

# Marital Histories and Heavy Alcohol Use among Older Adults

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#### **Abstract**

We develop a gendered marital biography approach—which emphasizes the accumulating gendered experiences of singlehood, marriage, marital dissolution, and remarriage—to examine the relationship between marital statuses and transitions and heavy alcohol use. We test this approach using individual-level (n= 10,457) and couple-level (n= 2,170) longitudinal data from the Health and Retirement Study, and individual-level (n= 46) and couple-level (n= 42) in-depth interview data. Quantitative results show that marriage, including remarriage, reduces men's but increases women's drinking relative to being never married and previously married, whereas divorce increases men's but decrease women's drinking, with some variation by age. Our qualitative findings reveal that social control and convergence processes underlie quantitative results. We call attention to how men's and women's heavy drinking trajectories stop, start, and change direction as individuals move through their distinctive marital biography.

# **Keywords**

alcohol, gender, health behavior, Health and Retirement Study, marital dissolution, marriage

The marital biography approach draws on life course theory to suggest that health and health behaviors (e.g., alcohol use) are a function of an individual's entire marital history—the cumulative number and types of current and past unions (Hughes and Waite 2009; McFarland, Hayward and Brown 2013). The cumulative nature of the marital biography may be especially evident with advancing age, as marital transitions build across the life course (Umberson et al. 2006). Despite burgeoning theoretical interest in marital biographies, few studies have tested this approach empirically; studies that do test this approach have not identified which marital biographies matter most for health and health behavior in mid-to later life (Hughes and Waite 2009). Moreover, while the association of marriage and health is highly gendered, few studies have explained why particular marital biographies matter differently for men's and women's health and health behavior. These research gaps limit our understanding of the meanings and

health implications of "his" and "hers" marriages (Carr and Springer 2010).

We advance research in this area by developing a gendered marital biography approach, which draws attention to multiple experiences of singlehood, marriage, marital dissolution, and remarriage that accumulate with age and vary by gender. We empirically test our gendered marital biography approach with a mixed-methods analysis of individual-level

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and couple-level quantitative and qualitative data concerning one specific health behavior-heavy alcohol use. According to national estimates, nearly 15% of older adults surpass the recommended daily limit of three drinks per day at least one day per week (Knowles et al. 2013; National Institute on Alcoholism and Alcohol Abuse [NIAAA] 2005). The implications of heavy alcohol use for chronic disease and mortality are unequivocal and increasingly consequential with advancing age (Gunzareth et al. 2004; Thun et al. 1997). This has important, and often overlooked, implications for the health and well-being of aging adults. We use a mixedmethods approach because it allows us both to document patterns of association between marital biography and heavy alcohol use (quantitative analysis) and to identify the specific relational and dyadic processes through which these biographies relate to heavy drinking (qualitative analysis) (Johnson, Onwuegbuzie, and Turner 2007). First, we use individual-level, longitudinal, national survey data from the Health and Retirement Study (HRS) (n = 10,457) to examine how marital trajectories of mid- to later-life men and women (ages 51–61 at first interview) are associated with heavy alcohol use (i.e., three drinks or more per day each week). Second, to explore sources of heterogeneity among those who are continually married, we capitalize on couple-level longitudinal data from the HRS (n = 2,170 couples) to consider how the heavy alcohol use of one spouse influences alcohol consumption in the other spouse over time. Third, to identify specific gendered processes that underlie our quantitative findings, we analyze qualitative indepth interview data from 88 mid- to later-life married, remarried, divorced, and never-married men and women (ages 40-89).

#### **BACKGROUND**

# Heavy Alcohol Use across the Gendered Marital Biography

Married men and women drink less, on average, than their unmarried counterparts (Leonard and Rothbard 1999; Waite 1995), and the transition to first marriage is associated with diminished alcohol use for both men and women (Bachman et al. 2002; Christie-Mizell and Peralta 2009; Fleming, White, and Catalano 2010; Uecker 2012). Yet, many questions about gender, marital status, and alcohol use remain unanswered. Most studies consider marital status at a single point in time, typically examining the transition to first marriage or the first two years

of marriage (Fleming et al. 2010). Yet, individuals can have multiple marital statuses and transitions over their life course; for example, in 2013, 40% of new marriages included at least one partner who had been previously married, and 20% of new marriages were between people who had both been previously married (Livingston, 2014). Moreover, studies of marriage and alcohol use typically focus on any change in alcohol use (e.g., number of drinks per week) and do not focus on heavy alcohol use-the strongest alcohol-related predictor of health (Gunzareth et al. 2004). Heavy alcohol use is associated with a broad range of problematic outcomes, including elevated risk of all-cause mortality, suicide, accidents, and risk of diseases, including heart disease, liver disease, and specific cancers (Centers for Disease Control and Prevention, 2014).

