



# **Research Article**

# The Economic Consequences of Gray Divorce for Women and Men

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# Abstract

**Objectives:** Gray divorce, which describes divorce among persons aged 50 and older, is increasingly common reflecting the doubling of the gray divorce rate since 1990. Yet, surprisingly little is known about the consequences of gray divorce and in particular how women and men fare economically during the aftermath.

**Method:** Using longitudinal data from the 2004–2014 Health and Retirement Study, we estimated hybrid fixed/randomeffects models comparing women's and men's economic well-being prior to, during, and following gray divorce and subsequent repartnering.

**Results:** Women experienced a 45% decline in their standard of living (measured by an income-to-needs ratio), whereas men's dropped by just 21%. These declines persisted over time for men, and only reversed for women following repartnering, which essentially offset women's losses associated with gray divorce. No gender gap emerged for changes in wealth following divorce with both women and men experiencing roughly a 50% drop. Similarly, repartnering was ameliorative only for women's wealth.

**Discussion:** Gray divorce is often financially devastating, especially for women. Although repartnering seems to reverse most of the economic costs of gray divorce for women, few form new co-residential unions after divorce. This study offers a cautionary tale about the financial aftermath of gray divorce, which is likely to contribute to growing economic disadvantage among older adults.

Keywords: Chronic strains, Gender, Repartnering, Standard of living, Wealth

Divorce often has significant negative consequences for financial well-being, with women in particular experiencing a decline in their standard of living following marital disruption (Duncan & Hoffman, 1985; Peterson, 1996; Tach & Eads, 2015). Men's post-divorce economic outcomes are more heterogeneous. Some studies indicate that men experience gains in their standard of living following divorce (Duncan & Hoffman, 1985; Peterson, 1996), whereas others document a modest decrease (McManus & DiPrete, 2001). Ultimately, comparisons of the economic well-being of women and men after divorce consistently show larger drops for women than men (Holden & Smock, 1991; Sharma, 2015). Despite a longstanding focus on the financial aftermath of divorce, research to date is largely silent on the economic consequences of *gray* divorce, a term that describes laterlife divorces that occur at age 50 or older. Since 1990 the gray divorce rate has doubled, rising from 5 divorcing persons per 1,000 married persons to 10 divorcing persons in 2010. Now more than one in four people experiencing divorce in the United States is at least age 50 (Brown & Lin, 2012). Yet, the economic ramifications of later-life divorce are mostly unknown, which is especially concerning for at least two reasons. First, older adults have relatively few years of working life remaining to recoup the financial

© The Author(s) 2020. Published by Oxford University Press on behalf of The Gerontological Society of America. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com. losses associated with divorce, possibly placing them in precarious economic circumstances as they advance into old age. Second, remarriage is a potential route to economic recovery following divorce (Jansen et al., 2009; Ozawa & Yoon, 2002), but most older adults, especially women, do not repartner following gray divorce (Brown et al., 2019), again signaling the risk of sustained economic disadvantage into old age. In short, the detrimental economic consequences of gray divorce are likely to persist over time.

Drawing on longitudinal data from the 2004-2014 Health and Retirement Study (HRS), we track the economic well-being of women and men before, during, and after gray divorce, accounting for subsequent repartnering through either cohabitation or remarriage. We consider two indicators of economic well-being as older adults could be asset rich but cash poor. The first is standard of living, gauged by the income-to-needs ratio, which is the most widely used marker of economic well-being in the divorce literature (e.g., Duncan & Hoffman, 1985; McManus & DiPrete, 2001). Second, we examine wealth because it is of particular relevance for the financial security of older adults, who typically become increasingly reliant on their assets for survival as their attachment to the labor force and the income it provides diminishes with age (Wilmoth & Koso, 2002). Our study moves the field forward by elucidating the economic consequences of gray divorce for women and men using a hybrid fixed/random-effects modeling approach that accounts for both pre-divorce economic well-being and potential recovery through repartnering. Guided by the stress-adjustment perspective on divorce (Amato, 2000), we investigate whether gray divorce operates as a persistent, chronic strain for the economic well-being of older women and men.

#### Background

The age distribution of individuals getting divorced in the United States is shifting as the divorce rate has plummeted among younger adults and risen for older adults (Kennedy & Ruggles, 2014; Wu, 2017). Adjusting for the aging of the population, the divorce rate in the United States actually has increased in recent years (Kennedy & Ruggles, 2014). This pattern reflects the "gray divorce revolution," which refers to the doubling of the gray divorce rate since 1990 (Brown & Lin, 2012; Wu, 2017). Gray divorce is an increasingly common event that will impact a growing number of people in the coming years even if the gray divorce rate remains steady. In 2010, over 600,000 people got a gray divorce, and estimates indicate this figure will rise to over 800,000 by 2030 simply because of the aging of the population (i.e., applying the 2010 gray divorce rate) (Brown & Lin, 2012).

#### **Divorce-Stress-Adjustment Perspective**

The divorce-stress-adjustment perspective (Amato, 2000) views divorce as a process that begins prior to the actual

divorce and persists for some time thereafter. Divorce can either exert a temporary shock on individual well-being or it can have an enduring harmful effect from which individuals typically do not recover. Under the former scenario, divorce is a short-term crisis associated with diminished well-being followed by recovery within a year or two after divorce. In the latter scenario, divorce is conceptualized as a chronic strain that persists over time.

Despite the doubling of the gray divorce rate, its consequences are poorly understood, having received very little attention in the literature (Brown & Wright, 2017; Carr & Pudrovska, 2012). This omission is not only notable because gray divorce is on the rise, but also because it appears that divorce adjustment is especially difficult for older adults (Chiriboga, 1982; Wang & Amato, 2000). Divorce is likely to be a more stressful, onerous experience for older adults because they are often in longer-term marriages that involve greater economic interdependence. This interdependence may complicate the uncoupling process, leading to a more circuitous pathway to divorce that in turn forestalls post-divorce adjustment.

