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THE TRANSITION FROM WIFE TO WIDOW: THE IMPORTANCE OF SURVIVOR BENEFITS TO THE WELL-BEING OF WIDOWS

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Abstract

Legislation over the decade has attempted to encourage married men who are eligible for pensions to elect an option that will also provide benefits to their widows. Here we examine the importance of that choice on the well-being of widows and then estimate the effect of making a survivor benefit mandatory. Using conventional measures of well-being and tracing individual women before and after the death of their husbands, we find that widows are more likely to be in poverty and have lower mean income than when married. But this is true regardless of the pension-option choice of their husbands. Simulating the effect of requiring all men with a pension to choose a survivor benefit option results in a substantial reduction in the fall of income and a lowering of poverty rates during widowhood. Yet the change in the poverty rate of all widows is small, since widows of men with pension income are only a small percentage of all widows.

The Transition from Wife to Widow:
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Introduction

In measuring the well-being of married couples, it is presumed that both husband and wife share resources equally with one another. Hence official poverty measures consider the income of both in determining the poverty status of each. This traditional view of equal sharing within a household has also dominated the formation of public policy aimed at alleviating poverty. In attempting to increase the well-being of the aged, across the board increases in social security benefits paid to workers were assumed to increase both the well-being of the male worker and his spouse while married as well as the well-being of his widow. Between 1969 and 1979 real benefits for the average new retiree rose by over 50 percent (Anderson, Burkhauser, and Quinn, 1986). This major commitment of resources to the aged resulted in a dramatic fall in the poverty of the elderly. In the 1980s the incidence of poverty is no greater among the aged than it is among the population as a whole (Danziger, van der Gaag, Smolensky, and Taussig, 1984).

Despite this overall increase in well-being, poverty still persists among the elderly. Now, however, its burden is disproportionately carried by aged widows. In 1984 over one-quarter of all widows aged 65 and over had incomes below the official poverty line (U.S. Bureau of the Census, 1985). Widows accounted for over one-half of all the aged poor, a large percentage of whom had not been poor while married (Holden, Burkhauser, Myers, 1986a).

The plight of elderly widows has called into question the view that married couples share resources across time in a manner similar to their sharing when both are alive. Specifically, it is argued that husbands do not sufficiently consider the effect that their death will have on the economic well-being of their wives. The result is an unequal sharing of household resources across the life of both marriage partners.

How income is shared over the lifetime of both spouses is affected by rules set forth in social security and pension legislation and by the choice made by each worker about the period over which pension income will be paid. After retirement, the major sources of income are social security and private pension benefits. Social security offers married couples no choice with regard to the distribution of benefits across time: when married, couples share a stated benefit; after the death of one spouse, the surviving spouse receives two-thirds of that amount over his or her remaining lifetime. This joint-life form of annuity spreads benefits across the lifetime of the worker and that of survivor.[1]

Private pensions have no such uniform system for distributing benefits across the lives of marriage partners. Prior to 1974 private pensions were not required to offer a joint-life option, although most plans did. The vast majority of pension-eligible workers chose single-life annuities, which paid benefits only over the life of the worker. Typically, when a joint-life annuity is chosen the yearly benefits paid while the husband is alive are lower than those paid in the single-life option. This is done to offset the increased number of years the benefit must be paid to his widow. It was argued that this actuarial reduction in yearly benefits while they were alive led husbands to ignore the well-being of their future widows. In part because of this concern Congress has been pressed to restrict the single-life choice.

The Employee Retirement Income Security Act of 1974 (ERISA) required that all private pensions offer a joint-life option to retiring workers. While ERISA did not require all married workers to choose this option, it did encourage that choice by requiring that a joint-life annuity be paid unless the employee specifically chose otherwise. Despite this change in pension rules, Kotlikoff and Smith (1983) estimated that only 29 percent of all male pension recipients (of all marital statuses) had elected some type of joint-life pension. Andrews (1985) found that only 11 percent of all widows in 1982 received income from a pension (other than social security), either as a survivor or worker.

Because of the low rates of joint-life pension choice by male workers and the persistently higher rates of poverty for aged widows as compared to aged married couples, Congress again took action. The Retirement Equity Act of 1984 (Public Law 98-397) requires both spouses to sign when a joint-life annuity is declined. It was hoped that by bringing the wife more formally into the decision-making process, resources would be used more equally across the life of both marriage partners.

