classes.

The ratio in mean transfers between the top and bottom wealth classes was166!, compared to 32 among recipients only. Differences between the top wealth class and each of the bottom six wealth classes are significant at the one percent level. The ratio in mean transfers between white and black households was 4.0, in comparison to1.7 among recipients only. The difference in mean transfers is significant at the one percent level between whites and the other three racial/ethnic groups.

Likewise, the spread between the oldest and youngest age classes in mean transfers was 9.3 compared to 4.1 among recipients, and that between college graduates and the least educated was 6.4 among all households and only 3.1 among recipients. Differences are significant at the one or five percent level between the oldest age group and almost all the younger ones and between college graduates and the other three educational groups.

The last column in Table 3 shows the present value of wealth transfers as a percent of current net worth. While the likelihood and mean value of transfers rise almost monotonically with income and wealth class, wealth transfers as a share of net worth generally decline with income and wealth. Wealth transfers amounted to 64 % of the net worth of the lowest income class and only 18 % for the highest income class. Likewise, these transfers accounted for 52 % of the wealth of the second lowest wealth class, compared to 18 % for the top wealth class.[10] Differences are generally significant between the top income and wealth class and the others. The rationale for this result is that while the dollar value of wealth transfers is greater for wealthier groups, small gifts and bequests mean more to poorer families in percentage terms.

Indeed, calculations indicate that the inverse relation between wealth transfers as a share of current net worth and both income and wealth level became more pronounced over the years 1989 to 2007. While the ratio fell from 55 to 43 % for the lowest income class, it plummeted from 30 to 13 % for the top income class. Likewise, while the ratio fell from 48 to 31 % for the second wealth class, it dipped from 24 to 16 % for the top wealth class.

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[10]For the bottom wealth class, the mean present value of wealth transfers was $4,700, while the mean net worth of this group was -$53.

Though the total value of wealth transfers tends to rise with age, wealth transfers as a share of wealth tends to have a U-shaped relation with age. The share is high for young households, because of their low savings, and for older households, because of the high absolute value of such transfers. It is low for middle-age households, because of their relatively small amount of inheritances and large level of savings. This pattern remains fairly robust over time. Differences are significant between the oldest and middle-aged households but not between the oldest and youngest age group.

Differences across race/ethnicity groups in wealth transfers as a share of wealth are not statistically significant. In addition, the ratio of wealth transfers to net worth was relatively constant across educational groups and there are not statistically significant differences among educational groups.[11]

In Table 4, we examine the sensitivity of the same set of statistics for the ratio of wealth transfers to net worth for 2007 to alternative capitalization rates. The use of alternative capitalization rates affects the estimated overall share of wealth transfers in net worth. This ratio for all households, not surprisingly, rises from 0.15 at $r = 0.02$ to 0.24 at $r = 0.04$. The use of period-specific capitalization rates (that is, the actual real rates of return computed for five periods – pre-1959, 1959–1982, 1983–1988, 1989–1998, and 1999–2007) results in a ratio of 0.22. The last two columns are based on rates of return that vary by wealth and income level. Since it is likely that wealthier and higher income households are more sophisticated financially and have better access to financial information, we assume that realized rates of return vary directly with wealth and income level. To test sensitivity, we use the rather extreme assumption that the top quintile of each receives a 5 % real rate of return on its portfolio, the second quintile a four percent return, the middle quintile a three percent return, the second quintile a two percent return, and the bottom quintile a one percent return. This set of assumptions boosts the ratio of wealth transfers to net worth to 0.30 for wealth-related rates and 0.25 for income-related ones.

The gradient of the ratio of transfers to wealth between the top and bottom income classes shows little variation across alternative capitalization assumptions, with the notable exception of income-related rates of return. In this case, the profile is, not surprisingly, much flatter, since we are augmenting the wealth transfer component of high income households relative to low income ones. Likewise, the gradient of this ratio between the top and bottom wealth classes show little difference across the first four capitalization rates but is now much flatter for both the wealth-related and income-related rates of return. Racial differences in the ratio of wealth transfers to net worth are fairly similar across the various capitalization rates (higher for blacks than whites) with the exception of the income-related rates of return, in which case the ratio is now higher for whites. The U-shaped profile in the ratio of transfers to wealth by age class is also fairly consistent across capitalization rates. There is, moreover, relatively little variation in the ratio of transfers to wealth across educational groups for alternative capitalization rates, with the notable exception of income-related returns, in which case, the lower educational groups show smaller ratios than the college graduate group.

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[11] When the value of vehicles is again included in net worth, the patterns of the ratio of wealth transfers to net worth are materially unchanged. However, since poorer households hold a higher share of vehicles in their portfolios, the gradient of the ratio of transfers to wealth with respect to both income and wealth is slightly less steep and the ratio is somewhat higher for younger households relative to older ones and minorities relative to whites and Asians.