Moreover, older adults have fewer remarriage prospects than their younger counterparts (Wang & Amato, 2000). The majority of men and women do not repartner following grav divorce (Brown et al., 2019), which is likely to slow financial recovery. Women are arguably doubly disadvantaged because not only does their postdivorce economic well-being presumably trail that of their male counterparts, but also women are much less likely to repartner than older men. The salience of financial well-being and repartnering in the post-divorce adjustment process is underscored by research on the decision to divorce later in life. Older adults who are thinking about getting divorced report that their main worries about their lives post-divorce include the inability to form a new partnership and financial insecurity (Montenegro, 2004).

The divorce process is uniquely challenging for older adults and much of the difficulty adjusting to divorce appears to stem from potential financial shocks. Prior research on the financial consequences of divorce have not just excluded older adults but also have focused on economic well-being in the short-run to gauge the immediate economic impact of divorce, as we detail in the next section. Our study tracks within-person change in economic well-being for up to a decade following gray divorce, allowing us to assess whether the financial ramifications are temporary or persistent and thus reflect either a short-term crisis period or a long-term chronic strain.

#### Divorce and Economic Well-being

The short-run economic consequences of divorce are significant, particularly for women. Most studies place the magnitude of the household income drop for women in the

range of 23%–40% (see Tach & Eads, 2015 for a summary) during the year following divorce. This decline in standard of living appears to have weakened somewhat for women in more recent divorce cohorts, presumably reflecting their growing economic independence during marriage as the proportion of household income contributed by wives has risen in recent decades, buffering the negative economic consequences of divorce (McKeever & Wolfinger, 2005; Tach & Eads, 2015). In addition to their greater labor force attachment while married, being older and having fewer young children at the time of divorce smoothed economic recovery for women divorcing in recent years (McKeever & Wolfinger, 2005). An examination of cohort variation in the economic consequences of divorce for mothers showed that household income fell by about 40% for mothers who divorced in the 1980s versus just 33% for those divorcing in the 2000s (Tach & Eads, 2015).

The economic consequences of divorce are comparatively modest for men. Earlier studies revealed economic gains for men (Peterson, 1996; Smock, 1994), whereas a more recent analysis uncovered a slight decline (McManus & DiPrete, 2001). McManus and DiPrete (2001) maintained that as wives' economic contributions in marriage rose, men's economic independence diminished, resulting in a growing share of men experiencing a decline in their standard of living after divorce. In other words, women's economic gains mean that men who get divorced increasingly suffer from the loss of their former wives' incomes. Only men whose marriages were predicated on the traditional male breadwinner framework exhibited an increase in their post-divorce standard of living, which rose about 10% (McManus & DiPrete, 2001).

Prior studies examining economic consequences of divorce largely focus on 1 year after dissolution. Just a handful of studies follow a longer period to examine whether the economic decline is short term or long term. Stirling (1989) and Jansen and colleagues (2009) found no improvement in standard of living 5 years after divorce, whereas Duncan and Hoffman (1985) showed a modest improvement, overall suggesting that the negative consequences of divorce for financial well-being are long term. Because all three studies are based on divorce during vounger adulthood, whether the economic consequences of gray divorce are short term or long term are unknown. Although one study (Sharma, 2015) examined changes in wealth before and after gray divorce over a 6-year period, the study mixed recent divorces with divorces that occurred several years ago, blurring the short- and long-term consequences. It also excluded those who repartnered after gray divorce, potentially overestimating the detrimental effects of divorce.

#### The Significance of Gray Divorce

The divorce-stress-adjustment process can be protracted for older adults, reflecting the unique challenges and

circumstances that characterize the second half of life (Wang & Amato, 2000; Wu & Schimmele, 2007). The distinctiveness of gray divorce aligns with the life course perspective, which underscores the linkages between current events (e.g., gray divorce) and earlier experiences or transitions (Elder, 1994; Uhlenberg, 1996). The life course perspective draws our attention to the intersection between an individual's place in the social structure and their own unique biography, which Uhlenberg (1996, p. 226) summarized as "transitions, aging, and context." Because economic well-being is shaped by both the larger sociohistorical context and individual maturation, it is likely that the gender gap in economic well-being is especially pronounced following gray divorce. Older women are less attached to the labor force than younger women, reflecting the fact that many women who quit their jobs (or reduce their work hours) to bear and rear children experience long spells out of the labor force (Gangl & Ziefle, 2009). Even among those who are working, the gender divide in earnings widens with age, peaking in the fifties, which mirrors the primary age range for gray divorce (Brown & Lin, 2012; Bureau of Labor Statistics, 2018). At the same time, older men are more likely to be the primary or sole breadwinners, minimizing the negative economic consequences of divorce for them (McManus & DiPrete, 2001).

Another feature of the life course that is relevant to deciphering the financial ramifications of divorce is its timing. Although divorce is now a less age-graded experience with rising divorce rates among older adults converging with falling rates among younger people (Wu, 2017), divorce that occurs during the later life course is still an offtime event as most divorces occur at younger ages. Off-time events are associated with poorer outcomes than on-time events (Elder, 1994; Uhlenberg, 1996). In fact, economic well-being is lower for those who experienced a later-life divorce than a divorce earlier in the life course (Lin et al., 2017; Zissimopoulos, 2013). The poverty levels of women who are age-eligible for Social Security are nearly twice as high for women who divorced after age 50 as prior to age 50. By comparison, no appreciable differential emerges for men, underscoring the disparate divorce outcomes by gender (Lin et al., 2017). However, these results are only suggestive because they stem from a cross-sectional study and thus do not account for the roles of selection into divorce and out through repartnering.