There can be no question that pension regulations can be developed which will force greater use of joint-life annuities. Yet, despite a decade of legislation concerning this issue, little solid evidence has been provided to pinpoint either the degree to which couples willingly share resources across time or the importance that joint-life annuities play in this sharing.

Most data that compare the well-being of the aged by marital status is cross-sectional. Because these data do not include information on the well-being of women prior to widowhood, comparisons of married couples and widows can be misleading.[2] Here we use data to trace the well-being of women before and after the death of their husbands and to measure the difference that pension coverage and the choice of pension option make on their income levels and poverty incidence. We then simulate the mean income levels and poverty rates of women before and after the death of their husbands if a joint-life pension option were made mandatory.

Data

Our data are from the Retirement History Study (RHS), a ten-year longitudinal study of men and single women who were 58 to 63 in 1969. The sample selected for this study consists of 4,058 couples who were married in 1969. Of these, 3,233 remained married throughout the survey. In the other 825 households the husband died. We identified whether the husband was receiving or was eligible to receive a pension at retirement or prior to his death. For men who died before the final survey in 1979, we can observe whether they had chosen a single- or joint-life annuity (See the Appendix for a fuller discussion of our sample selection procedure.[3])

Most men in our sample received pension income prior to the effective date of the 1974 Employee Retirement Income Security Act. None, of course, were affected by the 1984 Retirement Equity Act. While most plans offered survivorship options prior to ERISA, typically this option was not the default form. Thus, these data reflect pension choices made by men prior to legislated restrictions on choosing single-life options.

Because our earlier work has indicated a bias in cross-sectional comparisons between married and widowed women, we separate married couples in which the husband was alive throughout the ten-year survey period from those in which the husband died between 1969 and 1979. The former are labeled intact couples; the latter are labeled eventually widowed couples. We then are able to compare the poverty rates of these two types of couples with those of current widows. Note that women are married at the time they are labeled "eventual widows." When widowed they become "widows." Because we do not include women widowed in 1969, all data on widows presented in this paper are for women widowed after that date.

Economic Well-Being across Marital Status

The majority of men in our sample received or were eligible to receive a pension. Table 1 shows that the incidence of pension eligibility does not differ greatly between those couples who remained married and those who were widowed.[4] Among eligible couples, 28 percent elected some form of joint-life option. Because some men were not eligible for a pension, and others did not elect a joint-life option, only 15 percent of all eventual widows received survivor benefits. Because we cannot tell what option was elected by married men who were still alive in 1979, we do not know the election rate for intact couples.[5]

Table 1. Pension Eligibility and Pension Option Choice

Pension Eligibility and Pension Choice of Husband	Final Marital Status of Couples[a]			
	number	percent	number	percent
All couples	3,233	100.0	825	100.0
Pension eligibility:[b]				
Not Eligible	1,229	38.0	382	46.3
Eligible	2,004	62.0	443	53.7
Husband's Pension Choice:				
Single life	NA[c]	NA	281	63.4
Joint life	NA	NA	122	27.6
Lump sum	NA	NA	40	9.0

[a]All sample units were married couples in 1969. Intact couples remained married from 1969 to 1979; eventual widows were married in 1969, later widowed.

[b]Pension-eligible men either received pension income prior to 1979 or before their death or reported that they were eligible or would be eligible for a pension from the job they held.

[c]Data not available because we could not identify option choice if a husband did not die.

Table 2 provides poverty rates and mean income levels disaggregated by marital status and pension eligibility. The data are for 1974, when all men in our survey were aged 65 to 70. All sources of income were summed to define total earnings for the year.[6] The income of the couple or widow is compared with the official poverty level for a couple or single-member household, adjusted for age of the household head.[7]

Table 2 shows that even when married, eventual widows had somewhat higher poverty rates and lower mean income than did married women whose husbands did not die during our sample period. Thus it is important to separate these two groups of couples when making inferences concerning the effect of widowhood on poverty. Nevertheless, even when we compare eventually widowed couples with widows, the poverty rates of widows are substantially higher.

Eventually widowed couples in which the husband is eligible for pension benefits have poverty rates considerably lower than do such couples not eligible for benefits. Even when widowed, those women whose husbands were eligible for a pension were less likely to be poor than were widows whose husbands were never eligible.

