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Introduction

ALICIA H. MUNNELL

Strong economic growth, a stock market boom in the 1990s, and the shift toward defined contribution pension plans means that more and more individuals will have significant wealth upon retirement. How they use that wealth will determine not only their own well-being, but also the living standards of their children, the resources available to philanthropies, and the level of investment capital in the economy. To predict the impact of policy changes on future wealth accumulation, it is important to understand not only the disposition of wealth, but also why people save in the first place. Do they accumulate wealth to support themselves in retirement or do they save to leave a bequest to their children?

This volume explores the reasons why people save, how they decide to allocate their wealth once they retire, and how givers select their beneficiaries. It also assesses the extent to which the estate tax and annuitization of retirement wealth affects the amount and nature of wealth transfers. Finally, it looks at the impact of wealth transfers—first on the amount of aggregate saving and capital accumulation, and then on the distribution of wealth among households. To place the U.S. experience in context, the analysis begins with a historical and an international perspective.

Several important issues appear repeatedly throughout the volume: The first is the motive for saving. The big question is whether bequests result from a deliberate bequest motive or from unpredictable deaths that occur

before consumers without bequest motives consume all of their resources. If people do save to leave bequests, the question is why. They could be motivated by pure altruism, where their transfers reflect a selfless concern for their beneficiaries. Alternatively, bequests could result from a strategic or exchange motive where the giver is trying to influence behavior or get recognition in return. Another alternative is a "warm glow" motive, where people get pleasure from the mere act of giving. Finally, people may hold wealth, and die with wealth, simply because they like it, or perhaps because it brings them prestige and power.

The motive matters. For example, if bequests are accidental, an increase in the estate tax should have no effect on wealth accumulation. If bequests are the result of altruistic or warm glow motives, an increase in the estate tax is likely to reduce total accumulation and transfers. Similarly, the Ricardian Equivalence proposition, which asserts that a tax change has no effect on consumption, saving, or interest rates, requires that consumers have bequest motives that arise from pure altruism toward their children. If bequests are simply the accidental by-product of unpredictable deaths, then the Ricardian equivalence proposition will not hold.

The effort to sort out motives brings up the second issue: money versus people. The question is whether one is trying to explain the motives of most of the population or the motives of those—namely, the very rich—who bequeath most of the money. The bulk of the empirical work comes from household surveys, which generally do not include the very wealthy, so the results may explain what drives the behavior of most households but not the motive for the bulk of bequests.

The third issue is the trade-off between bequests and *inter-vivos* gifts. The literature suggests considerable substitutability between the two options, particularly for the wealthy. Some evidence indicates a movement among wealthy donors towards *inter-vivos* gifts to philanthropic organizations. Thus any analysis of the quantitative impact of transfers on wealth accumulation must consider gifts as well as transfers at death.

The final issue is the decisionmaking unit. In the case of a single person, the analysis is easy. One person is making a decision, and the bequest usually goes to the next generation. But often the decisionmaker is not a single unit, but a married couple consisting of two individuals with different life expectancies and different preferences. In most cases, the husband is likely to die before the wife, which means that the bulk of the estate goes to the wife and then to the children. In other words, while couples do engage in joint decisionmaking, they have different preferences and die at different times and therefore cannot be treated as a single unit with respect to transfer behavior.

As the authors address their specific topics and touch on the issues described above, several conclusions emerge: First, gifts and bequests are important; they may account for about half of total wealth. Second, rich people make most of the wealth transfers. They are thoughtful about how much they pay in taxes and how they dispose of their wealth. They care about philanthropic causes and view their charitable contributions as more than a way to avoid paying estate taxes. But tax minimization and thoughtfulness about disposition do not necessarily imply that they accumulate their wealth *solely to leave a bequest*; they could also simply value wealth per se. Third, most nonrich people probably have some lexicographic preferences about the disposition of their wealth; they want to ensure they have adequate resources to take care of their own needs, and if money is left over, they would like it to go to their children. Fourth, little support has emerged for the pure altruistic model of bequests; people do not offset public sector transfers, and they tend to leave equal bequests to their children rather than compensating those well endowed. Fifth, institutions matter. In the case of the rich, the estate tax probably reduces saving and increases bequests to charity. In the case of the nonrich, the shift to defined contribution plans will at a minimum mean that they have more wealth in their hands when they die, and therefore they will leave larger accidental bequests. It might also increase their interest in leaving an estate for their heirs.

Saving and bequest behavior remains a fertile ground for future research. Major differences of opinion remain on such important issues as the effect of bequests on the distribution of wealth. The shift toward defined contribution plans may have an equalizing effect by increasing bequests from middle-income households, but what about the impact of the bulk of estates? An equally important issue is why people do not buy annuities. These issues need to be resolved as the baby boom generation arrives at retirement with bigger bundles of cash than ever before.

Although questions remain, the following papers provide an exciting summary of existing knowledge, push the debate forward, and link topics in a unique and comprehensive way.

The U.S. Experience in Perspective

Before exploring the reasons for and economic effects of bequests in the United States, two papers put the current U.S. experience in perspective by offering first a historical and then an international view. It turns out that motivations for making wealth transfers change over time, and the workings of bequests are very dependent on the institutions within different countries.

J. Bradford DeLong characterizes today's consensus view of bequests in the United States as follows: Bequests influence, but do not decisively determine, both wealth accumulation and wealth inequality. Bequests are motivated primarily by the desire to improve the lot of one's children—all one's children, although strategic and compensatory bequests are also possible. Bequests as a part of American life are viewed with some suspicion. This consensus view is new, says DeLong; 250 years ago practically every aspect of bequests was different.

Before the Industrial Revolution, the fundamental purpose of bequests was not to make all one's descendants better off or to make children behave appropriately, or to compensate for unequal endowments, but rather to maximize the wealth and power of the eldest male of the lineage for all future generations. The mechanisms to accomplish this goal were known as *primogeniture*, the principle that the eldest son inherited almost everything, and *entail*, the legal requirement that the current wealth holder transmit the principal value of the estate unimpaired to his heirs. Bequests were central to the workings of society and in no way distasteful.

In practically every pre–Industrial Revolution society, bequests played an overwhelming role in wealth accumulation and wealth distribution. Very low rates of economic growth meant that net investment was a minuscule 1.5 to 2.2 percent of annual output. At the same time, DeLong estimates that shorter generations meant that between 16 and 24 percent of annual output—more than ten times the contribution of net investment to wealth—was turned over in bequests each year. These rough calculations suggest that bequests accounted for about 90 percent of wealth acquisition before the Industrial Revolution compared to 45 percent today. With little ability for individuals to accumulate wealth, the system of primogeniture and entail meant that wealth holdings remained extremely concentrated in the hands of a few.

Migration to the New World changed perceptions about the purpose of bequests. The old patterns were not consistent with a land-rich, rapidly growing, frontier economy. The family needed everyone to clear and improve the land, but younger children would have little incentive if they were precluded from enjoying the fruits of their labor. They could always move further west and acquire their own land. Within two or three generations, the principle of primogeniture was replaced with the idea that estates should be divided equally among all the children, or at least among all male children. Moreover, the ability to accumulate wealth through the acquisition of land and one's labor meant that bequests were less important in wealth accumulation and wealth distribution.