A key tenet of the life course perspective is that inequality rises across time within and between cohorts due to cumulative (dis)advantage (O'Rand, 1996). Most gray divorces occur to those in remarriages, meaning that gray divorce is arguably a marker of cumulative disadvantage because it is not an individual's first divorce. The gray divorce rate is 2.5 times higher for individuals in remarriages than first marriages (Brown & Lin, 2012). Each divorce has a cumulative negative effect on well-being, underscoring the importance of considering an individual's marital history as the disadvantages associated with disruption have enduring effects (Hughes & Waite, 2009; Wilmoth & Koso, 2002). The cumulative effects of multiple divorces may figure prominently for wealth, an indicator of long-term economic well-being.

#### Repartnering After Gray Divorce

Repartnering in later life is not particularly common. During the 10 years after gray divorce, only about 22% of women and 37% of men repartner through either remarriage or cohabitation (Brown et al., 2019). Repartnering brings economic benefits by allowing couples to pool resources, but whether divorced women and men enjoy the same level of economic benefits from repartnering is unclear. One cross-sectional study of middle-aged adults found that divorced women and men held similar levels of wealth after remarriage (Wilmoth & Koso, 2002). In contrast, two panel studies using general population samples showed that divorced women benefited more from repartnering than did divorced men in terms of household income (Jansen et al., 2009; Ozawa & Yoon, 2002) and the beneficial effect of repartnering on household income is long term (Jansen et al., 2009). Because older adults are less likely to be working than their younger counterparts, repartnering may not compensate for the loss in standard of living that accompanies divorce. Likewise, wealth often takes time to accrue and thus it may be harder to reverse wealth loss from divorce soon after repartnering.

# The Present Study

The recent acceleration of gray divorce raises new questions about the consequences of divorce for older adults. Research has not kept pace with this emerging trend, and little attention has been devoted to deciphering the ramifications of gray divorce for individual well-being. Of particular concern are the economic strains associated with gray divorce, which we maintain could be significant, especially because older adults are nearing the end of their work lives and have relatively little time remaining to recoup their financial losses. Moreover, most older adults do not repartner after gray divorce, meaning that they presumably will be self-reliant financially. Gray divorce may place older adults in a perilous financial situation that ultimately undermines their well-being. Our study is the first to examine the shortand long-term economic consequences of gray divorce for women versus men, accounting for both pre-divorce economic status and the role of subsequent repartnering for recouping the economic losses that accompany divorce.

We posit that gray divorce has larger negative economic consequences for women than men, aligning with prior research on economic well-being following divorce (Duncan & Hoffman, 1985; Holden & Smock, 1991; Sharma, 2015). This gender differential should hold for both standard of living, tapped by an income-to-needs ratio, and wealth. We anticipate that for both of these economic indicators, women and men will experience declines immediately following divorce, with women's losses exceeding men's. The difficulties that characterize the post-divorce adjustment process for older adults (Wang & Amato, 2000) foretell protracted economic precarity with women and men experiencing chronic financial strain evidenced by drops in both standard of living and wealth that do not attenuate over time.

Repartnering is a potential path to economic recovery that may ameliorate the detrimental effects of gray divorce on financial well-being. We test whether repartnering has comparable benefits for women and men. Prior work suggests that economic gains will accrue from repartnering, although these may be larger for women than men (Jansen et al., 2009; Ozawa & Yoon, 2002). We expect that repartnering is associated with significant gains in economic well-being and that the beneficial effect of repartnering is long term.

In this study, we account for factors that are associated with divorce, repartnering, and economic well-being. Individuals who are in a remarriage, younger, non-white, and less educated are at greater risk of gray divorce than their respective counterparts (Brown & Lin, 2012; Lin et al., 2018). Repartnering is most likely among those who are younger and white (Brown et al., 2019; Schimmele & Wu, 2016; Vespa, 2012). Although repartnering is more common among men than women, socioeconomic resources seem to operate similarly for men and women (Brown et al., 2019; Vespa, 2012).

#### Method

Data used in the analysis came from the 2004–2014 HRS, a longitudinal survey of a nationally representative, continuous cohort of individuals in the United States born before 1960. The HRS began interviewing in 1992 with a cohort of individuals born in 1931-1941 and re-interviews have been conducted every other year. Three additional cohorts were added in 1998 and a new six-year birth cohort has been added to the study every 6 years since 1998 to make the sample representative of individuals over age 50. This study focused on the 2004 wave forward because the HRS changed how poverty was measured in 2002, affecting our measure of standard of living, and a refresher sample aged 51-56 was added in 2004 to maintain a nationally representative sample of the target population (RAND HRS Longitudinal File 2014 V2 Documentation, 2018). The baseline interview response rates for various cohorts entering the HRS range from 69% to 82% and the re-interview response rates hover around 85%-93% (HRS, 2017).

The HRS covers a range of topics, including respondents' marital histories, demographic characteristics, employment status, household income, family composition, and wealth, making the data ideal for this study. We created a marital history file to track the marriages formed and dissolved by all respondents. The HRS also includes information on cohabitation status at each interview which allows us to track cohabitation experiences among HRS respondents. In total, 28,225 respondents were interviewed in 2004 or later. Of them, 21,082 were married. Among married respondents, 644 separated or got divorced (divorced hereafter) between 2004 and 2014. Respondents who were in same-sex unions (n = 4) were excluded because the small sample size prevents us from conducting a separate analysis. We further removed respondents who had a sample weight equal to zero (because of age ineligibility), were missing throughout the observation period (n = 37), or had a missing value on standard of living before or after divorce (n = 13), yielding 590 respondents (2,699 person-years) for analysis. Of them, 279 were women (1,316 person-years) and 311 were men (1,383 person-years). Respondents were followed up until they died or until the last interview in 2014.<sup>1</sup>

#### Measures

Two economic well-being indicators were examined. One was *standard of living*, a time-varying measure comparing reported household income from the last calendar year (along with family size and composition) to the U.S. census poverty thresholds for the year prior to the interview wave (i.e., an income-to-needs ratio). This measure is preferable to income because it accounts for family size and composition, which often changes following divorce. Because the measure was skewed to the right, ranging from 0 to 120.42 with a mean of 4.64, those with a ratio beyond the 95th percentile (13.98) were top-coded to the 95th percentile.