The patterns of differences between married and widowed women is the same when we look at mean real incomes. Eventually widowed couples' mean income is nearly twice that of already widowed women. Couples eligible for pensions have substantially greater income prior to the husband's death than do those not eligible for a pension. But in widowhood this difference in mean income nearly disappears.

Table 2. Well-Being of Women in 1974 as Identified by Pension Status of the Husbands

Husband's Pension Status	Poverty Rates			Mean Income		
	Intact Couples	Eventual Widows	Widows	Intact Couples	Eventual Widows	Widows
All couples	8.1%	11.4%	25.2%	$22,805	$19,696	$10,421
Pension eligibility[a]						
Not eligible	15.5	18.1	33.3	18,005	14,765	10,024
Eligible	3.6	5.1	16.7	25,748	24,380	10,836

Note: Data are from the Retirement History Study. Income is reported in 1984 dollars. All sample units were married couples in 1969. "Intact couples" remained married from 1969 to 1979. "Eventual widows" were married in 1974 and were later widowed. "Widows" were married in 1969 but widowed before 1974.

[a]Pension eligible men either received pension income prior to 1979 or before their death or reported that they were eligible or would be eliglible for a pension from some job they held.

Cross-sectional data of this type provide a useful first approximation of the dynamics of poverty, but a more accurate measure of the change in well-being of women after the death of their husbands is achieved using the longitudinal properties of our data.

Table 3 compares the poverty rates and income levels of women in the survey period preceding their husband's death with those in the second survey period after his death. Because the RHS interviewed respondents and their widows every two years, our measure of income in the second survey period of widowhood means that the income is captured in a period between one and three years after the husband's death.[8]

Over 14 percent of widows were poor in the last income period prior to their husband's death. Their poverty rates nearly doubled thereafter. But the level and change in poverty rates differ across pension-eligibility types.

When married, women whose husbands were not eligible for a pension had poverty rates over four times those of women whose husbands were eligible for a pension. But the difference is even more dramatic when single-life and joint-life pension-option couples are separated. The poverty rate of couples without pensions is over nine times that of joint-life couples and more than three times that of single-life pensioners.

The transition into widowhood means higher poverty rates for all subgroups of women, but the difference in poverty rates among the different groups of widows is smaller than when they were married. The increase in poverty for joint-life beneficiary women as they move from wife to widow is nearly threefold. This is only a slightly smaller

Table 3. Well-Being of Women before and after Widowhood, by Pension Eligibility Status

Marriage State	Total Sample[a]	Husband's Pension Eligibility: Not Eligible	Husband's Pension Eligibility: Eligible	Pension Option: Single Life	Pension Option: Joint Life
Wives					
Poverty rate	14.2%	23.3%	5.5%	6.8%	2.5%
Mean income	$21,307	$17,451	$24,962	$21,817	$32,208
Widows					
Poverty rate	26.1%	36.6%	16.1%	20.3%	6.6%
Mean income	$10,177	$9,153	$11,148	$10,120	$13,515
Number	785	382	403	281	122

Note: Data are from the Retirement History Study and cover the years 1969 to 1979. Incomes are from the last survey before and the survey following the first report of widowhood and are reported in 1984 dollars.

[a]Includes only those couples in which the husband died between the 1969 and 1977 surveys.

increase than that of single-life pension widows and is a much larger percentage increase than that of women whose husbands were never eligible for pensions. Thus, even women whose pension benefits continue during widowhood face increased risk of poverty after the death of their husband.[9]

There is also a substantial difference in mean income for women before and after the death of the husband. In the last income period of marriage, mean total income for couples was $21,307. This fell to $10,177 in widowhood. Joint-life pensioners are better off both as couples and as widows than are either single-life couples or couples in which the husband is not eligible for a pension. While single-life pension couples are better off than those not eligible for pensions, in widowhood there is no significant difference between mean incomes of these two groups. The relative fall in income for both single-life and joint-life widows is approximately the same, however; both have less than one-half the mean income they enjoyed as couples. Those widows whose husbands were not eligible for pensions have just over one-half of the mean income they had when married.