The coming of the Industrial Revolution to America produced large increases in the concentration of wealth, which led to questions about the legitimacy of passing huge estates to one's heirs. By the twentieth century, inherited wealth was viewed with some suspicion; even a number of the very rich supported high statutory rates on large estates. Although the estate tax, which began in 1916 in the shadow of World War I, has never raised much money, it serves as a message and an obstacle to large bequests. Today, after a sharp rise in inequality in the 1980s and 1990s, the estate tax is scheduled for repeal. The question is whether the scheduled repeal means that views about inherited wealth, which have been remarkably mutable over the centuries, are changing once again.

DeLong's discussants agree with his overall story about the changing nature and role of bequests. Peter A. Diamond proposes two topics for some further analysis: The first is protection of widows, which has a long history that originally centered on the concept known as *dower*. Dower is the right of the wife to a life estate in one-third of the lands of her husband. Dower persisted in England until 1925, and in the United States, dower was added to and expanded and eventually became the spousal *forced share* that is part of American inheritance law today. The second avenue for further research is the behavior of the nonwealthy. How has the age of the recipient changed over time and how important are bequests as a share of total wealth?

With regard to the wealthy, Diamond offers three comments: First, he does not think that accidental bequests or bequests to improve the well-being of one's descendants can explain why the wealthy leave such large estates. He believes that wealth itself enters the utility function of the wealthy. That is, the wealthy accumulate assets and hold onto them because they get pleasure from their holdings. Second, even though the estate tax has raised limited revenue, it may have curtailed large estates. Recent research suggests that the wealth of the top 2 percent of the wealth holders has grown more slowly than average wealth per capita. The estate tax also encourages contributions to charities, which may be a further inhibiting factor. Finally, Diamond thinks the enthusiasm for repeal may be short lived once the fiscal realities take hold.

Jonathan Skinner, agreeing with Diamond, thinks that the estate tax revenues from the wealthy few may be just too tempting as persistent deficits reemerge. He then turns to DeLong's discussion about the declining importance of agricultural land and primogeniture for wealth accumulation over the last three hundred years. While DeLong gets the essence of the story correct, he may overstate the importance of land in total wealth. It is true that most of the labor force was employed in agriculture, but productivity was so

low that the value of land was minimal compared to the capital used in commerce. Peter Lindert provides data on total wealth from probate, tax, debt, and ownership records for 1670 and 1875.[1] The data fit with DeLong's story in that the share of the capital stock held in land declines significantly over this period, and by 1875 a much larger share of wealth arises from life-cycle accumulation of merchants, entrepreneurs, and professionals. The surprising fact is that even in 1670, about half the capital stock is held by the nonagricultural sector, such as merchants, professionals, industrial and building trades, shopkeepers and laborers, and much of this capital could be viewed as arising from conventional life-cycle saving.

Skinner then discusses DeLong's contribution to the contentious debate about the relative importance of bequests and life-cycle motives in explaining overall wealth accumulation. DeLong's calculations show that the accounting exercises, beginning with Kotlikoff and Summers and continuing with Modigliani and Kotlikoff, tell us little about motives.[2] All those involved in this debate would find a much larger role for bequests in 1670 than today. But that does not mean that people cared more about their children, or that decedents left more accidental bequests. The debate about motives is a nondebate, according to Skinner. Money is fungible, and a dollar set aside at age fifty can be used as a cushion in case of poor health or some other contingency, and if these adverse events do not occur, the dollar can flow to one's children as a bequest. Saving for bequests and precautionary saving are not substitutes, but could well be complements. This combination of motives probably explains wealth accumulation in 1670, as well as in 2002, and will probably explain it in the future.

Pierre Pestieau provides an international perspective on gifts and bequests. The institutional setting surrounding wealth transfers in the United States and Europe differs in two important dimensions: the way transfers are taxed and the freedom to select beneficiaries. The United States levies an estate tax on the total estate of the donor, regardless of the characteristics and number of recipients. Most European countries, with the exception of the United Kingdom, levy an inheritance tax on the share received by the beneficiary, with rates and thresholds dependent on the relationship between the donor and the beneficiary. Estate taxation is generally paired with total freedom to bequeath to anyone, and the right to disinherit with an explicit will. In contrast, inheritance taxation often comes with the obligation to leave wealth to one's children, if any, and with equal sharing of most of the estate.

1. Lindert (1986).
2. Kotlikoff and Summers (1981); Modigliani (1988); Kotlikoff (1988).

The estate tax is easy to administer, and freedom of bequests allows parents to compensate for differences in income or need. The inheritance tax is more equitable in the case of large families, but forced sharing does not allow parents to offset unequal endowments.

In terms of economic effects of wealth transfers, Pestieau reports the following: Studies using the same methodology for European countries and the United States generally conclude that bequests constitute a larger share of total wealth in Europe than in the United States. This finding must be accepted with caution, however, since most estimates for European countries fall within the very broad range of estimates for the United States. Nevertheless, assuming an altruistic motive for giving, larger private transfers would be expected to offset the greater public intergenerational transfers for social security and health care in the European countries. Despite the apparent greater importance of bequests in Europe, wealth is more concentrated in the United States than in Europe.

In both the United States and Europe, *inter-vivos* gifts are much less important than bequests. Gifts appear to be somewhat compensatory in the U.S., but not in France, which is somewhat surprising since in both countries bequests are generally divided equally among children (voluntary in the United States; mandatory in France). Almost no studies allow researchers to identify the most important bequest motives. In terms of the effect of the number of children on bequest size, studies for both the United States and France find a negative relationship between the amount received by a child and the number of siblings. Finally, regardless of the type of wealth transfer tax, the yield is uniformly low—generally less than 0.5 percent of GDP.

Pestieau cautions that most of the conclusions should be viewed as tentative. Even in the United States, where considerable research exists, many questions are still unresolved about the motives for and effects of wealth transfers.

Peter R. Orszag notes that international comparisons play a role in the debate about eliminating the estate tax. Specifically, opponents of the estate tax, citing the high U.S. marginal rate, argue that wealth transfer taxes are much more burdensome in the United States than in other developed countries. Pestieau, however, shows it is impossible to characterize a tax on the basis of one parameter such as the tax rate. For example, because of a lower exemption level, wealth transfer taxes as a percent of GDP are higher in France than in the United States. Moreover, while opponents claim that high wealth transfer taxes reduce national saving, no such pattern is evident across countries.

Although Pestieau finds little evidence for variations in motives across countries, Orszag suggests one reason why accidental bequests might be lower

in Europe. Orszag's sense is that motives are lexicographic in that actual bequests result from some combination of accidental and altruistic motives. That is, people accumulate wealth as a precaution against substantial end-of-life expenses, particularly health care expenses, but also hope that these expenses will not occur and they will be able to leave a significant bequest to their heirs. To the extent that precautionary saving is lower in countries with national health insurance, accidental bequests may also be lower.

In short, bequests in the United States occur in a very different institutional environment than in Europe, and within the United States, the role of bequests and the public's view of bequests have changed significantly over the centuries.

How Do People Make Gifts and Bequests?

This section explores the reasons for wealth transfers and how givers select their beneficiaries. The three papers consider whether bequests are left by accident or on purpose, how people decide between philanthropic organizations and family, and finally, who gets the bequest within the family and the extent to which basic biological criteria—such as gender—play a role.

Michael D. Hurd assesses whether individuals have an important bequest motive or whether bequests arise from precautionary saving and imperfect annuity markets. He presents a simple life-cycle model and assumes that altruism is the motive for bequests, if any bequest motive exists. In his model, consumers get utility from their own consumption, and separately from bequests to children, bequests to relatives, and bequests to institutions.