Table 4 Present value of wealth transfers received as a percent of net worth, 2007

Category	r = 3.0 %	(Std.err.)	r = 2.0 %	(Std.err.)	r = 4.0 %	(Std.err.)	Period specific rates	(Std.err.)	Wealth related rates	(Std.err.)	Income related rates	(Std.err.)
All households	18.7	(6.5)	15.0	(6.3)	23.8	(6.8)	22.1	(6.7)	29.5	(6.38)	24.9	(6.49)
A. Income level (1998$)												
Under $15,000	42.8	(13.1)	32.6	(12.7)	58.2	(13.7)	52.9	(13.5)	69.3	(12.72)	25.6	(12.39)
$15,000–$24,999	36.6	(14.3)	26.1	(14.3)	53.4	(14.5)	47.5	(14.4)	64.2	(14.41)	25.7	(14.28)
$25,000–$49,999	28.1	(8.1)	22.7	(7.8)	35.6	(8.4)	33.1	(8.3)	42.9	(7.96)	28.8	(8.08)
$50,000–$74,999	16.5	(7.1)	14.1	(6.2)	19.6	(8.2)	18.6	(7.8)	22.9	(6.34)	19.6	(8.18)
$75,000–$99,999	19.4	(1.4)	16.8	(1.2)	22.6	(1.6)	21.6	(1.6)	26.3	(1.87)	26.8	(1.99)
$100,000–$249,999	19.1	(4.6)	15.9	(3.6)	23.3	(5.7)	21.9	(5.3)	28.2	(5.90)	28.9	(7.25)
$250,000 or more	12.5	(2.8)	9.7	(2.0)	16.6	(4.4)	15.2	(3.8)	22.5	(7.37)	22.5	(7.37)
B. Wealth level (1998$)												
Under $25,000	–		–		–		–		–		–	
$25,000–$49,999	31.3	(3.5)	26.8	(2.8)	37.0	(4.4)	35.1	(4.1)	29.2	(3.07)	26.1	(2.38)
$50,000–$99,999	24.2	(2.3)	20.8	(2.0)	28.4	(2.8)	27.1	(2.6)	24.2	(2.32)	21.7	(2.00)
$100,000–$249,999	24.1	(2.7)	19.7	(2.1)	30.2	(3.4)	28.2	(3.2)	29.2	(3.36)	25.7	(3.92)
$250,000–$499,999	18.5	(1.7)	14.9	(1.2)	23.6	(2.5)	21.9	(2.2)	26.0	(2.76)	18.6	(1.62)
$500,000–$999,999	24.0	(2.0)	18.7	(1.5)	31.9	(2.9)	29.2	(2.6)	44.2	(4.41)	23.3	(2.09)
$1,000,000 or over	16.0	(2.2)	12.9	(1.6)	20.4	(1.6)	18.9	(2.9)	26.7	(5.01)	25.6	(4.66)
C. Race												
Non-Hisp. whites	18.9	(7.5)	15.2	(7.3)	24.1	(7.8)	22.3	(7.7)	29.9	(7.40)	25.6	(7.50)
Non-Hisp. blacks	21.0	(5.8)	15.2	(5.3)	30.2	(6.4)	27.0	(6.2)	42.3	(5.54)	16.1	(5.62)
Hispanics[a]	11.6	(5.8)	10.5	(5.7)	13.1	(5.9)	12.6	(5.9)	14.9	(5.68)	10.2	(5.65)
Asian & other	17.6	(20.5)	14.5	(19.3)	21.6	(21.9)	20.3	(21.4)	21.9	(20.48)	25.9	(22.03)

Table 4 (continued)

Category	r = 3.0 %	(Std.err.)	r = 2.0 %	(Std.err.)	r = 4.0 %	(Std.err.)	Period specific rates	(Std.err.)	Wealth related rates	(Std.err.)	Income related rates	(Std.err.)
D. Age class[b]												
Under 35	25.7	(9.7)	23.6	(9.2)	28.1	(10.2)	27.4	(10.0)	28.6	(9.15)	28.3	(9.26)
35–44	18.7	(7.4)	16.5	(7.1)	21.5	(7.9)	20.6	(7.7)	22.6	(7.46)	23.9	(7.94)
45–54	13.6	(7.1)	11.6	(7.0)	16.1	(7.3)	15.3	(7.2)	18.9	(7.11)	18.0	(7.16)
55–64	15.3	(16.9)	12.3	(16.8)	19.5	(16.9)	18.0	(16.9)	24.4	(16.91)	20.3	(16.85)
65–74	20.8	(8.2)	16.7	(6.9)	26.5	(9.8)	24.6	(9.3)	33.7	(7.59)	31.7	(9.77)
75 & over	31.0	(4.3)	21.4	(3.0)	46.0	(6.5)	40.7	(5.8)	62.5	(4.72)	38.5	(2.41)
E. Education[b]												
Less than 12 years	19.1	(9.2)	13.9	(8.5)	27.3	(10.1)	24.4	(9.8)	36.6	(8.47)	16.2	(9.59)
12 years	14.7	(4.6)	12.0	(4.2)	18.5	(5.2)	17.2	(5.0)	19.5	(4.26)	14.5	(4.17)
13–15 years	20.8	(14.7)	17.0	(14.5)	25.8	(14.9)	24.1	(14.9)	28.6	(14.71)	23.7	(14.90)
16 years or more	19.0	(7.3)	15.3	(7.0)	24.3	(7.6)	22.5	(7.5)	31.4	(7.31)	27.7	(7.21)

Note: own computations from the 2007 SCF

The figures show the present value of all transfers as of the survey year which were received up to the time of the survey and accumulated at real interest r as a percent of current net worth

[a] Hispanics can be of any race

[b] Households are classified according to the age and education of the head of household

5 Wealth transfers and wealth inequality

It is first of interest to determine whether the inequality of wealth transfers themselves has changed over time. As shown in Table 5, the Gini coefficient for wealth transfers among all households was incredibly high, 0.96 on average over the seven survey years from 1989 to 2007. Even limiting the sample to recipients lowers the Gini coefficient to only 0.82 on average. This compares to an average Gini coefficient for net worth of 0.83. Similar results are apparent using the coefficient of variation (CV). Overall, there is no clear indication that the inequality of inheritances, gifts, and other wealth transfers among all households or among recipients alone rose or declined between 1989 and 2007.