In addition, previous studies are inconclusive regarding the prevalence and causes of the gendered patterns of alcohol use across the marital biography. For example, while first marriage reduces alcohol use among both men and women, some studies suggest that this reduction is greater for men than for women (Duncan, Wilkerson, and England 2006; Power, Rogers, and Hope 1999). Similarly, some research shows that divorce is associated with increased alcohol use for both men and women (Perreira and Sloan 2001), whereas others find this pattern only among men (Power et al. 1999). Further, studies examining gender differences in marriage and alcohol use typically draw on "social role" and "socialization" theories—approaches that have been criticized by gender scholars for assuming static notions of gender (Springer, Hankivsky, and Bates 2012). Contemporary scholars propose gender relations theory to explain gendered phenomena (Connell 1995; Ferree 2010), wherein masculinity and femininity are relational, complementary constructs that change over historical time and across social positions, including age and marital status (Ferree 2010). In this approach, men's heavier alcohol use (Galea, Nandi, and Vlahov 2004; Sacco, Bucholz, and Harrington 2014) may persist as a social practice that reflects pervasive enactments of "hegemonic masculinity," defined as the culturally and historically specific ideal of how men should behave (Connell 1995; Peralta 2007). By contrast, women's more moderate alcohol use is conceptualized as an indicator of "emphasized femininity"—an idealized form of femininity that contributes to women's subordinated place in the gender order (Nolen-Hoeksema 2004; Rolfe, Orford, and Dalton 2009).

Previous studies have also failed to adequately assess the pathways linking marital statuses and

transitions to heavy alcohol use (Bachman et al. 2002; Fleming et al. 2010). Rather, researchers draw post hoc conclusions regarding potential explanatory mechanisms without directly assessing such processes (Carr and Springer 2010). We extend prior work by analyzing the role of three potential explanatory mechanisms—marital resources, convergence, and selection processes—as pathways that may link the gendered marital biography to heavy alcohol use. We merge life course and gender relations approaches (Lodge and Umberson 2012) to theorize how these pathways may be distinct for mid- to later-life men and women.

#### Marital Resources

Marriage has been linked to reduced alcohol use through the direct spousal regulation (Reczek and Umberson, 2014) as well as through the indirect instrumental, emotional, and informational support that buffers against psychological distress (Taylor, Repetti, and Seeman 1997); psychological distress is associated with heavy alcohol use (Galea et al. 2004; Uecker 2012). Women provide more social support and social control to their husbands than vice versa due to prevailing ideologies and socialization processes that encourage women to act as caregivers and men as risk takers (Reczek and Umberson 2012; Rosenfield, Lennon, and White 2005). Thus, the protective effects of marriage on heavy alcohol use may be stronger for men than women. Social control and support may become more important with advancing age, as both processes accumulate over time and have attendant effects on health behaviors (Reczek and Umberson 2012). Additionally, the marital relationship becomes more central to health behavior as people age, in part due to transitions out of other salient social roles, such as parenthood or paid employment (Williams 2003).

In the case of divorce, the loss of social support and social control coupled with increased stress during dissolution may contribute to heavy alcohol use, especially for those exiting marriages marked by relatively high quality and low conflict (Umberson, Liu, and Reczek 2008). This risk may be particularly acute for men, who are more likely than women to engage in externalizing behaviors, such as heavy drinking, to cope with stress (Courtenay 2000; Sacco et al. 2014). Alcohol use may be heaviest during the divorce transition, especially with advancing age, when both stress and the loss of marital resources are most severe (Rosenfield et al. 2005; Sasson and Umberson 2014; Williams and Dunne-Bryant 2006). Remarriage may alleviate negative effects of divorce

on health (Williams 2003), although the extent to which this is true for heavy alcohol use is unknown. The effects of remarriage may be especially protective for men who are more likely to remarry after divorce than for women (Kreider and Ellis 2009).

# Alcohol Convergence and Divergence

Research on marital biographies typically treats married persons as a reference group, failing to consider heterogeneity within marriages, such as the level of alcohol consumed by one's spouse. Current or past spouses' heavy alcohol use may affect drinking via convergence (i.e., becoming more similar) or divergence (i.e., becoming less similar) (Stimpson et al. 2006). In long-term marriage, spouses may enter into a "drinking partnership" wherein spousal drinking becomes more similar over time (Falba and Sindelar 2008; Leonard and Mudar 2004). For example, a moderate drinker may increase consumption to "keep up" with a heavy-drinking spouse (Meyler, Simpson, and Peek 2007). This convergence also partly reflects a shared social environment and network (Meyler et al. 2007). Spouses may affect each other indirectly; they may share emotions, such as happiness or sadness (i.e., mood convergence or contagion), as well stress levels, which in turn influence alcohol consumption (Simon 2002).