The life-cycle model makes the strong prediction that the elderly should decumulate their wealth as mortality risk increases; failure to draw down assets would provide evidence of a bequest motive. An altruistic bequest motive implies that elderly people with children should decumulate their wealth at a slower rate than those without children. Hurd reports the results of a number of studies that show the elderly with children decumulating at the same rate as or more rapidly than those without. He interprets these results as evidence against a bequest motive.

Hurd also offers two new pieces of evidence to support his case of no bequest motive. The first is the pattern of homeownership among the elderly. Hurd looks at homeownership rather than housing equity, because equity is subject to reporting error and capital gains. He presents cross-section ownership rates from three waves of the Study of the Asset and Health Dynamics among the Oldest Old (AHEAD). For the population as a whole, homeownership declines by about 2 percent per year between age seventy and eighty-

five. Since this rate of decumulation is very close to that for nonhousing wealth, Hurd concludes that it provides no evidence of a bequest motive.

Hurd next looks at projected wealth decumulation, which he estimates from a household's wealth holdings and survey questions on the subjective probability of leaving a bequest of $10,000 or $100,000 reported in AHEAD. He compares the expected bequest with existing wealth holdings to calculate how much people plan to decumulate before they die. Hurd argues that expected decumulation is a better measure than actual decumulation, because it is not subject to various economic shocks, such as the enormous stock market boom of the 1990s. He then tests whether the projected rate of decumulation is slower for those who should have a greater bequest motive, and finds that decumulation is no higher for those without children than for those with children, and the number of children has no effect on the rate of decumulation.

Hurd's overall conclusion is that people without children appear to behave very much like those with children in terms of the rate at which they draw down assets, including housing. Since Hurd assumes that because those without children must not have an operative bequest motive, elderly people with children must not either.

Andrew B. Abel highlights an important limitation to Hurd's analysis, and then presents some evidence in support of a bequest motive. As Hurd acknowledges, his results apply only to people included in the household surveys of the elderly, and these surveys generally do not include the very wealthy. Because the distribution of wealth is highly concentrated, even if Hurd is correct, the absence of a bequest motive may apply to the bulk of bequests, but not to the bulk of the money transferred.

Abel then looks at annuities and life insurance to see if they shed any more light on bequest motives, since in the absence of a bequest motive people should fully annuitize their wealth. He argues that the fact that annuities are expensive is not sufficient to explain why most people do not purchase them. Overpricing may eliminate demand for those with a bequest motive, but annuities have to be monumentally expensive to do the same for those without a bequest motive. More precisely, the load would have to be large enough so that the price of annuities exceeds the price of bonds; recent studies of annuities imply that this is not the case. Therefore, consumers without a bequest motive should buy annuities. The fact that they do not suggests a widespread bequest motive, unless other reasons exist for not purchasing them. One reason, of course, is the risk of very large medical or nursing home expenses. To the extent that these risks are important, improvements in long-term care and catastrophic health insurance may encourage the pur-

chase of annuities. In any case, Abel argues that his model suggests that a bequest motive does exist.

As further support for the notion that consumers have a bequest motive, Abel turns to data on TIAA-CREF annuities purchased in 2000. Many annuities offered by TIAA-CREF include a "years certain" or "guaranteed payment" option. For example, a single-life annuity with a ten-year guarantee will provide periodic payments for life if the annuitant lives at least ten years; if the annuitant dies before ten years, it will provide his heirs with payments for the remainder of the ten-year period. In 2000, 80 percent of men and 75 percent of women elected an annuity with some form of guarantee. The proportions are even higher if the sample is limited to those with some form of joint annuity, where the fixed payment generally benefits the children. Abel interprets the purchase of annuities with guarantees as evidence of a bequest motive.

Jonathan Gruber also challenges Hurd's conclusion of no bequest motive. First, he notes that Hurd's results on homeownership are virtually identical to those of other researchers. Hurd finds that housing wealth declines at about 2 percent per year and concludes that the rate does not suggest an active bequest motive. In contrast, Steven Venti and David Wise find housing wealth decumulation of 1.76 percent per year after age seventy-five, and conclude that housing equity is not drawn down for consumption.[3] The difference between the two studies rests on the interpretation of the results, and it is impossible to tell whose interpretation is right without a true underlying model of consumption needs in old age.

Second, Gruber challenges Hurd's conclusions from his estimates of projected wealth decumulation. Recent research documents considerable substitutability between gifts and bequests, which suggests that part of the decumulation of those with children may be in the form of gift-giving. The more fundamental question is the hypothesis that the bequest motive is stronger for those with children. It is not obvious to Gruber that among those planning to leave a bequest, that the bequest motive is stronger for households with children, and even less obvious that it is stronger with more children. The effect of children depends on the model; Hurd has assumed altruism as the motive for bequest, but the literature includes other options. For example, the warm glow model, where the donor gets utility simply from providing the bequest, does not imply that more children would lead to larger bequests.

Paul G. Schervish and John J. Havens shift the focus from why people accumulate wealth to how they decide what to do with it. The shift in focus also involves a shift in the population under investigation from the vast

3. Venti and Wise (2000).

majority of the households to the households that control the vast majority of the money. In exploring how people decide to allocate their wealth between charitable institutions and their children, the authors bring a social psychological perspective and extensive in-depth interviews. One set of interviews focused on 130 millionaires in the mid-1980s, another involved forty-four randomly selected people from the Boston area who reported weekly on care and giving over the course of a year from 1995 to 1996, and the third set of interviews was conducted with twenty-eight high-tech entrepreneurs and executives in 2001 about their attitudes to wealth and philanthropy.

From these interviews and other literature, they derive a general theoretical framework for giving: the "identification theory." This theory has two components: The first is that giving to families, friends, and charity is a manifestation of the more general concept of care. Second, identification with the needs of others is the major motivation for giving to both charitable organizations, and to friends, relatives, and to others in need. Identification motivates giving and caring behavior by families and individuals across all levels of wealth and income. The identification theory is more general than the motives for giving—altruism, exchange, or warm glow—generally cited in the economics literature. Motives do not lie along an axis from altruism to self-interest but rather an axis from isolation to engagement.

The second part of their argument is that while identification holds across the economic spectrum, the realms of identification and hence the allocation of gifts differ for those who have redundant resources; that is, those who can provide for their desired standard of living and still have financial resources left over. Such financially secure individuals, who are responsible for the bulk of charitable giving, do not have to trade off consumption expenditures for gifts. They also tend to have control of their time and can create their own opportunities for philanthropy; they are not limited, like the nonwealthy, to supporting predefined institutions and organizations.

Schervish and Havens argue that the very wealthy appear to be shifting gifts away from children and toward charities, and from bequests to *inter vivos* giving. These shifts may in part reflect new techniques used by fundraisers for charitable organizations and by financial planners through the development of innovative giving vehicles. The new techniques involve the wealth holders in a process of discernment to clarify their own financial needs and to identify their philanthropic objectives and priorities for the allocation of their wealth. This self-reflective financial advising could significantly increase the amounts being left to charitable organizations in the future.