The other economic well-being indicator was wealth, captured by a time-varying measure of the respondent's total household assets (i.e., primary residence; secondary residence; real estate; vehicles; business; IRA or Keogh accounts; stocks, mutual funds, and investment trusts; checking, savings, or money market accounts; CD, government savings bonds, or T-bills; bonds or bond funds; and all other savings) minus all debt (i.e., mortgages or home loans for primary or secondary residence and other debt). This wealth measure represents the net assets of two adults for respondents who were married or cohabiting and the net assets of one adult for respondents who were not married or cohabiting. Although an earlier study (Wilmoth & Koso, 2002) divided net assets by 2 to obtain per capita measure of wealth, more recent studies (e.g., Addo & Lichter, 2013) have not followed this approach because the per capita measure does not capture how women's bargaining power relative to their husbands' differs across couple households. Moreover, relying on the household-level measure elucidates how net assets were divided between women and men after divorce and allows us to gauge whether and to what extent wealth loss from divorce was reversed after repartnering. Wealth values were converted from nominal dollars to 2014 dollars to account for inflation, resulting in

an initial range from -\$2,\$14,138 to \$27,597,632 with a mean of \$332,915. Similar to standard of living, those with wealth beyond the 95th percentile (\$1,255,311) were top-coded to the 95th percentile. We also bottom-coded four outliers to -\$472,180 (i.e., the fifth lowest value) and thus wealth ranged from -\$472,180 to  $\$1,255,311.^2$ 

*Time* was coded 0, 2, 4, 6, 8, and 10, representing the six time periods as the HRS respondents were interviewed every other year.

Additionally, we created four variables to capture person-specific discontinuities in the trajectory after divorce (Singer & Willett, 2003). *Transition to divorce* was a time-varying variable indicating whether the respondent became divorced (coded 1) or remained married (coded 0) at each wave.

Years since divorce clocked the number of years since divorce occurred. This variable was coded 0 before the respondent became divorced and started counting time (e.g., 1, 2, 3 years, etc.) beginning 1 year after the divorce occurred. We were able to capture years since divorce in an increment of one year because when respondents reported becoming divorced, the HRS asked them to report the year in which the divorce occurred.

*Transition to repartnering* was a time-varying variable measured at each wave to distinguish between repartnering through marriage or cohabitation (coded 1) versus remaining divorced (coded 0). In rare cases in which respondents experienced multiple repartnerships after divorce, only the first repartnership was considered in the analysis.

Years since repartnering clocked the time since repartnering occurred. This variable was coded 0 before the respondent repartnered and started counting time (e.g., 1, 2, 3 years, etc.) beginning the year after repartnering occurred. Similar to years since divorce, when respondents reported having formed a new union, then the HRS asked them the year in which the remarriage or cohabitation began.

Together, the estimates from these parameters allow us to capture pre-divorce economic well-being as well as the full trajectory of economic well-being before, during, and after divorce to examine how women's and men's economic circumstances changed in response to divorce in both the short and long term. We also considered whether repartnering was associated with gains in economic well-being and whether the benefit of repartnering persisted over time.

Several demographic characteristics were considered. *Marriage order* was a dichotomous variable tapping whether the current marriage was a first marriage (coded 0) or a higher-order marriage (coded 1).<sup>3</sup> *Marriage duration at baseline* and *age at baseline* were measured in years. *Racial and ethnic background* was gauged by white (reference category), black, Hispanic, or other race. Education was captured by a set of four categorical variables: less than high school (reference category), high school, some college, and college or higher. *Employment status* was a time-varying indicator of whether the respondent was

working full or part time (coded 1) or not working (coded 0).<sup>4</sup> Missing data were minimal; less than 3% of personyear observations for marital duration at baseline and less than 0.1% for race were missing. We performed multiple imputation using chained equations (MICE), the *mi impute chained* command in Stata, which imputed missing values for a given variable as a function of other covariates and the dependent variables in the models (Raghunathan et al., 2001; van Buuren et al., 1999). The results were based on 10 random, multiply-imputed replicates.

#### Analytic Strategy

We conducted three analyses. First, we compared median levels of standard of living and wealth at the wave before divorce, as well as the wave after divorce/repartnering, for those who repartnered versus those who remained single. Second, we compared the baseline characteristics of women and men using means and percentages (as appropriate) in the Supplementary Table 1. Finally, we pooled the observations from all six time periods and estimated hybrid fixed/random-effects models (Allison, 2009), as specified below:

$$y_{it} = \mu_t + \beta \left( \mathbf{x}_{it} - \overline{\mathbf{x}}_i \right) + \gamma \overline{\mathbf{x}}_i + \delta \mathbf{z}_i + \alpha_i + \varepsilon_{it}$$

where  $y_{it}$  is the dependent variable for person *i* at time *t*;  $\mu_t$  indicates an intercept that may differ for each time period;  $(x_{it} - \bar{x}_i)$  represents a vector of deviations of time-varying variables from their respective means over the six time periods;  $\bar{x}_i$  is a vector of person-specific means of the time-varying variables  $x_{it}$  (and therefore time-invariant);  $z_i$  depicts a vector of other time-invariant variables; and  $\beta$ ,  $\gamma$ , and  $\alpha$  are vectors of coefficients. Both  $\alpha_i$  and  $\varepsilon_{it}$  are error terms, where  $\alpha_i$  varies across individuals and  $\varepsilon_{it}$  varies for each individual at each time period.