The pattern of poverty rate and mean income change over the lifetime of couples in our sample suggests that even if resources are equally shared during marriage, they may not be equally shared across the life of both marriage partners. It is not obvious from our data, however, that the choice of a single-life pension option reflects a smaller effort on the part of a husband to provide for his wife after his death. Although it is true that widows whose husbands chose a single-life option are worse off than are joint-life widows, this was also the case before their husbands died. For women whose husbands chose a single-life pension option, the percentage drop in the mean income and the percentage increase in the poverty rates approximated that of women with joint-life coverage as they moved from wives to widows.

A widow requires fewer resources to maintain a given level of well-being after the death of her husband, since family size has been reduced from two to one. But the percentage falls in income shown in Table 3 suggest that even after adjusting for family size, real resources and well-being of widows decline regardless of the pension status of their husbands. For instance, official poverty-line equivalence scales are set such that a single person aged 65 and over requires 80 percent of the income of a married couple whose household head is aged 65 or over.[10]

Simulating the Effects of Mandating Joint-Life Annuities

The enactment of ERISA was the first attempt by Congress to use pension-reform legislation to address the problem of unequal sharing of resources across the life of marriage partners. Even a decade after the act was passed, only a small minority of male retirees had chosen a joint-life option, and widows continued to suffer substantial reductions in well-being after the death of their husbands (Andrews, 1985; Kotlikoff and Smith, 1983). Some would argue that more drastic action is necessary. One extreme is to require all married men eligible for pension benefits to choose a joint-life annuity. In this section, we provide a measure of the effect such a rule would have had on the income and poverty levels of our sample of married men and their widows from 1969 to 1979.

There are many varieties of joint-life options now offered by pension plans. We will simulate them along several dimensions. The first dimension is the percentage change in annual benefit that occurs with the death of the worker. Social security is considered a joint and two-thirds annuity because benefits for the survivor are two-thirds the level of benefits when both husband and wife are alive. We will simulate three pension alternatives: joint and one-half, joint and two-thirds, and joint and full (or 100 percent). These are selected because they represent the most commonly offered joint-life alternatives.

The second dimension is that of "actuarial fairness" across pension option choices. That is, to what degree does the expected value of all pension payments over the life of both members of the couple change with the choice of pension option? In our simulation, we first develop joint-life option values assuming they are actuarially fair in relation to the actual single-life option chosen. That is, the benefit going to the husband when he is alive is reduced from its amount under the single-life option in order to hold constant total expected benefits going to the couple over both their lives. Hence the larger the percentage of the survivor's benefit compared to the joint benefit, the smaller is the benefit when the husband is alive.

We then adopt the opposite assumption: that the survivor benefit is totally subsidized. In this case, the benefit paid to the husband when he is alive is not reduced, regardless of the size of the survivor benefit. These two assumptions of actuarial fairness provide six different estimates of benefits paid to the retiree and his widow. Because the completely subsidized joint-life option assumes no reduction in the benefits paid to retirees, benefits paid under any of the three joint-life options will be higher than those paid when actuarially fair reductions are assumed. Few pension plans provide completely subsidized joint-life benefits, although it is not unusual for the reductions in the retirees' benefits to be less than actuarially fair.

Our assumption of a total subsidy is extreme, but it provides an estimate of the maximum change in the well-being of widows that would take place if a joint-life benefit had been mandated. Likewise, actuarially fair reductions do not occur in all pension plans. Because ERISA requires that the joint-life annuity be at least actuarially equivalent to the single-life annuity, the estimates using this assumption provide minimum estimates of changes in income and poverty rates. Together the actuarially fair and totally subsidized pension assumptions provide a range within which the actual change is likely to lie.

A final dimension which will affect the size of our actuarially fair joint-life benefit calculation is the discount rate. This is because for each plan the present value of a single-life and joint-life option over the expected lifetime of the beneficiaries must be equal. The interest rate actually used by specific plans varies across plans because of differences in interest assumptions and mortality experience. We do not have information on discount rates actually used by plans covering workers in our sample, and we must therefore assume a uniform rate across all plans. We adopt a variety of discount rates.[11]

Table 4 shows the simulated mean yearly joint-life pension benefits for those couples who reported a benefit prior to the husband's death

Table 4. Estimated Joint-Life Pension Benefits of Those Who Actually Received Single-Life Pension Benefits, Using Different Pension Assumptions