James Andreoni argues that the core components of identification theory are similar to the motives described by economists: altruism, exchange, and

warm glow. "Care," in the Schervish-Havens identification theory, is very close to the economists' concept of altruism. People express their care for people or organizations through gifts, and Andreoni likens the joy people get from helping those with whom they identify to the economists' notion of warm glow. But the interviews also make clear that care can be intended to shape and influence others, so the process of giving also has a strategic or exchange motive.

Although the core components of identification theory are similar to current economic concepts, Andreoni asserts that the social psychological approach enriches the economic analysis in three ways: First, the interviews provide a nice analysis of how economic objectives are formed. Second, identification theory makes clear that giving is a dynamic social activity. Third, the dynamic interaction between givers, and heirs and beneficiaries, which emerges from the interviews and the data, means that identification can be manipulated and influenced. To Andreoni, the major innovation emerging from the Schervish-Havens work is the potential to create a new literature on fund-raising. That is, the social psychological literature should encourage economists to think about the lifelong relationships between givers and their beneficiaries, and how preferences are shaped by these relationships.

Charles Clotfelter notes that two other literatures address the division of estates between heirs and charitable organizations. One is the theoretical literature that offers alternative models of behavior for charitable giving:

—Donors care about the provision of public goods;

—Donors care about the well-being of their heirs;

—Donors want to affect the behavior of their beneficiaries;

—Donors get a warm glow from giving.

The second is the empirical literature that assumes preferences as given, and within an assumed model of behavior, tests for the importance of factors such as income, tax rates, wealth, age, and marital status. This literature shows that people respond to the relative costs of alternatives, and they tend to donate more if the price is lower. This literature also yields some other stylized facts:

—Charitable bequests are a small percent of total bequests, except for the very rich;

—Religious groups receive the most in the lowest wealth classes, but their share drops to near zero at higher levels of wealth;

—Decedents who are survived by a spouse tend to leave less to charity;

—Charitable bequests are higher the more affluent the children.

The Schervish-Havens in-depth interviews offer an opportunity to understand the complexity of human decisionmaking. Schervish and Havens

observe a variety of motivations underlying charitable giving and attempt to blend them together under the identification theory. Although Clotfelter finds the notion of blending love of self with love of family and community appealing, he agrees with Andreoni that the authors overdraw the distinction between their model and those that exist in the economics literature. Moreover, Schervish and Havens, like other researchers, face the challenge of showing how the empirical regularities described above emerge from their model of behavior.

Donald Cox shifts the discussion from charity versus family to the distribution of bequests within the family. He summarizes what the existing literature says about the allocation of bequests among family members and then explores the potential role that basic biology might play. The stylized facts that have emerged from research to date are as follows:

—Most bequests are shared equally among the children;

—Unlike bequests, *inter-vivos* giving tends not to be shared equally; they are targeted to children who are liquidity constrained;

—Demographic characteristics of children, such as gender, are often important determinants, even after controlling for income.

While these findings are broadly accepted, they create some puzzles. For example, if altruism is the primary motive for wealth transfers, the pattern of *inter-vivos* giving would be expected to vary strongly with the income of the children—vis-à-vis the parents and each other. The altruistic model also predicts that among parents who make transfers to their children, a $1.00 increase in parents' resources coupled with a $1.00 decrease in children's resources should raise transfers from parents to children by a dollar. However, researchers have been unable to find anything close to a dollar-for-dollar response to an increase in transfers; in fact, the highest estimate for the United States is 15 cents. Of course, an even bigger challenge for the altruistic model is to explain why bequests are distributed equally.

Although much of the empirical work in the United States includes demographic variables, these variables are generally entered as controls and rarely discussed in relation to any theory of behavior. Cox contends that greater consideration of male-female differences could provide useful insights. He suggests that researchers might want to consider at least a biological motive for transfers; that is, parents and grandparents invest in children in order to maximize the likelihood of passing along their genes. Within this framework, he explores three implications of biology for intergenerational transfers: The first is how uncertainty about paternity could affect the incentives of fathers, mothers, and grandparents to invest in children. The second is how differing reproductive prospects of sons versus daughters could

affect parental investment in the two. The third is the extent to which parent-child conflict, which stems from children's strong genetic interest in themselves, might affect transfers. Each of these predictions presents testable hypotheses.

One implication of parental uncertainty is that mothers, who are more certain of the biological link, are more likely to make transfers than fathers. Cox examines this hypothesis by looking at the transfers from grandmothers to their grandchildren. The notion is that maternal grandmothers are more likely to make transfers than paternal grandmothers because they are more certain of the genetic link. The evidence supports this prediction, but the pattern is also consistent with a variety of commonsense explanations as well. For example, the mother of young children might feel more comfortable turning to her own mother for support than to her mother-in-law.

In terms of investing in children, Cox starts with the Trivers-Willard hypothesis. This model from biology predicts that parents differentially invest in boys versus girls depending on which sex has the most favorable reproductive prospects. Cox argues that investment in education is one way, albeit less extreme, to apply the Trivers-Willard model. The hypothesis is that parents will vary how much they invest in children of each sex depending on how successful they expect them to be in the world. Cox finds that poor people are more likely to educate daughters, while rich people are more likely to educate sons. He attributes this finding to the expectation that daughters have a better chance of marrying up to escape poverty than sons who lack the resources to marry at all. Conversely, investments in sons from rich families will only enhance their chances to "go forth and multiply." Once again, the results are also consistent with alternative nonbiological explanations, such as the differential returns to schooling reported in the human capital literature.

Finally, parent-child conflict in families stems from the fact that children have a stronger genetic interest in themselves than in their parents or siblings. This self-interest creates the possibility for conflict and the potential for people to make transfers, not for reasons of altruism or exchange, but simply to avoid nasty interactions. Cox presents some evidence from the 2000 wave of the Health and Retirement Study (HRS) that suggests that conflict, or the avoidance of conflict, may play a role in transfers between generations.

Kathleen McGarry doubts whether a biological motive plays a significant role in transfer decisions, but applauds Cox for offering a theory with testable implications. With regard to parental uncertainty, she suggests that the same prediction about maternal grandmothers could be extended to grandfathers;

that is, maternal grandfathers should provide more support than paternal grandfathers. In fact, it should be possible to establish a ranking of probabilities of transfers: maternal grandmother first, then either maternal grandfather or paternal grandmother, and finally paternal grandfather (who does not know for certain that his wife's son is his child, nor that the grandchild belongs to his son). This ranking is testable for transfers of time.

In terms of money transfers, the ranking suggests that the maternal side should unambiguously make greater transfers. Cox's data, however, show that while couples lower in the income distribution receive more from the wife's parents, those higher up receive more from the husband's parents. Cox suggests this twist reflects less confidence in paternity for poor people than for rich people. But McGarry offers another explanation. To the extent that the recipient couple's income is largely determined by the husband, it is probably more highly correlated with the income of the husband's parents than with that of the wife's. Since high-income husbands are likely to have high-income parents who can afford generous transfers, and low-income husbands are likely to have low-income parents who do not make generous transfers, it is not surprising that the husband's parents dominate at the high end and the wife's parents dominate at the low end.

Another area where the biological model provides testable predictions, which Cox does not address, is transfers to stepchildren and adopted children. If the biological model dominates, these children should not receive any transfers at all. The one study that explores the issue finds that adopted and biological children are treated equally.[4] Some survey evidence on stepchildren suggests a preference for biological children, not necessarily because of genetics, but because stepchildren have another parent from whom they will get transfers and the donor is trying "to be fair."