It is beyond the scope of this paper to fully simulate the effects of eliminating wealth transfers on the size distribution of wealth. Such an exercise would require a full behavioral model of household savings, and, in particular, a fully estimated response function of savings to the receipt of inheritances and other wealth transfers. For such an analysis, we would have to estimate this response function for different income and wealth classes and for different demographic groups. Moreover, a full model would be even more complicated for two reasons. First, household savings would also respond to anticipated inheritances, which would be even harder to measure. Second, in a world without transfers, the savings behavior of those potentially leaving inheritances would be affected as well.

We address the question of the impact of eliminating transfers on the size distribution of wealth in a series of steps. First, we use a decomposition analysis, implicitly assuming that savings do not respond to transfers. Second, we redo the analysis, allowing a range of responses of savings to transfers, but assuming that the elasticity of saving with respect to inheritances does not vary by wealth class. Third, we relax the last-mentioned assumption and redo the analysis once again. In the last section of the paper, we speculate about the course of saving behavior of potential donors and the resulting impact on wealth inequality in the counterfactual case in which all wealth transfers are eliminated.

Table 5 Inequality of net worth and wealth transfers received, 1989–2007

Category	1989	1992	1995	1998	2001	2004	2007	Unweighted average, 1989–2007
I. Gini coefficients								
A. All households	0.959	0.968	0.967	0.959	0.962	0.968	0.961	0.963
B. Recipients only	0.824	0.843	0.844	0.799	0.787	0.840	0.814	0.822
C. Net worth	0.832	0.823	0.828	0.822	0.826	0.829	0.834	0.828
II. Coefficient of variation								
A. All households	13.3	23.4	21.8	22.5	9.9	37.1	11.8	20.0
B. Recipients only	6.0	10.5	9.7	9.4	4.1	11.8	5.2	8.1
C. Net worth	6.6	6.4	7.0	6.6	5.4	6.2	6.2	6.3

Note: own computations from the 1989, 1992, 1995, 1998, 2001, 2004, and 2007 SCF

The figures are based on the present value of all wealth transfers as of the survey year which were received up to the time of the survey and accumulated at a real interest rate of 3.0 %

Turning to our first step, the initial decomposition analysis uses the coefficient of variation to assess the effects of inheritances and other wealth transfers on the inequality of wealth.[12] For any variable $X = X_1 + X_2$,

$$CV^2(X) = p_1^2 CV^2(X_1) + p_2^2 CV^2(X_2) + 2CC(X_1, X_2),$$

where CV is the coefficient of variation (the ratio of the standard deviation to the mean), CC is the coefficient of covariation, defined as $COV(X_1, X_2)/E(X)^2$, $p_1 = E(X_1)/E(X)$, and $p_2 = E(X_2)/E(X)$. In this case, X equals net worth (NW), X_1 equals net worth minus transfers (NWX) and X_2 equals transfers (WT).

Before turning to the decomposition results, it is useful to discuss some implications of this formula. We are starting with an initial wealth distribution (NWX), are adding the distribution of transfers (WT), which is more unequal, and want to know under what conditions the resulting net worth (NW) distribution will be more equal than the initial net worth distribution. In terms of our formula, what are the conditions under which:

$$CV^2(NWX) > p_1^2 CV^2(NWX) + p_2^2 CV^2(WT) + 2CC(X_1, X_2)?$$

Rearranging terms and substituting ($1 - p_1$) for p_2:

$$\left(1 - p_I^2\right) CV^2(NWX) - (1 - p_1)^2 CV^2(WT) > 2CC(X_1, X_2)$$

For the inequality to hold, it is evident, that all else equal, one would want the coefficient of covariation to be low. If this coefficient is negative, the inequality is more likely to hold, but that is neither a necessary nor sufficient condition. Given that inequality is greater among wealth transfers than among initial wealth, the inequality is also more likely to hold if p_1 is large – that is, if E(NWX) is large relative to E(WT).

Additional clarity can be obtained if it is assumed that the covariance term is zero. Rearranging terms once again, one obtains:

$$\frac{\left(1 - p_I^2\right)}{(1 - p_1)^2} > \frac{CV^2(WT)}{CV^2(NWX)}$$

Factoring and canceling yields:

$$\frac{(1 + p_1)}{(1 - p_1)} > \frac{CV^2(WT)}{CV^2(NWX)}$$

Because p_1 is the ratio of E(NWX) to E(NW) and because the distribution of wealth transfers is more unequal than that of initial net worth, both sides of the inequality will be positive and greater than 1. What this inequality expresses is that the higher the ratio of inequality in wealth transfers relative to initial net worth, the higher the weight that will be needed on initial wealth for the inequality to hold.

We first consider results for a capitalization rate of 3 % for the years 1989 to 2007 (Table 6). It is of note that the correlation between wealth transfers (WT) and current wealth holdings excluding transfers (NWX) is negative in all seven years. There is no intuitively appealing explanation for this result, as far as we are aware. We know from Table 3 that there is a strong positive correlation between WT and *current net worth*. We also know from Table 3 that less wealthy households tend to receive greater transfers *relative* to the size of their current wealth holdings than richer ones. However, in levels (that is, in dollar terms),

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[12] Because of the large number of negative and zero net worth values, it is not possible to use a decomposition of the Theil coefficient.

there is a greater decline in the wealth of richer households from the subtraction of WT than of poorer ones. The result that NWX and WT are negatively correlated thus appears to be only an empirical regularity.