Subsidy and Discount Rate	Joint Pension Type					
	Joint and 1/2		Joint and 2/3		Joint and Full	
	Husband	Widow	Husband	Widow	Husband	Widow
Full Subsidy:	$7,068	$3,534	$7,068	$4,711	$7,068	$7,068
No Subsidy, discount rate:						
2 percent	$5,578	$2,789	$5,075	$3,477	$4,622	$4,622
3 percent	5,659	2,830	5,311	3,541	4,731	4,731
5 percent	5,804	2,902	5,481	3,654	4,933	4,933
10 percent	6,901	3,041	5,813	3,876	5,342	5,342

Note: Data are from the Retirement History Study and are reported in 1984 dollars. Sample size is 114. These simulations are for couples in which the husband reported pension income prior to his death and elected a single-life benefit. The sample is also limited to those who responded to the survey following the first report of widowhood.

but who had actually chosen a single-life benefit (values are in 1984 dollars).[12] The mean annual benefit actually reported by these husbands was $7,068. Under the assumption that the joint-life pension option is fully subsidized, this amount would continue to be paid while the husband is alive and survivor benefit would also be paid to the widow. As can be seen, this would vary in amount from $3,534 to $7,068, depending on the type of joint-life option chosen. This is an extreme assumption, since it is unlikely that firms would be willing to bear the additional expense of such a change in pension rules without some downward adjustment in base benefits.

When we make the more realistic assumption that any joint-life option offered to married workers must be the actuarial equivalent of the single-life option they actually chose, then the yearly benefits paid to the worker when he is alive and the benefit paid to his widow must fall.

Finally, for actuarially fair pension options we see that the higher the discount rate chosen in calculating the benefits, the higher in absolute value are the husband's and widow's benefits. Because the discount rates used by pension plans reflect estimated interest earnings, a higher discount rate implies higher expected earnings by the pension fund and, therefore, the necessity of smaller reductions in current payments to pay for future benefits. It should be noted that we assume no inflation adjustment, so to the degree that the discount rate chosen reflects inflation expectations, the smaller will be the real value of these fixed payments in the future.

In Table 5 we simulate the change in poverty and mean income levels that would have occurred for this subsample of couples if the husband had, instead, chosen the joint-life option. We show estimates using a 5 percent discount rate. We simulate six different options that differ by the joint-life chosen and the degree of subsidization. The rate in the first column is the actual rate that was experienced by these single-life pensioners. We compare this rate with the rate that would have been recorded if the simulated benefits had been paid to the husband prior to his death and to his widow.

All the simulated joint-life options would dramatically reduce poverty levels during widowhood. The actuarially fair joint-and-one-half option would reduce poverty rates over 50 percent in widowhood. To pay for these benefits, the couple's income when the husband is alive would be reduced. But in our sample no increase in poverty is found in the prewidowhood period. Somewhat surprisingly, more generous but actuarially fair survivorship benefits have no additional effect on poverty rates for couples and little effect on poverty rates when widowed. This suggests that while payment of the legislatively required 50 percent survivor's benefit will raise substantial numbers of women above poverty, additional increments above this amount will have only a small additional effect. Only when the joint-life option is subsidized or when benefits paid to widows are equal to those paid to the husband do poverty rates fall further for widows.

Because we are not limited to measuring the change around a single income amount, our other measure of average well-being--mean income--is more sensitive to changes in the joint-life benefit amount. Pension

Table 5. Actual Well-Being of Single-Life Beneficiaries and Simulations of Well-Being if Joint-Life Pension had been Chosen
(Assuming a 5 percent discount rate)

Marriage State	Actual	No Subsidy			Full Subsidy		
		Joint and 1/2	Joint and 2/3	Joint and 100%	Joint and 1/2	Joint and 2/3	Joint and 100%
Wives							
Poverty rate	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
Mean income	$19,144	$18,269	$18,046	$17,670	$19,144	$19,144	$19,144
Widows							
Poverty rate	16.7%	7.9%	7.9%	6.1%	7.9%	6.1%	4.4%
Mean income	$9,588	$11,629	$12,222	$13,145	$12,136	$12,985	$14,682

Note: Data are from the Retirement History Study and are reported in 1984 dollars. Sample size is 114. These simulations are for couples in which the husband reported pension income prior to his death and elected a single-life benefit. The sample is also limited to those who responded to the survey following the first report of widowhood.

benefits fall while the husband is alive to pay for actuarially fair survivor benefits, so the average income during marriage falls for couples. The larger the survivor benefit the greater is the fall.