The biological model also makes it difficult to understand the prevalence of bequests over *inter-vivos* giving. The notion would be to make transfers early so that the assistance influences the quantity and quality of one's children. Similarly, bequests are overwhelmingly divided equally across children, with no preference for those with more children or a particular gender. Despite these puzzles and others, McGarry concludes that the notion of a biological motive merits further investigation.

Theodore Bergstrom also finds intriguing, if not fully convincing, the notion that biological differences between the sexes are likely to result in predictable differences in economic relations among family members. He too

4. Judge and Hrdy (1992).

applauds the fact that Cox's hypothesis provides testable implications. With regard to paternity uncertainty, Bergstrom is interested in the incidence of children conceived outside of marriage. Cox notes one study that says between 5 and 30 percent of American and British children have been adulterously conceived, but notes that even these imprecise estimates are poorly documented. How much is going on, and where it is going on, has implications for some of the data reported by Cox.

Bergstrom finds the Cox data showing bias toward the maternal line interesting regardless of the reason, and suggests some further avenues of exploration. For example, divorce might offer an explanation. Grandmothers are more likely to have dealings with grandchildren that live with their own child than with their child's former spouse. If mothers generally gain custody, this would explain some of the bias toward maternal rather than paternal grandchildren. Age of the grandparents and distance from the grandchildren would also be useful to consider.

With regard to investments in sons versus daughters, Bergstrom does not find Cox's application of the Trivers-Willard model persuasive, but can offer no other explanation. Finally, on the issue of conflict, Bergstrom agrees that conflict is important and rejects the argument put forth by Gary Becker that even totally selfish children can be forced to act in the reproductive interests of their parents. Bergstrom concludes by adding one source of disparate treatment of children not mentioned by Cox—namely, in-laws. Hamilton's kin selection theory says that a wife values her sibling's children half as much as her own, while her husband will have no genetic stake in them whatsoever. This means that the genetically related spouse will have much more interest in supporting nieces and nephews than the spouse without the genetic link.

Impact of Taxes and Pension Benefits on Gifts and Bequests

These papers shift the discussion from the inner workings of the household—their decisions about saving and about the disposition of their wealth—to external factors that affect bequests such as taxes and benefits.

Wojciech Kopczuk and Joel Slemrod explore the impact of the estate tax on wealth accumulation and transfers. They note from the outset that their analysis applies only to the rich since no more than 6 percent of decedents in any year have ever paid the estate tax and currently that number is limited to the top 2 percent. The most important features of the 2001 estate tax are:

—Current law imposes an integrated set of taxes on estates, gifts, and generation-skipping trusts;

—Bequests to spouses and to charitable institutions are tax free;

—A credit provides the equivalent of an exemption for the first $675,000 of transfers;

—The tax rate on transfers over $675,000 is 37 percent and rises to 55 percent on taxable transfers above $3 million;

—A surtax of 5 percent applies to taxable estates between $10 million and $17 million.

The Economic Growth and Tax Relief Reconciliation Act of 2001 includes major changes to the estate tax, and suffice it to say that the future of the estate tax is uncertain.

Given recent legislative interest in the estate tax, a series of studies has tried to assess its effects on wealth accumulation and giving. These studies suggest that the estate tax reduces the accumulation of estates by as much as 10.5 percent and increases charitable contributions by as much as 12 percent. Moreover, even though the tax provides substantial reasons to favor *inter-vivos* gifts over bequests, most wealth transfers occur through bequests. Kopczuk and Slemrod add to the existing literature in three ways: First, they explore the relationship over time between reported estates of the top one half of one percent of decedents as a share of total wealth and the estate tax rate. Reported estates are clearly negatively related to the estate tax rate, which is consistent with earlier studies that suggest the estate tax reduces accumulations. The key question, of course, is whether wealthy individuals are actually saving less in response to the estate tax or simply making their reported estate smaller through some form of avoidance. Nevertheless, the results are suggestive.

Second, Kopczuk and Slemrod estimate time-series equations to explain the effect of the estate tax on charitable contributions. Because charitable contributions are deductible from the taxable estate, the estate tax lowers their price relative to noncharitable bequests; the price effect would be expected to increase charitable bequests. At the same time, the estate tax reduces the total wealth available for bequests; this would be expected to reduce all bequests, including bequests to charity. The ratio of charitable contributions to gross estate has drifted up over time. If this drift can be attributed to increasing wealth, then the regressions indicate that the estate tax rates have a significant positive effect on charitable giving. Moreover, given the progressivity of the rate structure, for most reforms the price effect will change proportionately more than the so-called net-of-tax wealth effect, implying that a tax decrease will reduce charitable contributions. The overall results of the Kopczuk-Slemrod analysis is that the tax has increased charitable contributions, and the effect could be larger than the 12 percent found in recent studies.

Third, Kopczuk and Slemrod analyze a model of the optimal distribution of bequests between spouses and the role of QTIP trusts. This is an important contribution, because it recognizes that the decisionmaker is not a single unit, but typically a married couple consisting of two individuals with the husband likely to die before the wife. In their model, a husband facing death gets utility from his widow's consumption after he dies, and the value he places on nonspousal bequests made by him or his widow. Solving this model subject to a budget constraint, and assuming that the husband and wife have similar tastes, indicates that the two estates should be set so that the husband's and wife's marginal tax rates are equal. This result changes to the extent that the husband and wife disagree about the wife's consumption as a widow; the husband and wife place different values on giving to children; the couple places a significant option value on retaining resources for the surviving spouse; or they expect very large capital gains between the death of the first spouse and the second. The availability of QTIP trusts is also important in that these trusts allow the husband to leave resources to his wife and still control the ultimate destination of the bequest.

The authors check their predictions against the data and find that husbands leave significantly more to their wives than tax minimization would suggest. This is puzzling, especially since the large transfers often do not benefit the wife in that they are placed in a QTIP trust that restricts the wife's control. The inefficiency of the large spousal transfers seems at odds with the apparent responsiveness of charitable contributions to the price considerations embedded in the estate tax. In short, the estate tax appears to be an important determinant of bequests, but more work is needed to understand intrafamily dynamics.

Ray D. Madoff addresses some of these questions: She agrees with Kopczuk and Slemrod that the technical division of assets is responsive to tax considerations, but cautions that the technical division may provide little information about the transfers of resources between husband and wife. Credit shelter trusts allow decedents to take advantage of the unified credit yet offer enormous discretion about how much benefit is given to the surviving spouse. Similar flexibility is available with respect to transfers qualifying for the marital deduction. In other words, the husband can take full advantage of the unified credit and the spousal deduction without being subject to significant limitations on his dispositive plan. Very little trade-off is required between resource allocation and tax minimization.

In contrast, Madoff notes that tax equalization involves real costs to taxpayers. Tax equalization, which is accomplished by paying some taxes on the death of the first spouse, requires diminishing the resources available to the

surviving spouse by the amount of the tax. Without equalization, the couple's combined tax liability will be higher, but the burden of the reduced resources will fall on the children. One great advantage of the QTIP trust, not mentioned by Kopczuk and Slemrod, is that it allows couples to defer the difficult decision about when to pay taxes until nine months after the death of the first spouse. At that time, the surviving spouse may herself be in poor health and indifferent to reduced resources; in which case assets can be subjected to taxes in the first spouse's estate. Alternatively, she may feel that she needs the resources, and the resources can be transferred undiminshed by payment of estate taxes. This reluctance on the part of couples to reduce the resources available to the surviving spouse is consonant with people's reluctance to make taxable gifts even though the effective tax rate on gifts is significantly lower than on transfers at death.