Convergence processes are gendered and may be more salient with advancing age. Men's drinking habits prior to marriage predict their wives' drinking habits in the first year of marriage (Leonard and Mudar 2003), whereas wives' drinking in the first year of marriage predict husbands' drinking in the second year of marriage (Leonard and Homish 2008). Although past studies focus on the early years of a first marriage among young adults, qualitative studies of longer-term mid- to later-life marriages suggest that men's and women's drinking tend to converge over time (Reczek 2012; Reczek and Umberson 2012). Spouses whose drinking habits converge during marriage may subsequently diverge after dissolution due to reduced shared time. Alternatively, the drinking convergence trajectory established during marriage may continue after divorce and into a subsequent remarriage if each partner's habits became incorporated into their behavioral repertoire and persist after dissolution.

#### Social Selection

An observed statistical association between one's marital biography and heavy drinking may reflect social selection, whereby particular psychosocial, demographic, behavioral, or economic characteristics "select" one into both a particular marital biography and a trajectory of alcohol use. Prior drinking history may precede both a disruptive marital biography and heavy drinking in mid- to later life. A central component of bachelorhood includes enactments of masculinity via alcohol use wherein men who are heavy drinkers may not be considered "marriageable" (Courtenay 2000). In contrast, women's heavy drinking is not as strong a predictor of selection into (re)marriage (Bird and Rieker 2010). Selection processes also may contribute to marital dissolution, as alcohol and drug use is the third most common cause of divorce in the United States (Fu and Goldman 2000). Divorce is less common for older adults than for younger adults and is less common among the cohorts of older adults in our study relative to more recent cohorts of midlife and older adults (Brown and Lin 2012); therefore older adults may be more likely to experience divorce as "off" timed and thus as more stressful, increasing heavy alcohol use (Kreider and Ellis 2011). Discordant alcohol use among spouses is also linked with increased risk of divorce (Ostermann, Sloan, and Taylor 2005). Behavioral and sociodemographic factors beyond age and gender may confound the association between marital history and heavy alcohol use. Socioeconomic status, parental status, birth cohort, race-ethnicity, depressive and physical health symptoms, and religious denomination are associated with alcohol use and marital status (Fleming et al. 2010; Galea et al. 2004; Keyes, Li, and Hasin 2011).

# The Present Study

We use a mixed-methods approach to extend previous research in several ways. Quantitative national survey data are designed to provide population trends at the national level (e.g., breadth). To detail comprehensive marital biographies, we use individual-level longitudinal survey data to chart trajectories of change in heavy alcohol use of mid- to later-life adults across singlehood, marriage, divorce, and remarriage. To explore sources of heterogeneity among long-term married couples, we further examine convergence/divergence processes and gender differences therein with couple-level longitudinal survey data. We build on these quantitative analyses with our analysis of qualitative individual- and couple-level interview data. Qualitative in-depth interview data are designed to provide insight into the processes that underlie the alcohol trajectories of mid- to later-life men's and women's heavy alcohol use identified in the quantitative results (e.g., depth) (Johnson et al., 2007). Thus, the quantitative results guide the focus of the qualitative analysis, wherein the quantitative analysis provides population-level trends in heavy alcohol use across the marital biography and the qualitative analysis clarifies the processes through which this occurs.

#### DATA AND METHODS

# Quantitative Study

Sample. Our study was based on the HRS, collected biennially between 1992 and 2010. We used the RAND HRS data from eight waves between 1998 and 2010. The HRS is one of the largest longitudinal nationally representative surveys of married couples. Respondents were 51 to 61 at the time of the first interview. In the initial wave, in-home face-to-face interviews were conducted with 7,608 household members, yielding 12,652 individual participants. Respondents were reinterviewed every two years. The response rate at each wave was over 80%. We used the 1998 survey as the baseline wave.

We used two analytic samples. First, we examined how marital transitions between 1998 and 2006 affect alcohol use in 2006 to 2010. The individual-level sample included 10,061 individuals (4,003 men and 6,058 women) who participated in all waves between 1998 and 2010, remained in their 2006 marital status in 2008 and 2010, and had no missing values on alcohol use across waves. We excluded about 9.4% of the total sample due to these restrictions. Second, the couple-level sample included 2,767 couples who were continuously married between 1998 and 2010 in order to explore trajectories of alcohol use within marriages over the long term. Most of the couples were married before 1998; the average marital duration in 1998 was 33.54 years (SD = 11.28). Cohabiting partners were excluded due to low rates of cohabitation in the sample of older adults; heavy drinkers are more likely to select into cohabitation rather than marriage (Wilsnack and Wilsnack 1990).

#### Measures

Alcohol Use. In each wave between 1998 and 2010, participants reported whether they ever drank alcohol, the number of days in a week they drank, and the number of drinks per day. For each wave, we created a binary variable reflecting *heavy alcohol use* coded '1' if the individual consumed three or more alcoholic drinks on at least one day each week in the last three months. Federal guidelines consider three

drinks a day each week to be heavy alcohol use for all women and for older men (Fleming et al. 2010; Fine et al. 2004; NIAAA 2005). In the individuallevel models, the outcome was heavy alcohol use in 2006, 2008, and 2010; alcohol use at baseline in 1998 was included as a predictor in order to capture potential selective processes. In the couple-level models, each spouse's alcohol use in each wave was used as observed indicators for latent slopes and intercepts. We chose a threshold measure of heavy alcohol use over a continuous measure because heavy alcohol use is consistently linked with greater risk of mortality and morbidity. While a continuous measure of alcohol use would allow for the identification of any increase or decrease in alcohol use, the health implications of such change are highly variable and inconsistent (Hansel, Kontush, and Bruckert 2012). For example, research suggests that light and moderate alcohol use may in fact have protective health effects (Fillmore et al. 2006).