A hybrid model approach combines the unique advantages of both fixed-effects and random-effects models. On the one hand, fixed-effects models are superior to randomeffects models because the former use each individual as his or her own control, thereby statistically removing unobserved, time-invariant variables that may confound the association between divorce/repartnering and economic well-being (e.g., attractivity, intelligence, and personality traits). On the other hand, a disadvantage of fixed-effects models is that all coefficients for time-invariant variables are differenced away, obscuring the effects of key sociodemographic factors. A hybrid model allows us to retain these coefficients by estimating a random-effects model in which the deviations of time-varying variables from their respective means as well as the means themselves are included (rather than including time-varying variables) (Allison, 2009). The estimates for the deviation variables are identical to the estimates for the time-varying variables that we would have obtained from the fixed-effects model. The estimates for the mean variables are not particularly interesting, but are necessary to obtain the fixed-effects coefficients.

For the comparisons of the median levels of standard of living and wealth before divorce and after divorce/ repartnering for those who repartnered and those who remained single, we used wave-specific sample weights to adjust for the unequal probability of selection (for blacks, Hispanics, and respondents living in Florida) and nonresponse (Ofstedal et al., 2011). For the descriptive analvsis that compares the baseline characteristics of women and men, baseline sample weights were used. For the hybrid fixed/random-effects models, we applied normalized wave-specific sample weights to within-person variation and baseline sample weights to between-person variation in the models following the recommendation of Heeringa and colleagues (2017). We also computed robust standard errors to reflect the intra-clustering correlations arising from the HRS sampling strata. Because individuals with lower income or wealth were more likely to drop out of the longitudinal study compared with those with more economic resources, we included wave-specific indicators (1 = dropout at a given wave and 0 = remaining in the study) to take into account potential bias due to differential attrition (Muthén et al., 2011).

# Results

We compared the standard of living and wealth for women and men who transitioned to divorce in Table 1. For women, the median standard of living was 3.75, signaling a median household income that was 3.75 times the poverty line, at the wave prior to divorce and 2.07 at the wave when respondents first reported that they got divorced, a 45% reduction. In contrast, men experienced a 21% reduction, from a standard of living of 4.10, which corresponded to a median household income that was 4.10 times the poverty line, at the pre-divorce wave to 3.22 at the post-divorce wave. No gender difference was found for the median standard of living prior to divorce, but men's median standard of living was significantly higher than women's after divorce (p < .01). Women and men shared similar median values of wealth before and after divorce. Before divorce, women had \$140,327 and men had \$138,168 in assets. After divorce, assets were only \$65,991 and \$58,826 for women and men, respectively. Unlike for standard of living, women and men experienced comparable magnitudes of reduction in wealth after divorce (53% for women and 57% for men).

Because repartnering following gray divorce is selective of those with the most economic resources (Brown et al., 2019; Vespa, 2012), we also examined median levels of standard of living and wealth separately for those who repartnered versus those who remained single. As revealed in Table 1, men were more likely to repartner after divorce than women (31% vs. 20%, p < .05). Women who repartnered were similar to women who remained single in their standard of living prior to divorce, with median levels at 3.75 and 3.81 times the poverty line, respectively. In contrast, men who repartnered enjoyed higher pre-divorce standard of living than men who remained single (5.50 vs

	Women			Men			
	Total	Remained single	Repartnered	Total	Remained single	Repartnered	
Standard of living							
at wave before divorce	3.75	3.81	3.75	4.10	3.60 <sup>d</sup>	5.50 <sup>d</sup>	
at wave after divorce	2.07	2.00ª		3.22	2.59 <sup>e</sup>		
at wave after repartner			3.63ª			4.83 <sup>e</sup>	
Wealth (2014 dollars)							
at wave before divorce	140,327.14	138,168.34 <sup>b</sup>	280,753.25 <sup>b</sup>	138,168.34	106,656.16 <sup>f</sup>	200,861.08 <sup>f</sup>	
at wave after divorce	65,990.85	47,173.15°		58,825.82	56,710.89		
at wave after repartner			129,171.43°			111,359.56	
Unweighted N	279	217	62	311	211	100	
Weighted %		79.84	20.16		68.98	31.02	

**Table 1.** Weighted Median Standard of Living and Wealth by Gender and Repartnering Status, Health and Retirement Study,2004–2014

Note: Medians with the same superscripts are statistically different from each other, p < .05 (two-tailed tests).

3.60, p < .05). After divorce, women's median standard of living was significantly higher for those who repartnered at 3.63 than those who remained single at 2.00 (p < .05). Stated differently, by repartnering, women largely recouped their pre-divorce standard of living whereas women who did not repartner experienced a roughly 48% (=[2.00 – 3.81]/3.81) decline in standard of living following divorce. A similar pattern emerged for men. Repartnered men's median standard of living was 4.83 versus 2.59 for men who did not repartner (p < .05). Again, repartnering assuaged men's drop in standard of living following divorce.

Regardless of gender, pre-divorce wealth levels were roughly twice as high for those who repartnered as those who remained single. For women, the repartnered had a median of \$280,753 in pre-divorce wealth versus just \$138,168 for women who did not repartner (p < .05). For men, median pre-divorce wealth was \$200,861 for those who repartnered compared with only \$106,656 for those who did not (p < .05). After divorce, median wealth for unpartnered women was only \$47,173 versus \$129,171 for repartnered women (p < .05). Among men, median postdivorce wealth for the repartnered was \$111,360 whereas for the unpartnered it was just \$56,711. Although women and men did not fully recoup their wealth losses through repartnering, nonetheless they achieved significantly higher levels of wealth than their counterparts who did not form a new union following gray divorce.