James Poterba offers some thoughts on identifying motives for establishing QTIP trusts. He suggests that distinguishing between couples who have been married only once, and those where at least one partner has been married before, should provide some insights. In the latter case, a QTIP provides an obvious mechanism for the first to die to ensure that part of the estate goes to his or her natural children. Another possible motive for a QTIP is the desire to transfer management of assets to experienced trustees rather than leaving it in the hands of a less financially sophisticated spouse. Finally, it would be useful to know the extent to which QTIPs actually constrain the consumption of spouses below their desired level or alter the pattern of desired bequests.

With regard to other parts of the Kopczuk-Slemrod paper, Poterba emphasizes that the ability of the wealthy to reduce their reported estates seriously complicates efforts to estimate the impact of the estate tax on wealth accumulation. For example, recent research shows that when the unitary credit increases, people affected by the change appear to reduce their *inter-vivos* giving.[5] Various estate planning strategies can also reduce the size of the estate. Since these strategies always involve some loss in control, they are more likely to be adopted when rates are higher and the tax savings greater.

With regard to charitable giving, Poterba emphasizes the fragility of the Kopczuk-Slemrod results in that the significance of the estate tax rate disappears when the equations include a time trend. The difficulty with any type of time-series analysis is that tax rates do not vary much over time, and removing trend variation makes it difficult to identify behavioral effects. Nevertheless, Poterba shares the belief that lower marginal estate tax rates will lead to lower charitable contributions.

5. Bernheim, Lemke, and Scholz (2001).

That the estate tax affects wealth transfers is not surprising in that it changes the resources available for gifts and bequests and the price of allocating resources one way or another. However, Alicia H. Munnell, Annika Sundén, Mauricio Soto, and Catherine Taylor argue that the estate tax is not the only part of the U.S. financial infrastructure that influences bequests; the changing nature of the private pension system is also likely to have an important effect. They contend that the dramatic shift from defined benefit to defined contribution plans will increase bequests as retirees receive more of their pension benefits as lump sums rather than annuity payments.

Munnell and others contend that the shift to lump-sum distributions will affect bequests in two ways: First, unintended bequests will rise because people are reluctant to spend accumulated wealth. This reluctance is evident in the small size of the U.S. annuity market, the aversion of older homeowners to reverse annuity mortgages, the holdings of life insurance by retirees, and the limited dissaving in retirement. In the past, any reluctance to turn assets into income streams was mitigated by the fact that most retirement wealth, such as Social Security and private pensions, came in the form of annuity payments. But this countervailing force has diminished as more and more private sector pension plans provide lump-sum benefits. As a result, people will die with more assets than they would if they received their pensions as annuities, and greater assets in the hands of decedents will produce greater bequests. The second way in which a rise in lump-sum payments will increase bequests is by increasing intended bequests. The authors argue that people's interest in bequests increases when they gain access to accumulated assets. Accumulating wealth out of current income to leave a bequest is too difficult, but if people receive a pile of wealth, leaving a bequest becomes a plausible option. Thus Munnell and others contend that both intended and unintended bequests are likely to increase.

The increase in bequests due to the increase in lump-sum payments is potentially large. Using data from the Survey of Consumer Finances (SCF), the authors estimate that by 2004, assets in the hands of decedents each year will be roughly 6 percent higher ($28 billion in 2004) than otherwise because of the projected shift to defined contribution plans between 1992 and 2004. Roughly half this amount is transferred across generations, and since the increase in wealth is far more important for lower and middle quintiles of the wealth distribution, the increase in bequests should reduce wealth inequality.

The authors present a series of regressions to show that the composition of pension wealth affects people's subjective probability of leaving a bequest as reported in the Survey of Consumer Finances and the HRS. The first relates plans to leave a bequest to the ratio of defined contribution and IRA wealth

as a share of total pension and Social Security wealth. As hypothesized, bequeathable pension wealth as a share of total pension wealth has a positive and large effect on the probability of leaving a bequest. The second set of equations relates the same variables to the probability of leaving a bequest of $10,000 or more and the probability of leaving a bequest of $100,000 or more as reported in the HRS. Again, bequeathable pension wealth as a share of total pension wealth has a significant positive effect on the probability of leaving a bequest.

The remaining question is whether the increase in bequests will be financed by lower consumption in retirement or greater saving during the work life. To address this question, Munnell and others estimate saving and wealth equations including various forms of defined benefit, defined contribution, and Social Security wealth. The results suggest that workers react very differently to their defined contribution accumulations than they do to the present value of annuity pensions. They do not reduce their other saving in anticipation of payments from defined contribution plans as they do in response to promised Social Security and defined benefit pension payments. Thus it appears that households will finance their increased bequests by more saving during their work life.

The authors recognize that it may seem strange to worry simultaneously about people cashing out their defined contribution accumulations when they change jobs during their work lives, and to worry about people's reluctance to spend defined contribution accumulations in retirement. They argue that different worries may be appropriate for different types of people. Those who make it to retirement with large accumulations are likely to be the savers, while those with a propensity to cash out during their working years are likely to be the spenders. In any event, they conclude that an increasing number of people will receive lump-sum payments from their pension plans, and this change will increase bequests and have important implications for both this generation and the next.

Amy Finkelstein agrees that the increase in lump-sum payments will increase bequests but raises four concerns about the analysis: First, she notes that it matters whether the increase in bequests is intended or unintended. If bequests increase simply because households are reluctant to annuitize their accumulations due to the high load factors in the annuity market, this increase represents a welfare loss. On the other hand, if intended bequests rise because the utility of bequests increases with more bequeathable wealth, the increase in bequests would be welfare neutral. If unintended bequests increase because the increase in defined contribution plans reduces excess annuitization, the outcome would represent a welfare gain.

Given that the welfare outcomes hinge on the motive for the bequest, it would be useful to know how much of the projected increase is intended versus unintended. Finkelstein argues that neither of the authors' empirical exercises produces such a breakdown. First, not all the increase of wealth in the hands of decedents should be characterized as a potential increase in unintended bequests. Second, the equations explaining expectations of leaving a bequest should not be characterized as explaining intended bequests. Households may recognize that they will hold more assets as precautionary saving in response to the decreased annuitization and understand that their bequests will increase even if they do not intend them to. Thus while the exercises shed light on the effect of bequeathable wealth on bequests, they cannot be interpreted as evidence of an effect on intended bequests.

Finkelstein's third concern is whether the relationships observed in the 1990s will be stable over time. Specifically, the shift to defined contribution plans may have effects other than those that work through the decline in annuitization. The shift occurred during a period of rapid run-up in the stock market, and the large gains might have increased interest in bequests if households engage in any form of intergenerational risk sharing. If so, the desire to leave a bequest might be lower if markets did not perform as well.

Finally, Finkelstein raises the inevitable question of how much of the relationship between pension wealth, on the one hand, and saving and nonpension wealth, on the other, is spurious. That is, defined contribution plans are voluntary and allow workers to decide how much to contribute; individuals with a taste for saving may be more likely to participate and contribute higher amounts to their defined contribution plans. Similarly, individuals with a taste for a saving are more likely to save more and accumulate greater nonpension assets. Therefore, unless the equation controls adequately for a taste for saving, the regression will show a positive relationship between defined contribution wealth and saving and nonpension wealth even if one does not determine the other. The authors recognize the potential bias and attempt to address it through instrumental variables, but Finkelstein is not convinced that they have solved the problem.