Marital Biographies. Focal predictors in our individual-level analysis were marital trajectories between 1998 and 2006, shown in Table 1. During this period, marital status change and continuity was characterized by 125 unique trajectories. Of these possible trajectories, 95 contained nine or fewer individuals. Table 1 presents only trajectories containing at least 10 individuals. As indicated in Table 1, many unique yet conceptually similar trajectories were combined into broader categories to ensure a sufficient number of participants. As a result, marital trajectories between 1998 and 2006 in our models were represented with nine mutually exclusive categories: stably married (n = 6,371), stably widowed (n = 1,109), stably divorced (n = 702), stably never married (n = 234), recently widowed (2004–2006; n=522), long-term widowed (2000–2002; n=459), divorced (n=139), remarried (n = 136), and other (n = 389).

Sociodemographic characteristics included *gender* (coded '1' for women and '0' for men), *age* (coded in years at the beginning of the interview), *race-ethnicity* (non-Hispanic white (reference group), non-Hispanic black, non-Hispanic other race, Hispanic), *region of residence at the interview* (South, Northeast, West, Midwest), and *religious denomination* (Catholic, Protestant, other religion, no religion). In addition, we used the cohort design of HRS, as this design allows us to explore age effects among older adults in our sample. In 1998, four cohorts were merged into a single study. The 1998 survey included a cohort born between 1931 and 1941 and their spouses (HRS), a cohort born prior to 1924 (Asset and Health Dynamics among

the Oldest Old [AHEAD]), a cohort born 1924 to 1930 (the Children of Depression [CODA]), and a cohort born 1942 to 1947 (the War Baby [WB] cohort). We coded each cohort categorically (1=AHEAD, 2=CODA, 3=HRS, and 4=WB).

Education is measured as years of schooling based on the highest completed degree. Mothers' and/or fathers' education reflects completed years of education by each parent. Employment status is coded '1' if the participant worked for pay in a given wave. Financial resources were measured with the natural log of household assets and the natural log of household income (assets below zero was recoded as 0; we added a constant (1) and took a natural log of [wealth + 1]). Physical and mental health measured include depressive symptoms based on eight items from the Center for Epidemiologic Studies—Depression Scale (CES-D), self-rated health coded from 1= "excellent" to 5= "poor," smoking status coded '1' if a participant currently smokes, and the following self-reported chronic conditions diagnosed by a physician: hypertension, diabetes, cancer, heart disease, and stroke. We controlled for these factors because they were correlated with heavy alcohol use (Sullivan, Fiellin, and O'Connor 2005) and also may be related to marital statuses and relationships (see Carr and Springer 2010). Family variables included the number of children and the total lifetime number of marriages, including current marriage, for married participants.

In individual-level and couple-level analyses, the following time-invariant variables were used as baseline controls: alcohol use at baseline, race-ethnicity, age, cohort, own and parents' education, household assets and income, employment status, region of residence, religion, number of children, number of marriages, depressive symptoms, selfrated health, smoking, and chronic health conditions. The following variables were also included as time-varying covariates in 2006, 2008, and 2010 (for individuals) and in 2000 to 2010 (for couples): age, employment status, household assets and income, number of children, depressive symptoms, self-rated health, smoking, and chronic health conditions. Couple-level models also controlled for the duration of the current marriage in years. Summary statistics for all study variables by gender are shown in Table 2.

## Statistical Approach

In the individual-level analysis, we estimated logistic growth curve models predicting the trajectories of

Trajectory	Number of Participants	s Analytic Categories	
MMMMM	6,371	Stably married	
WWWWW	1,109	Stably widowed	
DDDDD	702	Stably divorced	
NNNNN	234	Stably never married	
MMMMW	298	Recently widowed (2004–2006)	
MMMWW	224	n = 522	
MMWWW	253	Long-term widowed (2000–2002)	
MWWWW	206	n = 459	
MMDDD	41	Divorced	
MDDDD	39	n=139	
MMMMD	34		
MMMDD	25		
DMMMM	40	Remarried	
DDDMM	32	n= 136	
DDMMM	22		
DDDDM	20		
WMMMM	22		
MMMWM	17	Other (including trajectories with fewer than	
WDWWW	16	10 participants)	
DDWDD	14		
DWWWW	13		
WDDDD	13		
DDDWW	12		
MWMMM	12		
WWMMM	12		
MMWMM	11		
MWWMM	11		
WWWWM	11		

**Table 1.** Marital Trajectories between 1998 and 2006. Health and Retirement Study, N = 10.457.

Note: There are 125 unique trajectories. Of them, 95 contain nine or fewer individuals. The table shows only trajectories with at least 10 individuals. Letters denote marital status in each of the five waves: M = married; W = widowed; D = divorced; N = never married.