The value of the correlation coefficient varies over time, but not in a way that suggests any particular time trend. For 1998, the value is -0.47. For 2001 and 2007, the correlation is quite low in absolute value (-0.11 and -0.17, respectively) but for 2004 it is at its highest point, -0.80. The average correlation over the seven years is -0.50.

In all seven years, the (negative) correlation between WT and NWX serves to reduce overall wealth inequality (the third line in Panels A and B). The distribution of wealth transfers is much more skewed than the distribution of NWX. This is true for all seven years. For 1998, for example, CV(NWX) is 9.1, compared to 22.5 for CV(WT). The average value of CV(NWX) over the seven years was 10.6, compared to an average value of 21.3 for CV(WT).

Empirically, it does turn out that CV(NW) is less than CV(NWX) in all seven years. In 1998, CV(NWX) is 9.1, while CV(NW) is 6.6. Thus, adding wealth transfers to NWX results in a 28 % reduction of wealth inequality. The CV also declines by 28 % in 1989, by 51 % in 1992, and by 46 % in 1995. In 2001, the percentage decline is 15 %, in 2004, 54 %, and, in 2007, 18 %. On average, the CV declines by 40 %. From this standpoint, the net effect of wealth transfers is to equalize the overall distribution of wealth.

It is helpful at this point to provide further explanation for this finding. As noted, in this first exercise, neither the saving behavior of the donors nor of those receiving transfers is affected. Let us consider gifts and inheritances separately. For gifts, while wealth is measured post-transfer, we do not have information on who in the sample provided gifts. Gifts invariably flow from a more wealthy to a less wealthy household, as the vast majority of such transfers are from an older (and likely richer) to a younger (and likely poorer) person – in particular, from parent to child. Such *inter-vivos* transfers may reduce measured wealth inequality.[13]

With inheritances, the key point is that, unlike with gifts, we no longer observe the wealth of the decedent in the sample. In other words, with death, one observation in the sample disappears, while with gifts both observations remain. We saw in Table 3 that though wealth transfers are greater in absolute terms for richer households than for poorer ones, they raise the wealth of poorer households by a *greater percentage* than that of the rich. This effectively raises the share of wealth of the poor more than that of the rich, thus lowering wealth inequality.

In the last five columns of Table 6, we examine the sensitivity of the decomposition results for 2007 to alternative capitalization rates. Higher capitalization rates yield higher values for CV(NWX) and more negative correlations between NWX and WT. This is not surprising since the higher capitalization rates lead to attributing more of current net worth to the wealth transfer component. Thus, subtracting WT from NW lowers the wealth of the wealthy more with a higher capitalization rate than a lower rate and also increases the magnitude of the WT component. With higher capitalization rates, wealth transfers appear even more equalizing (the difference between CV(NW) and CV(NWX) is greater) and the contribution of CC(NWX,WT) to the reduction in inequality is even greater.

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[13]There are two reasons why the redistributional effect of gifts is understated. First, as shown in Wolff [40], it is very likely that *inter-vivos* transfers from older to younger people are much higher than reported in direct survey data. This finding would imply a much higher redistributional effect of gifts on wealth inequality than found here. Second, from the point of view of the donor, we observe the person's wealth *post-transfer,* not *pre-transfer.* The full redistributional effect of the transfer is therefore not captured here.

Table 6 Contribution of inheritances to overall wealth inequality, 1989–2007

Category	r = 3.0 % 1989	r = 3.0 % 1992	r = 3.0 % 1995	r = 3.0 % 1998	r = 3.0 % 2001	r = 3.0 % 2004	r = 3.0 % 2007	r = 3.0 % Unwtd. Ave. r = 3.0 % 1989–2007	r = 2.0 % 2007	r = 4.0 % 2007	Period specific related rates 2007	Wealth related rates 2007	Income related rates 2007
Coefficient of variation													
1) NW	6.6	6.4	7.0	6.6	5.4	6.2	6.2	6.4	6.2	6.2	6.2	6.2	6.2
2) NWX	9.1	13.0	12.8	9.1	6.4	13.4	7.6	10.6	7.1	8.4	8.1	10.1	9.4
3) WT	13.3	23.4	21.8	22.5	9.9	37.1	11.8	21.3	10.5	13.0	12.5	15.5	18.0
A. Decomposition of $CV^2(NW)$													
1) $\bar{p}_1^2 CV^2(NWX)$	45.5	80.5	77.3	54.2	29.1	104.7	37.9	65.2	36.9	41.3	39.9	50.2	49.4
2) $\bar{p}_2^2 CV^2(WT)$	12.0	52.9	46.9	18.9	2.3	76.1	4.9	34.8	2.5	9.6	7.6	20.9	20.0
3) $2CC(NWX,WT)$	−14.2	−92.6	−75.9	−29.9	−1.8	−142.6	−4.6	−59.5	−1.2	−12.7	−9.4	−32.9	−31.3
4) $CV^2(NW)$	43.3	40.8	48.4	43.2	29.6	38.1	38.2	40.6	38.2	38.2	38.2	38.2	38.2
Memo: Correl(NWX,WT)	−0.30	−0.71	−0.63	−0.47	−0.11	−0.80	−0.17	−0.50	−0.06	−0.32	−0.27	−0.51	−0.50
B. Percentage decomposition of $CV^2(NW)$													
1) $\bar{p}_1^2 CV^2(NWX)$	105.1	197.4	159.8	125.4	98.5	274.6	99.2	160.1	96.7	108.1	104.5	131.4	129.5
2) $\bar{p}_2^2 CV^2(WT)$	27.6	129.8	97.1	43.7	7.7	199.6	12.8	84.2	6.5	25.1	20.0	54.6	52.4
3) $2CC(NWX,WT)$	−32.7	−227.2	−156.9	−69.1	−6.2	−374.2	−12.0	−144.4	−3.2	−33.1	−24.5	−86.0	−81.9
4) $CV^2(NW)$	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: own computations from the 1989, 1992, 1995, 1998, 2001, 2004, and 2007 SCF. Key:

CV = Coefficient of variation

CC = Coefficient of covariation

NWX = Total net worth excluding wealth transfers

WT = Wealth transfers

NW = NWX + WT Total net worth

$$\overline{p1} = \frac{\sum_i w_i NW X_i}{\sum_i w_i NW_i}$$

$$\overline{p2} = \frac{\sum_i w_i WT_i}{\sum_i w_i NW_i}$$

where w_i are the weights of each household, indexed by i

However, somewhat counter-intuitively, using wealth-related and income-related rates of return results in an even higher value of CV(NWX). We saw from Table 4 that the ratio of transfers to wealth is flatter across wealth classes when wealth-related returns are used. However, the importance of the wealth transfer component in current net worth is also now much greater for the wealthy than the less wealthy. Thus, subtracting WT from NW to obtain NWX now lowers the wealth of the wealthy much more than that of the less wealthy. Moreover, the magnitude of WT is now greater for the wealthy with these new rates of return. As a consequence, the correlation between NWX and WT is now even more negative. With the wealth-related and income-related rates of return, the difference between CV(NWX) and CV(NW) is now even greater than with the other capitalization rates and the equalizing effect of wealth transfers now appears greater than before. Moreover, the contribution of CC(NWX,WT) to the reduction in inequality is even greater than before.[14]

As noted, the decomposition exercise above assumes that inheritances are fully saved, but, clearly, there may be a response of savings to wealth transfers. It is possible to formulate this response in terms of the change in net worth per dollar of wealth transfer, a parameter we will call γ.

The only paper we could find that directly informs the question of what might be plausible values for γ is Brown et al. [10]. Using the 1998 SCF, they estimated a regression of the ratio of life-cycle wealth (that is, household wealth minus transfer wealth) to income on the ratio of transfer wealth to income. Their coefficient estimate for the ratio of transfer wealth to income is about zero on the basis of transfers received in the five preceding years (1993–1998). However, the coefficient estimate is -0.55 for transfers received in the years 1978–1992 and -0.95 for transfers received before 1978. Thus, they do find a considerable impact of transfers received in the past on other household savings.[15]

We use values of γ ranging from a low of 0.25 (a dollar of wealth transfers displaces 0.75 dollars of savings) to a high of 1.0 (no displacement of savings). The results show that eliminating wealth transfers increases inequality. The effects can be quite large. On the basis of the standard estimate of wealth transfers, the Gini coefficient for 1998 ranges from 0.843 for γ equal to 0.25 to 0.972 for γ equal to 1.00. This compares to the actual Gini coefficient of 0.822. Moreover, the share of the top percentile ranges from 37.8 to 42.1 %, compared to its actual value of 38.1 %, and the share of the bottom 40 % ranges from -1.0 to -8.4%, in comparison to its actual share of 0.2 %. Eliminating wealth transfers appears to hurt the bottom part of the wealth distribution the most. Results for 2007 are very similar.

The last column of Table 7 shows the percentage reduction in net worth resulting from eliminating or reducing wealth transfers. In 1998, eliminating wealth transfers lowers average net worth by 4.1 % for γ equal to 0.25 and reduces it by 16.6 % for γ equal to 1.00. The comparable figures for 2007 are 4.7 and 18.7 %, respectively.

One potential criticism of this simulation is that we have assumed that the parameter γ is invariant across income or wealth class. However, it is well known in the savings literature that savings rates are positively associated with income and with wealth [19]. What if we assume that higher wealth families save a higher percentage of their inheritances and gifts

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[14]When the value of vehicles is included in the definition of wealth, the decomposition results for 2007 are once again almost identical. This is not surprising since vehicles make up only about three percent of net worth.

[15]Interestingly, they find no evidence that *anticipated* wealth transfers reduce household savings. A similar finding is reported by Coe and Webb [11] on the basis of the 1994 to 2004 HRS.

Table 7 The effects of eliminating wealth transfers on the size distribution of wealth, with uniform savings rates by wealth class, 1998 and 2007

Year	Percentage share of wealth or income held by:									Gini	Percentage reduction
	Top 1.0 %	Next 4.0 %	Next 5.0 %	Next 10.0 %	Top 20.0 %	Next 20.0 %	3rd 20.0 %	Bottom 40.0 %	All	Coefficient	in net worth
A. 1998 SCF											
Actual Net Worth, 1998	38.1	21.3	11.5	12.5	83.4	11.9	4.5	0.2	100.0	0.822	
Counter–factual wealth distribution											
$\gamma = 0.25$	37.9	23.0	9.6	19.4	89.9	6.8	4.4	−1.0	100.0	0.843	4.1
$\gamma = 0.50$	37.8	24.0	13.6	15.6	91.0	7.5	4.5	−2.9	100.0	0.877	8.3
$\gamma = 0.75$	41.0	21.8	13.4	16.1	92.3	8.5	4.5	−5.3	100.0	0.920	12.4
$\gamma = 1.00$	42.1	24.1	12.0	16.1	94.2	9.7	4.6	−8.4	100.0	0.972	16.6
B. 2007 SCF											
Actual Net Worth, 2007	34.6	27.3	11.2	12.0	85.0	10.9	4.0	0.2	100.0	0.834	
Counter-factual wealth distribution											
$\gamma = 0.25$	35.1	27.5	11.2	12.0	85.9	10.7	3.8	−0.4	100.0	0.844	4.7
$\gamma = 0.50$	36.5	27.8	11.3	12.2	87.9	10.8	3.7	−2.5	100.0	0.875	9.3
$\gamma = 0.75$	38.3	28.4	11.5	12.6	90.7	11.1	3.7	−5.5	100.0	0.919	14.0
$\gamma = 1.00$	40.1	29.3	11.9	13.0	94.3	11.4	3.7	−9.4	100.0	0.973	18.7