But the added survivor benefits substantially increase average income during widowhood. Hence, while the actual average income of our sample fell by nearly 50 percent of the income of the couple, in our joint-and-one-half simulation widows'income is almost two-thirds of average income when married. Increasing the survivorship benefit to two-thirds or 100 percent increases income in widowhood by just over two-thirds and just over three-fourths of the income when married.

The simulations presented above suggest that, all else held constant, requiring husbands who chose single-life pension options to choose even the least generous joint-life pension would have a substantial effect in increasing the well-being of their widows. This is true with respect to poverty rates and even more so with regard to changes in mean income. Although incomes of couples fall somewhat, the payment of survivorship benefits boosts widows' incomes substantially.

The effect of this policy change on overall poverty rates of widows in our sample is far smaller, because single-life pensioners are only 34 percent of all eventually widowed couples in our sample (see Table 1) and are an even smaller percentage of eventually widowed couples whose widows are poor. Table 6 repeats the simulations in Table 5 but shows the changes in poverty for all eventually widowed couples in our sample. These couples include those in which the husband was not eligible for a pension, did not choose a joint-life annuity,

Table 6. Actual Poverty Rates and Simulations under Joint-Life Pension Assumptions before and after the Deaths of Their Husbands (assuming a 5 percent discount rate)

Marriage State	Actual	No Subsidy			Full Subsidy		
		Joint and 1/2	Joint and 2/3	Joint and 100%	Joint and 1/2	Joint and 2/3	Joint and 100%
Wives	14.2	14.2	14.2	14.2	14.2	14.2	14.2
Widows	26.1	21.7	21.7	21.0	21.7	21.0	20.4

Note: Data are from the Retirement History Study. Incomes are from the last survey before and the survey following the first report of widowhood and are reported in 1984 dollars. The sample includes only those couples in which the husband died between the 1969 and 1977 surveys.

or died prior to retirement but elected a single-life retirement option. Requiring a joint-life annuity would not affect the first two groups of couples. Because we had no information on the pension amount of the last group of husbands and their widows, we assume that comparable changes in the incidence of poverty would have occurred for them as those simulated (in Table 5) for the widows of men after retirement.[13]

The hard reality is that even if pension rules forced more equal sharing of resources, poverty rates of all widows would not decline dramatically. This is not overly surprising, since the husbands of the great majority of poor widows were never eligible for pensions. Nevertheless, poverty rates would fall to some degree. Again, the greatest effect on poverty rates would result from the awarding of some survivorship benefits to widows whose husbands had pensions; more generous benefits would reduce poverty, but only slightly more.

Conclusions

There can be little question that, on average, aged women have higher levels of poverty and lower mean incomes when they become widowed than when they were married. Using longitudinal data and standard measures of well-being, we find evidence to question the premise that equal sharing occurs across the life of both marriage partners.

Comparing the incomes of women as widows and as wives indicates that the average woman suffers a greater decline in income after her husband's death than is assumed by the most commonly used equivalence scales reflecting decline in household needs as household size declines. The average widow in our sample has about one-half of the income she and her husband had in the year before his death. This compares with official government equivalence scales that suggest a widow requires 80 percent of the income of couples of comparable age.

The level of well-being of elderly women as they move from wives to widows is substantially affected by pension eligibility and survivorship choice. Those women whose husbands are not eligible for a private pension are worse off, both as wives and widows, than women with pension-eligible husbands. In widowhood, those women whose husbands chose a single-life option are worse off than women whose husbands chose a joint-life option. But this is in part because they were also worse off when married. In our analysis, all women, regardless of pension eligibility or annuity choice, are worse off as widows than as wives. In fact, widows of joint-life pensioners suffer the largest percentage decline in income. Hence it is not possible to argue from our findings that husbands who choose a single-life pension option are less concerned about the well-being of their wives after their own death than those husbands who choose joint-life pension options.