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heavy drinking from 2006 to 2010 based on marital trajectories between 1998 and 2006. We estimated a two-level random-intercept model: Level 1 units (measurements for a given individual) are nested within Level 2 units (individuals). This model can be represented with the following equation:

**DDDWD** 

**DDWWW** 

$$\begin{split} \Pr(\mathbf{D}_{ij} = 1 | u_j) = H[\mathbf{MT}_{ij}\beta_1 + \mathrm{Female}_i\beta_2 + \\ (\mathbf{MT}_{ij} \times \mathrm{Female}_i)\beta_3 + \\ \Sigma^q_{k=1}X_{ij}\beta_k + \Sigma^q_{m=1}X_i\beta_m + u_i], \end{split}$$

where  $D_{ij}$  is the probability of heavy drinking for individual i at wave j,  $u_j$  is the random-individual-level intercept,  $H(\bullet)$  is the logistic cumulative

distribution function, and MT represents marital trajectory. The fixed part of the model contains slope  $\beta_1$  for the effects of marital trajectories, slope  $\beta_2$  for the effect of gender, slope  $\beta_3$  for the interactive effects of marital trajectories and gender (the focal regression coefficient of interest in our analysis) and slopes  $\beta_k$  and  $\beta_m$  for the effects of time-varying and time-invariant covariates, respectively. The growth models were estimated using Stata 12.1. We used the multiple imputation (mi) module in Stata to impute missing values.

For the couple-level analysis, we estimated growth curves for two parallel processes—wife's heavy drinking and husband's heavy drinking—with

**Table 2.** Summary Statistics for Individuals and Couples, Health and Retirement Study (HRS), 1998 to 2010

	Individuals (n	= 10,061)	Couples $(n = 2,767)$	
Variable	Men (n = 4,003)	Women (n = 6,058)	Husbands	Wives
Heavy alcohol use (3+ drinks/day)				
1998	.197***	.042	.132***	.035
2000	.167***	.035	.111***	.027
2002	.185***	.037	.117***	.030
2004	.187***	.043	.117***	.035
2006	.162***	.032	.108***	.023
2008	.151***	.035	.098**	.034
2010	.136***	.027	.084**	.023
Marital trajectories, 1998–2006				
Stably married	.797***	.525		
Stably widowed	.028***	.164		
Stably divorced	.047***	.085		
Stably never married	.023	.024		
Recently widowed	.026***	.069		
Long-term widowed	.020***	.065		
Divorced	.013	.014		
Remarried	.019*	.013		
Other trajectories	.025***	.043		
Control variables, baseline, 1998	.023	.0 15		
Age (years)	61.76 (7.59)***	61.05 (9.20)	61.51 (7.26)***	58.11 (7.76)
Education (years)	12.68 (3.37)***	12.35 (2.98)	12.80 (3.35)	12.75 (2.81)
	.791***	.743	.816	.817
Non-Hispanic white Black	.108***	.149	.081	.081
	.021	.024	.021	.023
Other race	.021	.024	.082	.023
Hispanic	.537***	.443	.578*	.583
HRS cohort (b. 1931–1941)				
AHEAD cohort (b. pre-1924)	.067** .172**	.101	.051** .175**	.023
CODA cohort (b. 1924–1930)		.150 .215		.115 .279
WB cohort (b. 1942–1947)	.200*		.196***	
Mother's education (years)	9.68 (3.49)***	9.43 (3.45)	8.98 (4.27)*	9.27 (4.09)
Father's education (years) CES-D	9.29 (3.81)***	9.13 (3.69)	8.29 (4.69)*	8.55 (4.58)
	1.09 (1.60)***	1.57 (1.95)	.83 (1.41)*** .644***	1.22 (1.70)
Employed	.626***	.476		.524
Number of children	3.25 (2.05)	3.31 (2.13)	3.37 (1	,
Household wealth (log)	11.43 (3.07)***	10.85 (3.68)	11.80 (2	
Household income (log)	10.66 (1.31)***	10.341 (1.36)	10.78 (	,
Northeast	.157	.162	.15	
Midwest	.265	.263	.272	
South	.396	.404	.388	
West	.183	.171	.189	
Protestant	.623***	.669	.633**	.657
Catholic	.267	.264	.269*	.276
Other religion	.034	.029	.031	.030

(continued)

Table 2. (continued)