Note: own computations from the 1998 and 2007 SCF. Key:

[a] The results show the distribution of NWX, where

$$NWX = NW - \gamma * INHERT$$

$\gamma = dW/dI$ = change in net worth per dollar of wealth transfer

than do lower wealth families? How would differential savings rates affect overall wealth inequality?

We simulate two different savings rate scenarios to get an answer to this question. First, suppose that the savings rate out of inheritances and other wealth transfers, SAVINH, rises proportionately with wealth with slope c, with a cap of 100 % at some upper limit, b:

$$\text{SAVINH} = c \cdot \text{NW}, \text{NW} >= 0, \text{NW} <= b$$
$$\text{SAVINH} = 0, \text{NW} < 0$$
$$\text{SAVINH} = 1.0, \text{NW} > b.$$

Four different values were selected for b: $1,000,000, $2,000,000, $5,000,000, and $10,000,000, with implied values of parameter c. To interpret the savings function, it is useful to see what the savings rates are at different income levels. In the case of b = $1,000,000, the savings rate is 10 % at NW = $100,000 (about median wealth) and 100 % at NW = $1,000,000 and higher. In the case of b = $5,000,000, the savings rate is 2 % at NW = $100,000 and 100 % at NW = $5,000,000 and higher.

Results are shown in Table 8 for NWX, where:

$$\text{NWX} = \text{NW} - \text{SAVINH} \cdot \text{INHERT}.$$

It is immediately apparent that the steeper the slope coefficient c, the greater reduction in overall net wealth and the higher the resulting level of wealth inequality. Indeed, even with a slope coefficient c of 0.0000001 and a value of b of $10,000,000 there is still an increase of the Gini coefficient from its actual value of 0.834 to 0.866. In fact, it would require a slope coefficient c of zero to completely neutralize the disequalizing effects of eliminating inheritances on overall wealth inequality.

The logic is as follows: If we prohibit all wealth transfers and other savings are unaffected, then there will be a large increase in wealth inequality as shown in Table 7. However, if part of an inheritance is saved and part used for consumption, then eliminating inheritances will reduce a family's wealth only by the part that is saved (since the rest is not accumulated as wealth in any case). The greater the part of inheritances that is saved, then the more wealth is taken away and the greater the reduction in net worth. That is to say, the net worth we observe in, say, 2007, will be smaller the higher is the amount of inheritance that is saved when the inheritance is received.

In particular, if the rich save all their inheritances, then eliminating inheritances will make the wealth of the rich *lower* today. In contrast, if the poor save nothing out of their inheritances, then their wealth would be the same today as in actuality in the *absence* of inheritances. Thus, the more that is taken from the rich relative to the poor, the lower wealth inequality becomes. However, given the very strong *negative* correlation between NWX and WT, it would require very extreme differences in savings rates between the rich and the poor to make eliminating inheritances inequality neutral. Indeed, it appears that the higher are total savings and, consequently, the greater the reduction in net worth, the more unequal is the distribution of net worth, even though the rich save a larger share of their inheritances than the poor.

There are two provisos in order. First, it would be much better to have data on the wealth of each family *at time of receipt* of the wealth transfers. However, we have data only on the current wealth of the family. Second, as noted above, it is quite likely that a family

will change its savings behavior in *anticipation* of an inheritance or other wealth transfer. However, we do not model anticipatory behavior here.

The second savings function is given by

$$\text{SAVINH} = 1 - 1/(NW/50000)^{\alpha}, NW > 50000$$
$$\text{SAVINH} = 0, NW <= 50000$$

where α is a parameter taking on values here of 1.0, 0.75, 0.50, and 0.25 and where we have somewhat arbitrarily introduced a scaling factor of $50,000 for net worth. In this case, the savings rate out of inheritance approaches one asymptotically as net worth increases. Once, again, it is useful to see what the savings rates are at different income levels. In the case of $\alpha = 0.25$, the savings rate is zero up to $50,000, 16 % at NW = $100,000$, and then asymptotically approaches zero as NW approaches infinity

Results are shown in the second panel of Table 8. The pattern is very similar to that of the first panel. The higher the value of α (and thus the greater is total savings out of inheritance), the greater is the percentage reduction of mean wealth and the greater is the level of wealth inequality. The percentage reduction of wealth varies from 16.9 for α equal to 1.0 to 10.5 for α equal to 0.25. Correspondingly, Gini coefficients range from a high of 0.971 for α equal to 1.0 to 0.888 for α equal to 0.25. This range is considerably in excess of the actual Gini coefficient of 0.834. A similar pattern holds for the shares of the top one, five, and twenty percent, as well as the share of the bottom 40 percent. The same two provisos as above apply to this savings function as well.[16]

6 Concluding remarks

We found on the basis of the SCF data (and a three percent capitalization rate) that, on average over the period from 1989 to 2007, 21 % of American households at a given point of time received a wealth transfer and these accounted for 23 % of their net worth. These figures are comparable to previous studies of inheritances in the U.S. However, over the lifetime, about 30 % of households could expect to receive a wealth transfer, the mean value of these transfers would be about $200,000 (in 2007 dollars), and these would account for close to 40 % of their net worth near time of death. Moreover, with higher capitalization rates, a higher share of net worth would be attributable to wealth transfers.