Requiring all married men to choose joint-life pensions would have a substantial effect on the mean income and poverty rates of widows of men who actually chose a single-life option, assuming no other changes in behavior. It would lead to smaller drops in income and result in lower poverty rates for widows in the first years after the death of the husband. But even if this goal could be accomplished, it would have a much smaller effect on the general condition of widows, since only a small fraction of widows who are poor had husbands who were eligible for pension benefits in the first place.

These simulation results are on the upper boundary of the actual results of a policy requiring all married men to choose joint-life pensions. It is possible that the bequest of other assets will be adjusted to offset the additional pension benefits to the widow. Hence if husbands, alone or with the consent of their wives, believe that the way in which they now allocate resources across their lifetimes is the correct one, then our simulations overstate the increase in the well-being of widows that will occur from this pension policy change.

Two pieces of evidence suggest that some offset is likely. First, the drop in income of women whose husbands chose the joint-life option was not substantially different from that of single-life-option widows. This suggests that for men who chose a joint-life option, the survivor's benefit may have been a replacement for other types of assets that could instead have been bequeathed the wife--e.g., other financial assets.

Second, the pension option choice is not random. Holden, Burkhauser, and Myers (1986b) find, for instance, that men in households with lower levels of wealth tend to choose the single-life option. Forcing such men to take an actuarially fair joint-life option may induce them to compensate for the reduction in benefits during their lifetime with a faster consumption of other joint resources.

Hence, from a public policy perspective renewed efforts to direct the annuity choice toward the joint-life option may have more limited long-term success in changing the distribution of resources across the lives of marriage partners and even less success in changing the well-being of most widows in old age. Nonetheless, it will to some degree assure to women whose husbands are eligible for pension benefits a minimum share of these benefits in widowhood. And it may reduce the chances that these women will become poor in their old age.

APPENDIX

Data for this study are drawn from male respondents who were married at the time of the initial interview of the RHS. For our purposes, we require that the respondent either remain married to the same wife throughout the entire ten years of the study (3,233) or die with the surviving spouse consenting to at least one post-widowhood interview (1,113). In order to identify key variables, these widows must have participated in at least one interview after the one conducted in 1973.

Pension eligibility is based on questions asked of the husband while he was still alive. He must have either reported receipt of pension income or reported that he would be eligible to receive a pension in the future. The future pension questions were asked about any job he held during the course of the survey, along with the longest job he had held and the job he held prior to the job reported in the 1969 survey. While this may lead us to include as pension eligible some husbands who were mistaken about their future pension receipt, any decisions concerning the division of assets in the event of his death would have been made with the belief that such benefits would eventually be received. We eliminate those households for whom we cannot determine such eligibility.

The pension option chosen by the husband can only be determined with our data for the households in which the husband dies before the end of the study. The husband is never asked whether he had the option to elect a joint-life pension or what the benefits would be under the options available. Thus we must rely upon questions asked of widows concerning receipt of survivorship benefits from their husbands' pensions. Those widows for whom we are unable to determine which option was selected are eliminated from the sample. Those widows who receive a lump-sum payment of survivors benefits are eliminated from analysis. (Inclusion of this group as joint-life receipients does not alter the results.)

For the simulation, the single-life-pension widows are further restricted to include only those households in which the husband reported a continuous pension benefit. Thus we are able to compute the wealth value of the pension. This is done by calculating the present discounted value of the future stream of pension income. We weight each year's receipt by the probability that the husband will live until that year. The mortality figures are general, thus they do not correspond exactly with the life expectancy of the individuals. Because the value of pension income is in constant dollar terms, the interest rate would reflect the expected earnings on the annuity and the expected rate of inflation.

Simulated pension benefits are calculated by dividing the calculated present value of the pension by a combination of the present value interest factors for the husband and wife, both weighted by the probability of being alive in each of the subsequent years. The spouse's factor is weighted by the proper fraction of the husband's benefits.

We restrict the sample to include only those widows who responded to a second interview as a widow. The second interview is preferable to the first because, in order to correctly examine the first period of widowhood, the sample size must be reduced drastically (see Holden, Burkhauser, and Myers, 1985, for a discussion of this problem). Thus the income year used for eventually widowed couples could be up to two years before the husband actually died. Likewise, the income in widowhood could be up to three years after his death.