	Individuals (n = 10,061)		Couples $(n = 2,767)$	
Variable	Men (n = 4,003)	Women (n = 6,058)	Husbands	Wives
No religion	.076***	.038	.067**	.037
Number of marriages	1.32 (.69)	1.30 (.67)	1.34 (.65)	1.32 (.62)
Smoking	.164	.150	.143	.126
Hypertension	.421	.408	.415***	.357
Diabetes	.112**	.094	.110***	.078
Cancer	.077	.085	.075	.079
Heart problems	.208**	.172	.1 <b>72</b> ***	.098
Stroke	.039	.035	.030	.024
Feeling Ionely			.055***	.098
Couples' characteristics				
Marital duration			33.54 (	1.28)

Note: Each cell contains means (standard errors) or proportions. AHEAD = Asset and Health Dynamics among the Oldest Old; CODA = Children of Depression; WB = War Baby; b. = born; CES-D = Center for Epidemiologic Studies—Depression Scale. Asterisks denote statistically significant gender differences. \*p < .05, \*\*p < .01, \*\*\*p < .001.

regressions among random effects and time-invariant and time-varying covariates (Muthén and Muthén 1998–2010). The model estimated trajectories of heavy alcohol use between 1998 and 2010 simultaneously for both spouses. The wife's latent intercept and slope affected her observed indicators of heavy alcohol use in each of the seven waves, whereas the husband's latent intercept and slope affected his indicators. Intercepts and slopes within each couple were correlated. The focal coefficients of interest in this model were the effect of the wife's intercept on the husband's slope and the effect of the husband's intercept on the wife's slope.

# Qualitative Study

We aimed to understand the gendered marital biography and thus conducted our qualitative analysis on men and women who either remained in long-term marriages or had completed at least one marital transition, such as remarriage. Data were from two indepth interview studies, neither affiliated with the HRS. The first used couple-level data from 42 indepth interviews conducted individually with both spouses in 21 long-term heterosexual marriages. Interviews occurred between the years 2003 and 2006. In the United States in 2009, the median age at first divorce was approximately 32 years old for men and 30 for women; median age at second divorce is 42 for men and 39 for women (Kreider and Ellis,

2011). Thus, we restricted the couple-level sample to spouses married seven years or longer and where both individuals were over the age of 40 in order to approximate the HRS sample and capture change over the life course. After receiving institutional review board (IRB) approval and obtaining informed consent from study participants, the first and fourth authors and a graduate student assistant conducted the interviews. Thirty-seven respondents were white; five, African American. Household income ranged from \$40,000 to \$120,000, with an average of \$60,000. Ages ranged from 40 to 87 with an average age of 63.5 years; average marital duration was 32 years. Two of the 21 currently married women were previously widowed; five currently married women were previously married. Two of the 21 currently married men were previously widowed; four currently married men were previously married.

The second source of qualitative data included 46 individual in-depth interviews conducted between 2008 and 2009. After obtaining IRB approval, the first, fourth, and fifth authors and one graduate student conducted all interviews. The sample included five men in their first marriages, four men who were remarried, three women in their first marriages, two who were remarried, nine currently divorced men, 11 currently divorced women, four never-married men, four never-married women, one currently widowed man, and three currently widowed women. One half of respondents

were African American and one half were white. Income ranged from no income to \$120,000, with an average of \$52,200. In order to determine experiences of adults in mid- to later life, we restricted the age of our analytic sample from 40 to 89, with an average age of 59.

Both qualitative studies took place in the same large southwestern U.S. city, and respondents were recruited through a newspaper article, flyers, e-mail listservs, and word of mouth. Both studies used a nearly identical set of questions regarding alcohol use and union status. Analyses focus on responses to open-ended questions investigating how enduring marital statuses and marital transitions influenced heavy alcohol use (interview guide available upon request). For example, questions elicited basic information about alcohol use over time, such as "When did you start drinking alcohol?" "When did you drink the most in your life, and why?" and "Have you or anyone else ever thought your alcohol use is a problem?" Then, we asked questions focused on alcohol use within the context of one's marital biography, asking about each marital transition and alcohol use. These questions included "When you got married/remarried, (how) did your alcohol use change?" "Why do you think this change occurred?" "What was/is your spouse's alcohol use like?" and "Did you ever think he/she drank too much?" From here, interviewers asked follow-up question specific to what respondents characterize as heavy alcohol use. Among those who had been divorced, we also asked about alcohol use during and after a divorce, such as "After your marriage ended, how did your alcohol use change?" We focused on those portions of the interview data that focus on heavy alcohol use. Heavy alcohol use was subjectively determined by respondents; no directives or definitions were given to guide respondents' accounts.

Interviews lasted one to two hours and were recorded and transcribed. The first, fourth, and fifth authors analyzed these data via a standardized method of inductive analysis that emphasized the dynamic construction of codes for the purpose of developing analytical and theoretical interpretation of data. NVivo software was used to store the data only; no programs were automatically run to "code" the data. In line with standard approaches to qualitative data analysis, the authors read the transcripts multiple times to ensure understanding of the content of the interviews. Thereafter, the first author followed a dynamic, three-step coding process. This first involved line-by-line, data-driven categorization to summarize each piece of data as it

related to heavy alcohol use. Next, "focused" coding was used to develop categories by connecting initial line-by-line codes together for conceptual purposes and developing themes around how marriage/marital status was perceived to matter for heavy alcohol use. In the final stage, memos were created to develop categories and subcategories that related to one another on a conceptual and analytical level. These themes are presented in the qualitative results section.