Olivia S. Mitchell cites another version of the same type of problem. She notes that workers covered by any type of pension tend to be more risk-averse, more productive, and have longer planning horizons than average. This means that the variable representing bequeathable pension wealth as a share of total pension wealth may be reflecting these characteristics, and these characteristics rather than more lump-sum payments leads to the increase in expected bequests. While Munnell and others try to address this issue by including a pension coverage variable, it may not reflect all the differences

between covered and noncovered workers. For example, pension-covered workers are more likely to have health insurance, and if bequeathable pension wealth as a share of total pension wealth is related to health insurance, and the presence of health insurance allows people to think they will leave a larger bequest, the coefficient of the share variable will overstate its effect on expected bequests.

Mitchell also believes that households are too optimistic in survey responses about how much they will ultimately leave as a bequest. The average household has only $60,000 in nonfinancial assets and an equal amount in housing. The household nearing retirement may have to use a significant portion of these resources to support itself. Therefore, Mitchell is skeptical of the HRS responses indicating 41 percent of households expect to leave a bequest in excess of $100,000. It would be fruitful to compare households' expectations of bequests with bequest realizations.

Taking the findings of Munnell and others at face value, Mitchell notes they have potentially important policy implications. The analysis indicates that wealth in a defined contribution plan is more likely to be saved than spent. As employers move to automatic enrollment in defined contribution plans, inertia may get workers to save more during their work lives. Munnell and others suggest that households will continue to hold these funds in retirement, increasing long-term saving and wealth. The implication is that building a defined contribution component into Social Security might do the same.

Impact of Gifts and Bequests on the Economy

The final section shifts from examining the impact of economic institutions on bequests to exploring the impact of bequests on the economy. It starts with a discussion about how much bequests contribute to aggregate wealth and then turns to their effect on the distribution of that wealth among households.

William Gale and Samara Potter discuss empirical estimates of life-cycle wealth and transfer wealth and then question the usefulness of the accounting exercise even if it provides precise answers. They begin with the classic paper by Kotlikoff and Summers in which the authors establish a simple accounting framework that attributes any excess of lifetime earnings over consumption to life-cycle wealth and any excess of inheritances over bequests to transfer wealth.[6] Using data on average earnings and consumption by age across different cohorts, they conclude that life-cycle saving is at most 20 percent. This means that 80 percent of wealth comes from gifts and bequests.

6. Kotlikoff and Summers (1981).

Modigliani sharply criticizes their methodology and conclusions.[7] He argues that parents' payments for college should not be counted as transfer wealth, that interest accrued on previous transfers should be attributed to life-cycle, not transfer wealth, and that they did not accurately measure the consumption of durable goods. Making these corrections, Modigliani concludes that 80 percent of aggregate wealth can be explained by life-cycle wealth. Subsequent estimates by other researchers of life-cycle wealth also show enormous variation in magnitude.

Gale and Potter then explore other methods of estimating transfer wealth. One alternative is to ask people how much of their wealth was inherited. Studies looking at these survey data generally conclude that transfer wealth accounts for no more than 20 percent of the total. Gale and Potter note that this approach is plagued with difficulties. First, these surveys focus only on wealth received through inheritance and ignore *inter-vivos* gifts. Second, transfers received are generally significantly underreported, for example, as compared to transfers given. Third, it is not clear how respondents define the size of transfers received; that is, do they adjust these transfers to reflect subsequent earnings on the inherited amounts? William G. Gale and John Karl Scholz, using the 1983 and 1986 SCF, estimate that *inter-vivos* gifts account for 20 percent of net wealth and intergenerational bequests for 30 percent.[8] More recent estimates from the 1998 SCF produce a lower number. Gale and Potter conclude that trying to divide aggregate wealth between life-cycle saving and transfers yields a wide range of estimates.

They next ask what we would learn if we could calculate precisely the true values of these wealth components. Their answer is not much. First, the Kotlikoff-Summers accounting definitions do not provide economically meaningful information. For example, their definitions assume that all transfers received are either saved or paid out as transfers but not consumed, and that all earnings are either saved or consumed but not transferred. This assumption is at odds with the life-cycle model, according to which some transfers received might be consumed or result in changes in labor supply, and some wages might be used to provide transfers. Thus life-cycle wealth as defined by Kotlikoff and Summers does not necessarily correspond to what the life-cycle model would predict.

Second, knowing the precise magnitude of transfer wealth provides no information about the motives for the gift or bequest, because even if the transfer component is large, it could arise entirely from accidental bequests

7. Modigliani (1988).
8. Gale and Scholz (1994).

within the life-cycle framework. Gale and Potter believe that the patterns of *inter-vivos* giving, estate planning, annuity choices, and other evidence suggest that not all bequests are accidental, but they acknowledge that researchers have had substantial difficulty validating the specific implications that arise from alternative bequest motives. The important point is that all values of transfer wealth are consistent with either accidental or intended bequests and with any motive for intended bequest.

Understanding motives for transfers is critical because the response to government policy depends crucially on the reason for the bequest. For example, if bequests are accidental or because people get utility from holding wealth, changes in the estate tax will have no effect on saving. On the other hand, if transfers arise from altruism, an increase in the estate tax would likely reduce saving for bequests. The difficulty is that precise estimates of the amount of transfers say nothing about the motive, and without understanding the motive, it is impossible to predict responses to policy changes. Thus while transfers are probably a significant portion of wealth and merit attention and research, simply trying to get better estimates of the share of transfer and life-cycle wealth will not resolve the key issues about the motivation for saving and transfers and the effect of government policy on transfers and wealth.

Peter A. Diamond agrees with Gale and Potter that the accounting issue does not shed any light on interesting economic questions, but acknowledges that the Kotlikoff-Summers paper stimulated a lot of useful work. He reiterates the Gale-Potter point that motives are key to determining the impact of policy on saving. For example, if some people simply like to hold wealth—Diamond's preferred motive for the very wealthy—and therefore die with it, an increase in estate taxes will have no effect on their saving, although it will affect recipients.

Diamond also argues that the distinction between intended and accidental bequests used by the authors and others is not helpful. If an individual derives utility from both consumption and bequests, then the ultimate size of the bequest depends upon when he dies. It is not correct to characterize the excess of actual over intended bequests as accidental, because the entire bequest was intended in a probabilistic sense. So the question is how the distribution of possible bequests responds to changes in the economic environment.

This leads to the point that some annuitization is not inconsistent with a bequest motive. For example, annuitizing an amount equal to planned consumption sets the amount of the bequest with certainty, assuming no unforeseen contingencies. Conversely, annuitization is not a sign of an absence of bequest motive. This can be seen in the selection of an annuity that guarantees payment for a fixed number of years, a very popular option, that

increases the price of the annuity and again makes the bequest probabilistic, depending on the time of death. While the popularity of the "years-certain" option is difficult to explain in the context of a standard utility-maximizing framework, it highlights the need for exploring a number of ways to model the decision concerning consumption, savings, and bequests. This kind of modeling, rather than accounting exercises, is the way to shed light on the role of transfers in aggregate wealth accumulation.