Tables 4 and 5 are presented only for those single-life recipients who respond to at least two surveys as a widow. In Table 6 we assume that the changes of those widows examined in Tables 4 and 5 are representative of all single-life widows, regardless of whether their husbands actually received pension income prior to his death. Tests of differences support this proposition for the period of widowhood.

NOTES

1. A major change in the social security program regarding survivors' benefits occurred in 1972. At that time, benefits paid to a worker's widow were increased from 82.5 percent to 100 percent of the worker's primary insurance amount. This effectively changed social security from a joint-and-55-percent to a joint-and-two-thirds annuity.

2. Holden, Burkhauser, and Myers (1986a) follow a sample of aged married women over the ten-year period of the Retirement History Study and show that women who remained married over that period were not only better off than those who became widowed in any given year, but that they were better off than those widows had been when their husbands were alive.

3. Men were not questioned about their pension-option choice in the RHS. We inferred this choice from questions asked of widows about the source of their pension income. Unfortunately, no such inference can be made if the husband lived throughout the survey. Hence our simulations are restricted to married men who died over the period. A detailed description of the development of our pension-eligibility and pension-option variables is included in Myers, Burkhauser, and Holden, 1986.

4. Our reported rates of pension eligibility cannot be compared directly with those reported in other studies of the aged population. This is because we defined husbands eligible for pensions as both those receiving pension income and those who do not receive but are eligible or will be eligible for a pension.

5. Because our sample is drawn from men who died earlier than average, we may overstate the incidence of joint-life benefits for the entire population. If the men in our sample are aware of their higher-than-average probability of death, the joint-life pension would be more likely to be chosen than a single-life pension. This is the case because even actuarially fair pension options are so only for men with average life expectancy for those in the plan.

6. As with the official poverty measure, income is defined as pretax income, including cash transfers but excluding capital gains and in-kind transfers. We also consider only reported income, ignoring that which is available but not realized (see Burkhauser and Wilkinson, 1983).

7. The poverty threshold in 1984 dollars for a couple was $6,983 if the husband was under 65 years of age and $6,282 if he was 65 or older. The corresponding thresholds for single individuals were $5,400 and $4,979 (U.S. Department of Health and Human Services, 1985).

8. The RHS, like most other income surveys, determines marital status at the time of the interview but uses income from the previous year. Holden, Burkhauser, and Myers (1985) show that this systematically understates the income available to new widows. To avoid this problem, we use the income in the second period of reported widowhood.

9. Poverty rates of married couples differ significantly by pension eligibility of the husband (eligible or not eligible) and by the pension-option choice (single or joint-life). Thus, while married, joint-life couples are better off than single-life couples, who in turn are better off than non-pension-eligible couples. These differences are significant

at the 1 percent level. In widowhood, however, widows whose husbands elected single-life benefits and those whose husbands were never eligible for a pension are not significantly different in terms of their mean income. When these two groups are compared to joint-life widows, a test of differences is significant at the 1 percent level.

10. In our sample some husbands died before becoming 65, and by the first income year of widowhood their widows were 65 or older. Official poverty line equivalence scales for this type of household set the income needs of the widow at only 71 percent of the couple scale. Even this is well above the incomes of women in our sample as widows, compared to their incomes when married. The 80 percent ratio is the ratio of the poverty threshold for couple households with a male head over age 65 and single female households over age 65, as established by the Social Security Administration (U.S. Department of Health and Human Services, 1985). This ratio is near that found by Colasanto, Kapteyn, and van der Gaag (1984) when equivalence scales are based on people's subjective perceptions of income needs as asked in a survey question.

11. See Myers, Burkhauser, and Holden (1986) for a detailed discussion of the procedures used to simulate our joint-life option values.

12. In Table 1 we identified 281 widows whose husband chose a single-life pension option. Our simulations are based on information concerning 114 of these widows. The reduction is necessary since we can estimate pension benefits only for those widows whose husbands received a pension prior to his death. While those who actually received

such benefits were better off while married than those who did not, there is no significant difference between the groups while widowed.

13. Although the sample of women used in the simulation do not differ from those single-life widows whose husbands did not receive a pension, they are significantly better off as couples. It may be that those husbands who never received a pension would have been eligible for lower benefits than those used. Thus, the estimated decrease in poverty rates may be an overstatement of the actual reduction.

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