The first major issue considered in the paper is whether inheritances and other wealth transfers have become more important over time. The results indicate that, over the period from 1989 to 2007, the share of households reporting a wealth transfer fell by 2.5 percentage points and this difference is statistically significant at the one percent level. However, the mean value of wealth transfers among recipients climbed over the period, by 23 % (at a three percent capitalization rate), though the difference is not statistically significant. The average value of inheritances received among *all* households did increase but at a slower pace, by 10 % (though, once again, not statistically significant). However, wealth transfers

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[16]As one referee aptly noted, wealth transfers augment permanent or lifetime income. Either the permanent income hypothesis or the life-cycle model would predict that consumption from actual or anticipated transfers would be spread over the lifetime. In addition, the fraction of the transfer that will be consumed would be expected to vary primarily according to lifetime income rather than according to current wealth. While we agree with this comment, data limitations – in particular the lack of information of lifetime or permanent income – prevent us from making this alternative calculation.

Table 8 The effects of eliminating wealth transfers on the size distribution of wealth, with differential savings rates by wealth class, 2007

Year	Percentage share of wealth or income held by:									Gini coefficient	Percentage reduction in net worth
	Top 1.0%	Next 4.0%	Next 5.0%	Next 10.0%	Top 20.0%	Next 20.0%	3rd 20.0%	Bottom 40.0%	All		
Actual Net Worth, 2007	34.6	27.3	11.2	12.0	85.0	10.9	4.0	0.2	100.0	0.834	0.0
I. Counter-factual wealth distribution: linear function[a]											
b = 1,000,000; c = 0.0000010	38.3	28.0	11.4	12.5	90.2	11.5	4.2	−5.8	100.0	0.939	14.8
b = 2,000,000; c = 0.0000005	37.2	27.3	11.2	12.6	88.4	11.6	4.2	−4.2	100.0	0.908	12.5
b = 5,000,000; c = 0.0000002	36.0	26.8	11.4	12.7	86.8	11.6	4.3	−2.7	100.0	0.879	9.3
b = 10,000,000; c = 0.0000001	35.1	27.0	11.5	12.6	86.2	11.6	4.2	−2.0	100.0	0.866	7.2
II. Counter-factual wealth distribution: hyperbolic function[b]											
Alpha = 1.0	39.2	28.8	9.3	15.1	92.4	11.2	3.8	−7.4	100.0	0.971	16.9
Alpha = 0.75	38.9	28.6	11.5	12.7	91.7	11.2	3.8	−6.8	100.0	0.958	16.1
Alpha = 0.50	34.9	31.5	11.5	12.6	90.4	11.2	3.9	−5.5	100.0	0.935	14.4
Alpha = 0.25	36.7	27.5	11.3	12.3	87.8	11.1	4.0	−2.8	100.0	0.888	10.5

Note: own computations from the 2007 SCF

[a] The results show the distribution of NWX, where

$$NWX = NW - SAVINH * INHERT \text{ and } SAVINH = cNW, NW <= b$$

[b] The results show the distribution of NWX, where

$$NWX = NW - SAVINH * INHERT \text{ and } SAVINH = 1 - 1/(NW/50000)^{\alpha}, NW > 50000; SAVINH = 0 \text{ if } NW <= 50000$$

as a proportion of current net worth fell sharply over this period from 29 to 19 % or by 10 percentage points (here, too, not statistically significant).

Thus, despite the fact that the baby boom generation was reaching "prime" inheritance age and the wealth of their parents was the highest in history for that age group, wealth transfers were less important in accounting for current net worth in 2007 than in 1989. There are several possible explanations. First, the period from 2001 to 2007 was a time of very high capital gains and consequently very rapid wealth growth, particularly because of the boom in housing prices and, to a lesser extent, stock prices. Thus, because of our imputation procedure in which we assign a fixed rate of return to wealth transfers in computing their contribution to current net worth, the strength of capital gains over this period makes inheritances less important as a source of wealth accumulation. Second, life spans rose over this period. Since elderly people were living longer, the number of bequests per year declined. Indeed, richer people tend to live longer than poorer ones and the gap in life expectancies may also have risen over time. This trend would also lower the number of large bequests received per year. Third, as people live longer, their medical expenses might rise as they age and, as a result, less money is transferred to children at time of death. Fourth, the share of estates dedicated to charitable contributions might be rising over time.

With regard to the second major issue raised in the Introduction, we found that wealth transfers tend to be equalizing in terms of the distribution of household wealth. Indeed, the addition of wealth transfers to other sources of household wealth had a sizeable effect on reducing the inequality of wealth. While it is true that richer households do receive greater wealth transfers than poorer ones, *as a proportion of their current wealth holdings*, wealth transfers are actually greater for poorer households than richer ones. A related finding is that even though white households receive larger wealth transfers than African-Americans, a higher fraction of the wealth of the latter (about a third) comes from wealth transfers than that of whites (about a fifth). Low income households and the young and old (particularly, households age 75 and over) also receive a higher share of their wealth from transfers relative to other groups.