Laurence J. Kotlikoff, one of the authors of the original paper, agrees that the accounting exercise does not answer questions about motive or effect of government policy, but that was never the point of the original Kotlikoff-Summers article. The authors were just trying to figure out whether intergenerational transfers were important enough to merit further consideration. The paper concludes that transfers are the major source of wealth, and the results appear to have stimulated a great deal of important research.

Kotlikoff argues that we have learned a lot about the determinants for intergenerational transfers in the last twenty years. Researchers have found little empirical support for the Ricardo-Phelps-Barro model of intergenerational altruism. The old do not increase their bequests in response to government transfers financed by their children. Similarly, family members do not engage in much risk-sharing, which is an automatic implication of intergenerational altruism. Finally, parents generally ignore differences in the economic resources of their children and leave them equal amounts. *Inter-vivos* gifts are made primarily by middle-class families in the form of college support, and by the superrich in the form of business interests. This may be altruism, but to Kotlikoff, it seems more like the parental interest in transferring a particular item.

Kotlikoff believes that bequests are driven primarily by imperfect annuitization, and reports recent simulation results that support this hypothesis. In the simulation, parents have no interest in bequests, but any money left over at the end of life because of incomplete annuitization goes first to the surviving spouse, and when the last spouse dies, to the children in equal shares. The model generates realistic results for the flow of bequests relative to GDP, the distribution of wealth, and the share of wealth held by the top 1 percent of households.

Although the issue of motive remains unresolved, Gale and Potter and their discussants agree that intergenerational transfers constitute a significant share of total wealth. The next question is how those transfers affect the distribution of aggregate wealth. On his way to answering that question, Edward N. Wolff notes the following: First, wealth in the United States is extremely concentrated, with the top 1 percent of richest households holding

about 40 percent of net worth. Second, the concentration increased noticeably during the 1980s and continued to rise, albeit at a much slower rate, in the 1990s. Third, financial net worth, which excludes housing, is even more concentrated. Fourth, median net worth increased little between 1989 and 1998. Finally, snapshot comparisons where comparable data exist show that wealth holdings in the United States are also more concentrated than in France, Germany, Canada, and Japan.

Wolff then turns to the SCF to assess the role of bequests and *inter-vivos* gifts on the distribution of wealth. The first step is to calculate the value of wealth transfers received in the past. Wolff assumes that past inheritances grow by an average real rate of 3 percent, a number he views as a compromise between allocating all the returns to lifetime earnings and attributing all the returns to the transfer. The next step is to estimate lifetime earnings, and then calculate transfers as a percent of earnings by quintile. The results show that transfers are significantly larger for those with low lifetime earnings than for those with higher earnings. This suggests that transfers reduce inequality. Since simulating the effect of eliminating wealth transfers on lifetime resources would require a full behavioral model of household savings, Wolff uses a decomposition analysis to get at the question. This analysis shows that the correlation between wealth transfers and current wealth holdings excluding transfers is negative, which means that households with lower wealth holdings exclusive of transfers receive higher transfers. At the same time, the distribution of wealth transfers is much more skewed toward the wealthy than net worth excluding transfers. The magnitude of the transfer effect, however, dominates that of the skewness, so the net impact of transfers has been to reduce wealth inequality.

John Karl Scholz challenges the conclusion that transfers equalize the distribution of wealth. The key question is what would the world look like in the absence of the transfers. Wolff's calculations imply that a low-income person who has $10,000 of net worth and a transfer received ten years ago with a current value of $9,000 would be expected to have $1,000 in the absence of the transfer. Similarly, a high-income person with $100,000 of net worth and a transfer received ten years ago of $50,000 in today's terms would be expected to have $50,000 in the absence of the transfer. Thus the ratio of high-income to low-income net worth falls from fifty to one in the absence of transfers to ten to one with transfers. The problem is that this exercise assumes both the low- and high-income recipients save all of their inheritances. In fact, low-income recipients are likely to consume a large part of any inheritance and would experience little increase in net worth. Thus eliminating inheritances would have no adverse impact on the wealth of the low

income, but would reduce the wealth of the high income by $50,000 and therefore, Scholz argues, would have an equalizing impact on the distribution of wealth.

Scholz raises two other issues: First, he questions Wolff's adjustments to align the SCF with the Federal Reserve's Flow of Funds. The Flow of Funds household sector is calculated as a residual and therefore is not an obvious benchmark; even if it were, it is not clear that a proportional increase, which assumes uniform underreporting, is the right adjustment. Second, Scholz thinks Wolff provides a misleading characterization of the economic changes during the 1990s. Median net worth may have increased by only 1.6 percent per year from 1989 to 1998, but using this figure ignores the fact that households move through the wealth and income distribution as they age. Median net worth for thirty-five- to forty-four-year olds in 1989 increased at an annual average rate of 3.3 percent between 1989 and 1998, when these households were between fifty and fifty-nine years old.

John Laitner also challenges Wolff's finding that bequests and *inter-vivos* gifts are equalizing based on a theoretical model of household behavior from his own work, which shows that altruistic transfer behavior greatly increases the concentration of wealth. The Laitner model has four principal elements: Each household has a finite life span and engages in life-cycle saving and dissaving. Each household's utility depends on its own consumption and that of its descendants. A household's net worth and transfer cannot be negative, and earning ability varies across households. Simulations with this model calibrated to U.S. data imply that life-cycle saving explains about two-thirds of wealth creation and that transfers increase concentration of wealth.

The intuition for this result is the following: In a model without transfers, if household A earns twice as much as household B, we would expect life-cycle wealth to be twice as great. With transfers, however, the high-earning household also saves to leave a bequest, so household A is likely to accumulate more than twice as much as B at each stage. Thus from the donors' side, transfers increase inequality. In terms of the recipients, transfers will reduce inequality in that household A will leave larger bequests to its low-earning children. To get an understanding of the overall impact requires looking at the behavior of both donors and recipients. Laitner claims that Wolff gets his result of transfers being equalizing because he looks only at recipients.

Conclusion

The conclusion that emerges from these papers is that wealth transfers are big and important. They probably account for about half of total wealth in the

economy. Transfers can occur for a variety of reasons: a positive bequest motive, such as altruistic, warm glow, or strategic; accidental bequests due to precautionary saving and incomplete annuitization; or simply because people like wealth and die holding it. Studies provide some support for all three alternative explanations, but none verify all the predictions of the various models. Moreover, these reasons need not be mutually exclusive; in fact, for the nonrich, the most likely explanation is that people hold wealth for precautionary reasons, but if they do not need it, are delighted for it to go to their children.

Understanding how people make their consumption, saving, and bequest decisions is crucial for predicting how people will respond to major changes. For example, the plan to phase out the estate tax will increase saving and wealth accumulation if people are motivated to save in order to leave an altruistic bequest to their children. If rich people get rich simply because they value wealth per se, phasing out the estate tax will have no impact on the donors (although it will increase funds in the hands of recipients). How people respond to macro policy changes, such as an increase in deficit spending, also depends on whether people have altruistic savings motives or not.

For the elderly population, an immediate issue is why they do not purchase annuities. Price is part of the answer, but probably is not the whole story. Why do they care so much about dying before they have gotten their money back if they do not place a value on bequests?

The papers in this volume bring the reader up to date with what is known about the role and impact of gifts and bequests and they also move the story forward. At the same time, they make clear that many questions remain unresolved about the motives for and effects of wealth transfers.