## **RESULTS**

# **Longitudinal Survey Results**

Table 3 shows results from individual-level logit growth models predicting the effect of marital trajectories between 1998 and 2006 on heavy drinking between 2006 and 2010. Model 1 indicates that never-married individuals have 2.33 higher odds of heavy drinking than the stably married ( $e^{848} = 2.33$ , p < .01). No other marital trajectory is significantly different from the stably married. Women are significantly less likely than men to drink heavily, and higher baseline alcohol use strongly increases the odds of heavy drinking.

Model 2 includes our focal predictors - the interactive effects of marital trajectories and gender - to explore whether marital histories affect alcohol use differently for men and women. The interaction between remarriage and gender is significant at the p < .05 level (b = 1.321, SE = .617). This indicates that remarriage (versus being stably married) increases drinking among women but not men. Net of all control variables, women who remarried had significantly higher odds of heavy drinking than did stably married women. The odds of heavy drinking equal .332 for married women ( $e^{-1.103}$ ) and .638 for remarried women ( $e^{[-.667-1.103+1.321]}$ ), relative to married men. Thus, remarried women have about twice the odds of heavy drinking compared to stably married women; despite this gap, both groups of women were still less likely than married men to drink heavily. In contrast, remarried men decreased their drinking compared to their stably married peers, although this difference among men does not reach statistical significance. Interactions between each of the other marital trajectories and gender are not statistically significant, indicating that other marital histories affect men's and women's drinking similarly.

Model 3 includes three-way interactions among marital trajectories, gender, and age. The two-way Divorce × Gender interaction becomes statistically significant (b = -2.328, SE = 1.167, p < .05) when

**Table 3.** Logistic Growth Models Predicting Heavy Alcohol Use (2006–2010) from Marital Trajectories (1998–2006): Individuals, Health and Retirement Study (*n* = 10,061).

Variable	Model I	Model 2	Model 3
Marital trajectories			
Stably widowed <sup>a</sup>	027 (.244)	132 (.416)	105 (.476)
Stably divorced <sup>a</sup>	192 (.214)	175 (.26 <del>4</del> )	214 (.277)
Never married <sup>a</sup>	.848 (.328)**	.653 (.415)	.433 (.468)
Recently widowed <sup>a</sup>	.074 (.354)	083 (.592)	396 (.619)
Long-term widowed <sup>a</sup>	242 (.426)	203 (.680)	.001 (.933)
Divorced <sup>a</sup>	.419 (.386)	.618 (.524)	.217 (.663)
Remarried <sup>a</sup>	265 (.391)	667 (.468)	-I.448 (.618)*
Other trajectories <sup>a</sup>	575 (.302)	520 (.359)	617 (.438)
Demographic characteristics	,	,	,
Female	-I.042 (.I24)***	-I.103 (.148)***	-1.182 (.174)***
Age – 70	031 (.017)	032 (.017)	026 (.02 <del>4</del> )
$(Age - 70)^2$	.001 (.001)	.001 (.001)	001 (.001)
Education	.012 (.021)	.011 (.020)	.012 (.020)
Black <sup>b</sup>	352 (.196)	353 (.198)	342 (.199)
Other race <sup>b</sup>	.570 (.358)	.589 (.360)	.611 (.360)
Hispanic <sup>b</sup>	427 (.226)	443 (.229)*	410 (.227)
Cohort	()	()	()
AHEAD <sup>c</sup>	529 (.522)	526 (.518)	556 (.516)
CODA <sup>c</sup>	163 (.256)	165 (.256)	140 (.254)
War Baby <sup>c</sup>	152 (.142)	149 (.143)	155 (.149)
Interactions	()	()	
Baseline alcohol use	1.339 (.053)***	1.340 (.053)***	1.349 (.053)***
Stably Widowed × Female		.216 (.503)	.179 (.605)
Stably Divorced × Female		.001 (.422)	.420 (.521)
Never Married × Female		.505 (.610)	.650 (.750)
Widowed 1998–2002 × Female		.306 (.723)	.756 (.775)
Widowed 2002–2006 × Female		024 (.863)	044 (1.099)
Divorced × Female		541 (.822)	-2.328 (1.167)*
Remarried × Female		1.321 (.617)*	2.519 (.779)***
Other Trajectories × Female		149 (.686)	.415 (.569)
Age × Female		.117 (.000)	049 (.038)
Age <sup>2</sup> × Female			001 (.002)
Stably Widowed × Age			016 (.050)
Stably Divorced × Age			010 (.047)
Never Married × Age			118 (.071)
Recently Widowed × Age			.087 (.046)
Long-term Widowed × Age			054 (.114)
Divorced × Age			044 (.073)
Divorced × Age <sup>2</sup>			.007 (.005)
Remarried × Age			133 (.075)
Other Trajectories × Age			` ,
Stably Widowed × Female × Age			030 (.054) .099 (.067)
Stably Divorced × Female × Age			
Never Married × Female × Age			.084 (.084)
<u> </u>			.082 (.099)
Recently Widowed × Female × Age			014 (.084)