Women and men were largely similar in their demographic characteristics, as shown in Supplementary Table 1. On average, slightly more than 60% of respondents were in a higher-order marriage (vs a first marriage). The average length of marriage was 18 years and the average age was 57 years old at baseline. Approximately three quarters of respondents were white, 13% were black, 9% were Hispanic, and 4% belonged to another racial and ethnic background. The vast majority of respondents had at least a high school degree. Men were more likely than women to be working at baseline (65% vs 55%, p < .05). Next, we estimated a hybrid fixed/random-effects model to examine the short- and long-term effects of divorce and subsequent repartnering on standard of living and compared whether the trajectories differed for women and men. The estimates are presented in Table 2. Holding demographic characteristics constant, women who got divorced experienced a 2.20-point average reduction in standard of living whereas men who got divorced averaged just a .80-point reduction (p < .05). Years since divorce were unrelated to standard of living for both women and men, suggesting that the detrimental effect of divorce on standard of living is long term.

We also considered whether gray divorce(e)s reaped benefits from repartnering. The level of standard of living increased abruptly following repartnering although the magnitude was only statistically significant for women (2.30, p < .001). This beneficial effect of repartnering for women persisted over time as years since repartnering had no appreciable effect on women's standard of living, indicating that the economic advantage associated with repartnering is long term. For men, repartnering was unrelated to standard of living after controlling for other covariates (.36, p > .05), but employed men tended to achieve a higher standard of living than unemployed men (1.42, p < .001).

Demographic characteristics operated similarly for women's and men's standard of living. Older adults, whites, and individuals who had more education enjoyed higher standards of living than their respective counterparts. Marriage order and marital duration were not associated with either women's or men's standard of living.

To facilitate interpretation of the results, we plotted hypothetical trajectories for women and men based on the fixed-effects coefficients shown in Table 2. We set the transition to divorce variable equal to year 2, the transition to repartnering variable equal to year 6, and then clocked the time since divorce/repartnering occurred, while holding other covariates at their mean levels. As shown in Figure 1,

	Women	Men
Time-varying covariates		
Time, deviation	-0.02 (0.07)	0.00 (0.08)
Transition to divorce, deviation	-2.20 (0.34)***	-0.80 (0.36)*
Years since divorce, deviation	-0.06 (0.09)	0.01 (0.13)
Transition to repartnering, deviation	2.30 (0.46)***	0.36 (0.49)
Years since repartnering. deviation	-0.07 (0.11)	-0.04 (0.12)
Working, deviation	0.32 (0.27)	1.42 (0.33)***
Time, mean	-2.22 (1.31)	-1.09 (1.01)
Transition to divorce, mean	-3.32 (1.86)	0.64 (2.31)
Years since divorce, mean	0.39 (0.31)	-0.28 (0.38)
Transition to repartnering, mean	0.76 (1.88)	3.97 (1.54)*
Years since repartnering, mean	-0.06 (0.47)	-0.55 (0.39)
Working, mean	2.34 (0.45)***	3.05 (0.37)***
Time-invariant covariates		
Higher-order marriage	-0.81 (0.43)	-0.73 (0.50)
Marital duration at baseline	-0.01 (0.02)	0.01 (0.02)
Age at baseline	0.07 (0.03)*	0.07 (0.02)***
Black	-0.97 (0.37)*	-1.13 (0.34)**
Hispanic	-1.31 (0.32)***	-1.38 (0.43)**
Other race	-1.46 (0.69)*	-1.67 (0.55)**
High school	0.64 (0.38)	0.28 (0.34)
Some college	1.19 (0.42)**	1.63 (0.34)***
College or higher	3.13 (0.51)***	2.88 (0.44)***
Intercept	11.25 (6.31)	4.23 (5.46)
Variance components		
Within person, SD	2.35 (0.12)	2.75 (0.13)
Between person, SD	1.84 (0.14)	1.76 (0.14)
F statistic	9.14	17.06
Number of person-years	1,316	1,383

Table 2.	Regression C	Coefficients (	SEs) from	Hybrid	Fixed/Ranc	lom-Effects	Models	Predicting	Standard o	f Living,	Health and
Retirem	ent Study, 20	04–2014									

Notes: The models also include four dichotomous variables indicating the waves at which the respondents dropped out of the study. \* $p \le .05$ . \*\* $p \le .01$ . \*\*\* $p \le .001$  (two-tailed tests).



Figure 1. Predicted standard of living (income-to-needs ratio).

standard of living abruptly declined after divorce, more so for women than men (p < .01). For both women and men, the trajectories remained flat after divorce, indicating no appreciable economic recovery. Standard of living rose precipitously after repartnering for women (p < .001) but not for men. Again, the trajectories remained relatively unchanged for women after repartnering, signaling that the economic gains persisted over time.

We conducted parallel analyses for wealth as revealed in Table 3. To simplify the presentation, we rescaled wealth by dividing the dollar value by \$1,000 when estimating the model. Holding demographic characteristics constant, women and men who divorced experienced a comparable reduction in assets (\$129.80K vs \$111.31K, p > .05). Years since divorce were unrelated to wealth for both women and men, signaling that the detrimental effect of divorce on wealth is long term.