Our finding that wealth transfers are equalizing requires several qualifications, however. In particular, we have to be clear about the *counterfactuals* that are assumed. Eliminating wealth transfers would affect the behavior of both donors and recipients. Our implicit assumption in the initial decompositions reported above (Table 6) is that, if wealth transfers are eliminated, there would be no effect on the savings behavior of those who have received transfers or are expecting them and that there would be no effect on the savings of those who intend to give a bequest.

As we indicated above, it is beyond the scope of the paper to model all these effects. Inheritances will affect the behavior of their recipients, with some difference in the impact depending on whether or not the inheritance was anticipated. While we do not explicitly talk about anticipated versus unanticipated bequests, our simulation results (Table 7) suggest that the equalizing effect of wealth transfers holds up through a wide range of values of the elasticity of savings with respect to wealth transfers. Moreover, the results hold for a wide range of assumptions about differential proportions of wealth transfers that are saved by the wealth level of the household (Table 8).

Our assumption that eliminating wealth transfers will have a relatively small effect on savings behavior of those intending to leave a bequest would not be that unreasonable if the bequest motive is relatively weak. Consider the following scenario: Suppose that the estate tax became confiscatory. What would happen to the savings behavior of those who intend to leave bequests? There is prior work consistent with the finding of a relatively small effect on saving behavior. For example, Dynan et al. [18] claim "that allowing for uncertainty

resolves the controversy over the importance of life-cycle and bequest saving by showing that these motives for saving are overlapping and cannot generally be distinguished. A dollar saved today simultaneously serves both a precautionary life-cycle function, guarding against future contingencies such as health shocks or other emergencies, and a bequest function because — in the likely event that these contingencies do not absorb the dollar — it will be available to bequeath to children or other worthy causes." In their model, if there was a confiscatory estate and gift tax, savings behavior would change only modestly for all but the very wealthy.

Moreover, in the more recent work of Kopczuk and Lupton [26], it is concluded that three-fourths of the individuals in their sample have a bequest motive. While this, at first, seems to be at odds with Dynan et al., the implications turn out to be similar. Kopczuk and Lupton "find that most of the population has a bequest motive but for a majority, at least, some of the bequests are of an accidental nature. Only at high wealth levels does the difference between having and not having a bequest motive become clearly visible. A tax on small bequests is unlikely to have a large impact on individual decisions, while a tax on large bequests may be distortionary because some of the large bequests appear motivated by bequest considerations."

It may be interesting to consider the counter-factual case of a world without bequests. As noted above, all households except the rich (perhaps, the top one percent or even the top 0.1 %) do *not* appear to have a strong bequest motive. Their main motivation for savings is for retirement or for precautionary reasons. What about the rich – would they accumulate less wealth even there no bequests to potential heirs were allowed (that is, say, a 100 % inheritance tax)?

One possibility is that the rich might spend down their wealth over their lifetime. Of course, if this were the case then the inequality of wealth would be reduced to a (much) greater degree than it would be reduced by wealth transfers themselves.[17] However, there are several reasons why such a response might not be the case. First, as a "Forbes 400" gentleman confided to one of us once, it is very difficult to spend more than a million dollars a year, except for "big ticket" items like yachts, art, jewelry, private airplanes and the like. However, ironically, if the money were spent on yachts and the like, these purchases would enter the balance sheet of the household (they are already included in the category "other assets" in the SCF) and thus not draw down the household's wealth.

Second, even with a confiscatory estate tax, it would very likely still be possible for money to be passed on to children and others through trust funds. Indeed, it would be hard to conceive of any new fiduciary system that completely outlawed trust funds, at least in the United States. This is already likely the most popular vehicle through which wealth is passed on by the very rich (the top 0.1 % or so).

Third, anecdotal evidence for Andrew Carnegie is that he left no inheritances to his children (he thought people should stand on their own two feet). However, he did manage to accumulate a considerable amount of wealth. The reason was to leave it to charity, such as Carnegie Hall, Carnegie Mellon University, etc. So even without a bequest motive, there are other purposes that may explain why the very rich will save and accumulate vast amounts of wealth – charitable contributions, foundations, and, recently, political contributions.

Fourth, social status, respect, and social prestige are associated with high net worth – such as being included in the Forbes 400 list. Large fortunes may enable someone to keep his (her) name going, to achieve immortality. Look at the great foundations of today – the

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[17]This point was made by an anonymous referee.

Ford Foundation, the Sloan Foundation, the Mellon Foundation, the Russell Sage Foundation, and more recently the Gates Foundation. For these purposes, indeed, the very rich may actually prefer to leave their money to a foundation than to leave money to family members, who might dissipate the family fortune (and hence the family name) in a few generations (the so-called Buddenbrooks effect named after the 1901 novel by Thomas Mann). Thus, though this discussion is admittedly speculative in nature, it is not easy to find compelling reasons why our finding that wealth transfers are equalizing will be overturned in the counter-factual case that wealth transfers are disallowed.

As another counter-factual (suggested by one of the referees), suppose that every household gets a transfer equal to 5 % of its lifetime income. As a ratio to pre-transfer wealth this will be higher for people with lower lifetime income, so that the wealth distribution will be equalized, though there is no true equalizing effect for economic welfare - - everyone gets a transfer worth 5 % of lifetime income so that inequality in lifetime income (which includes transfers) does not change. If we then make the transfers rise from, say, 4 % of lifetime income for the poorest to 6 % for the richest, but the gradient in current wealth is steeper than that, there will still be an equalizing effect on current wealth whereas the true impact on inequality, as captured by the effect on lifetime income, is positive.

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