We also considered whether gray divorce(e)s reaped economic benefits from repartnering. The level of wealth increased swiftly following repartnering for women (\$66.84K, p < .05) but not for men (\$3.26K, p > .05). This beneficial effect of repartnering for women persisted over time as years since repartnering had no appreciable effect on wealth, suggesting that the economic advantage associated with repartnering, which partially offsets the wealth loss due to divorce, is also long term.

The associations of demographic characteristics with wealth were largely comparable with those for standard of living except that employment status was not associated with men's wealth and individuals in higher-order marriages owned significant fewer assets than those in first marriages, reflecting the cumulative disadvantage associated with multiple divorces.

We also plotted predicted wealth trajectories for women and men to examine the effects of divorce and repartnering based on the fixed-effects coefficients shown in Table 3. We set the transition to divorce variable equal to year 2, the transition to repartnering variable equal to year 6, and then clocked the number of years since divorce/ repartnering occurred, while holding other covariates at their mean levels. As presented in Figure 2, wealth abruptly declined after divorce, in similar magnitude for women and men (p > .05). For both women and men, the trajectories remained flat after divorce, signaling no appreciable rebound in wealth over time. Wealth immediately increased after repartnering, although it was statistically significant only for women (p < .05). The trajectories remained stable after repartnering, indicating the gains in wealth persist across time for women.

# Discussion

The recent doubling of the gray divorce rate foregrounds the importance of deciphering the consequences of gray divorce. Older adults face unique challenges when divorcing during the second half of life which can lengthen the postdivorce adjustment process (Wang & Amato, 2000). From the stress-adjustment perspective, we posited that gray divorce is a chronic economic strain from which individuals typically do not recover. Building on the existing literature showing negative economic consequences of divorce, particularly for women (Duncan & Hoffman, 1985; Peterson, 1996; Sharma, 2015; Tach & Eads, 2015), we investigated gender differentials in the short- and long-term financial well-being of older adults who experienced gray divorce, accounting for subsequent repartnering. We anticipated

 Table 3. Regression Coefficients (SEs) from Hybrid Fixed/Random-Effects Models Predicting Wealth (in \$1,000), Health and

 Retirement Study, 2004–2014

	Women	Men
Time-varying covariates		
Time, deviation	1.00 (5.83)	-6.88 (6.32)
Transition to divorce, deviation	-129.80 (24.56)***	-111.31 (24.24)***
Years since divorce, deviation	-9.29 (7.71)	10.77 (8.30)
Transition to repartnering, deviation	66.84 (34.17)*	3.26 (31.66)
Years since repartnering, deviation	6.25 (8.02)	-4.39 (8.87)
Working, deviation	-2.52 (26.24)	-29.02 (21.84)
Time, mean	-325.63 (142.20)*	-166.50 (123.93)
Transition to divorce, mean	14.84 (184.30)	-218.54 (280.99)
Years since divorce, mean	-11.58 (31.02)	25.02 (47.78)
Transition to repartnering, mean	34.11 (258.13)	338.24 (205.51)
Years since repartnering, mean	-1.82 (59.73)	-103.04 (50.93)*
Working, mean	45.86 (48.64)	-6.07 (48.03)
Time-invariant covariates		
Higher-order marriage	-174.91 (66.12)**	-170.01 (59.02)**
Marital duration at baseline	-0.11 (2.04)	-0.19 (2.04)
Age at baseline	8.93 (3.50)*	7.48 (3.10)*
Black	-120.02 (32.54)***	-168.77 (30.48)***
Hispanic	-109.44 (41.18)**	-178.25 (46.49)***
Other race	201.56 (85.11)*	-250.84 (78.77)**
High school	122.95 (40.06)**	21.79 (39.58)
Some college	153.73 (46.45)**	61.87 (42.46)
College or higher	373.45 (57.18)***	265.52 (62.46)***
Intercept	1,384.02 (659.03)*	820.64 (683.56)
Variance components		
Within person, SD	190.23 (10.87)	192.17 (12.77)
Between person, SD	243.14 (17.04)	255.03 (14.56)
F statistic	9.34	8.77
Number of person-years	1,316	1,383

*Notes*: The models also include four dichotomous variables indicating the waves at which the respondents dropped out of the study. \* $p \le .05$ . \*\* $p \le .01$ . \*\*\* $p \le .001$  (two-tailed tests).



Figure 2. Predicted wealth.

that repartnering would be associated with significant gains in economic well-being and that the beneficial effects of repartnering would persist over the long term. Our study is the first to take a longitudinal approach to examining the short- and long-term economic outcomes associated with gray divorce. We relied on a rigorous modeling strategy that accounted for both pre-divorce levels of economic well-being and factored in the role of subsequent repartnering following gray divorce, charting withinperson change for up to a decade. Another strength of our study was its dual focus on both standard of living and wealth. As individuals age, their reliance on income is likely to decline as they detach from the labor force and draw down their assets.

The economic consequences of gray divorce are substantial. We found that the standard of living for women declined by 45% following divorce. The drop for men was less severe but still sizeable at 21%. Likewise, women's and men's wealth plummeted by roughly 50% after gray divorce, which is not surprising given that we would expect divorcing couples to split their assets 50–50. Nonetheless, it underscores the considerable financial toll gray divorce takes, cutting nest eggs in half. These short-term losses are of substantively larger magnitudes than those documented in recent studies of the economic consequences of divorce among younger women and men (McManus & DiPrete, 2001; Tach & Eads, 2015), supporting our assertion that gray divorce could have particularly harsh financial ramifications for women and men.

The negative economic outcomes associated with gray divorce persisted over time, indicating that gray divorce operates as a chronic economic strain. Women's and men's standard of living did not rebound after divorce, perhaps because older adults were not able to swiftly augment their attachment to the labor force. We were skeptical that individuals would be able to rebuild their wealth soon after divorce, particularly because they would have less disposable income, precluding them from replenishing their savings. Indeed, individuals did not exhibit recovery over time on wealth. Rather, post-divorce levels of both standard of living and wealth remained remarkably flat even several years after gray divorce for women and men alike.

Forming a new union was associated with economic gains among women. Given women's general reluctance to repartner in later life (McWilliams & Barrett, 2014; Talbott, 1998), those who repartner tend to be selective of women who are white, younger, in better health, and with more economic resources (Brown et al., 2019; Vespa, 2012). Repartnering as a path to economic recovery is unlikely to be a realistic option for less advantaged women. In fact, we showed that women who repartnered had about twice as much wealth pre-divorce as their counterparts who did not repartner. For men, repartnering did not appreciably diminish the declines they experienced in standard of living or wealth following divorce. Ultimately, repartnering is not a panacea because few women and men actually do repartner, making it an unviable solution for recouping financial losses associated with gray divorce.

Findings from our study have notable policy implications. Many public and private programs are predicated on the assumption that married couples stay together until spousal death. For instance, the provisions governing the disbursement of Social Security often penalize those who get divorced as divorced individuals are eligible for spousal benefits only if they were married for at least 10 years and do not remarry before age 60. The benefits, when eligible, comprise just half of their ex-spouse's worker's benefits as opposed to 100% for widow(er)s (Carr, 2019). Gray divorced women and men, on average, receive smaller Social Security benefits than their widowed counterparts. Despite near universal receipt of Social Security benefits among those age-eligible, gray divorced women are twice as likely to live in poverty as gray widowed women (Lin et al., 2017). This differential is important for at least two reasons. First, it means that Social Security is less effective at lifting divorced than widowed women out of poverty. Second, it signals that gray divorced women have fewer other economic resources on which to rely, leaving them at much higher risk of poverty compared with widowed women. In short, those who experience gray divorce already face considerable economic insecurity and the eligibility rules for Social Security further jeopardize their economic well-being.

Other potential sources of economic support may prove inadequate. For instance, upon the death of an ex-spouse who remarried, divorce(e)s lose their ex-spouse's pension if no court order was in place at the time of divorce as many pensions are required to pay survivor's benefits to only one spouse, which would be the spouse at the time of death (Holden & Kuo, 1996). Also, although many single-headed families rely on poverty-based social programs such as Temporary Assistance for Needy Families (TANF) and Supplemental Security Income (SSI), the levels of material support have dropped in recent years and are insufficient to lift recipients out of poverty (Meyer & Abdul-Malak, 2015). With the growing popularity of gray divorce and its potentially dire economic consequences, national policies and safety net programs require realignment with the shifting demographics in later life to ensure the financial security of all older adults, including gray divorce(e)s.

This study makes a significant contribution to research on the economic consequences of divorce by shifting the lens to divorce that occurs during the second half of life, an increasingly common event given the doubling of the gray divorce rate and the swelling population of older adults. Still, it has some limitations. Wealth is composed of numerous types of assets and it is possible that gray divorce (and repartnering) affects the levels of some types of assets more than others, but an examination of how various asset types changed following divorce was beyond the scope of our study. Economic well-being was captured for the previous calendar year at each interview wave, which occurred every 2 years. Thus, in some cases our initial measure of post-divorce economic status occurred very soon after divorce whereas for others the time lag was longer, depending on the timing of divorce prior to the interview. It is possible that the Great Recession of 2007-2009 might have altered both the risk of gray divorce and the economic consequences. Robustness checks uncovered no evidence that either the level of gray divorce or the magnitude of the decline in wealth following divorce was distinctive during the recession period. The modest number of respondents who repartnered meant that we had to combine cohabitation and remarriage. A supplemental analysis indicated that 44% of women and 58% of men repartnered through cohabitation, and levels of economic well-being were largely similar regardless of whether repartnering occurred through cohabitation or remarriage. This finding aligns with the growing evidence that cohabitation is a long-term substitute for remarriage in later life (Brown & Wright, 2017). Finally, although the hybrid fixed/random-effects model allowed us to control for unobserved, time-invariant variables that could confound the association between divorce/repartnering and economic well-being, the model did not account for unobserved confounding variables that change over time.

Despite these limitations, our work clearly demonstrates that gray divorce is often financially devastating, especially for women. By taking a longitudinal approach that involved following individuals for up to a decade, we uncovered the chronic economic strain associated with gray divorce. Although repartnering seems to reverse most of the economic costs of gray divorce, few older adults form new co-residential unions after divorce. This study offers a cautionary tale about the financial aftermath of gray divorce, which is likely to contribute to growing economic disadvantage among older adults.

#### **Supplementary Material**

Supplementary data are available at *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* online.

# **Author Notes**

<sup>1</sup>Of the 590 respondents, 7.6% died before the end of the study (2014). On average, respondents contributed 4.6 waves of information to the study (4.7 waves for women and 4.4 waves for men).

<sup>2</sup>We re-estimated the hybrid fixed/random-effects models using the logarithm of wealth and reached the same conclusions (results not shown but available upon request). To ease the interpretation of the coefficients and figures, we present the raw value of wealth in the analysis.

<sup>3</sup>We separated higher-order marriages according to dissolution pathway to distinguish between remarriage after divorce and remarriage after widowhood, but we did not find statistically significant differences between these two groups in terms of their standard of living and wealth. Thus, we simply differentiated those in a higher-order marriage versus first marriage in all models.

<sup>4</sup>We found that full-time and part-time employment had similar associations with standard of living and wealth, and thus these two groups were combined in the analysis (results not shown but available upon request).

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# **Conflict of Interest**

None declared.

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# **Author Contributions**

I.-F. Lin and S. L. Brown planned the study and wrote the paper. I.-F. Lin performed all statistical analyses.

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