(continued)

Table 3. (continued)

Variable	Model I	Model 2	Model 3
Long-term Widowed × Female × Age			.074 (.127)
Divorced × Female × Age			491 (.242)*
Divorced × Female × Age <sup>2</sup>			018 (.009)*
Remarried × Female × Age			.256 (.097)**
Other Trajectories × Female × Age			.035 (.080)
Constant	-2.796	-2.796	-2.796
Random-intercept variance	1.328 (.943)	1.260 (.948)	2.651 (1.715)
Log likelihood	-1412 (52)	-1410 (60)	-1399 (77)
AIC	2929	2940	2953
BIC	3304	3373	3508

Note: Fixed effects are given as logistic regression coefficients (b) and standard errors in parentheses. All models adjust for the following baseline (1998) variables: depressive symptoms, employment status, number of children, household wealth and income, own and parents' education, religion, number of marriages, region of residence, self-rated health, smoking, and chronic health conditions. The time-varying covariates (2006–2010) include depressive symptoms, employment status, number of children, household wealth and income, smoking, self-rated health, and chronic health conditions. AHEAD = Asset and Health Dynamics among the Oldest Old; CODA = Children of Depression; AIC = Akaike information criterion; BIC = Bayesian information criterion.

age is included in the interaction terms. At the average age (70 years old), divorced women have lower odds of heavy drinking than stably married women, whereas divorced men are not significantly different from stably married men. Although the effects of divorce on heavy drinking differ by gender, the two-way interaction is not statistically significant in Model 2 because the gendered effect of divorce is contingent on age. The three-way interactions including both linear and squared age terms are statistically significant:  $b_{\text{Divorced} \times \text{Female} \times \text{Age}} = -.491$ , SE = .242 (p < .05), and  $b_{Divorced \times Female \times Age^2} = -.018$ ,  $SE = .009 \ (p < .05)$ . These interactions indicate that gender differences in the effect of divorce vary by age such that the well-established gender gap in the effect of divorce on men's and women's drinking converges with age. For example, at age 60, divorced women have a higher likelihood of heavy drinking than stably married women, yet heavy drinking declines significantly faster with age for divorced than for stably married women; this agerelated decline is linear. In contrast, at age 60, divorced men have much greater odds of consuming three or more drinks per day than do married men. The level of heavy drinking for divorced men declines with age and gradually approaches that of married men at about age 70. After this age, the decline in heavy alcohol use among divorced men

slows down; their odds of heavy drinking always remain higher than married men's, although this gap is smaller at later ages.

Moreover, after age is added to the interactive effects in Model 3, the two-way interaction between remarriage and gender becomes even greater in magnitude at the mean age 70 compared to Model 2:  $b_{\text{Remarried} \times \text{Female}} = -.252$ , SE = .779 (p < .001). The significant three-way interaction Remarried × Female × Age (b = .256, SE = .097, p < .01) indicates that the effects of remarriage also vary by age. The odds of heavy drinking among remarried women increase with age linearly, whereas the odds of heavy drinking among remarried men decline with age. The interaction term including the quadratic-age function is not significant for remarriage. Overall, three-way interactions with age are significant only for remarriage, and three-way interactions with quadratic term are significant only for divorce.

# Interspousal Effects on Alcohol-use Trajectories

Table 4 presents findings from couple-level models estimating interspousal effects on trajectories of alcohol use, adjusting for all couple-level, husbands', and wives' control variables. Model 1 in Table 4 indicates that husbands' heavy drinking at

<sup>&</sup>lt;sup>a</sup>Compared to stably married.

<sup>&</sup>lt;sup>b</sup>Compared to non-Hispanic white.

<sup>&</sup>lt;sup>c</sup>Compared to the original Health and Retirement Study cohort.

**Table 4.** Couple-level Growth Models Predicting Interspousal Influences on Trajectories of Heavy Alcohol Use between 1998 and 2010: Married Couples, Health and Retirement Study (n = 2,767).

	Wives' Slope	Husbands' Slope	
Variable	(1)	(2)	
Wives' intercept		012 (.005)* β=136	
Husbands' intercept	.782 (.260)** β= .189		
Wives			
Black <sup>a</sup>	27I (3. <del>48</del> 0)	224 (.132)	
Other race <sup>a</sup>	1.054 (1.436)	028 (.087)	
Hispanic <sup>a</sup>	-1.094 (1.642)	.011 (.088)	
Catholic <sup>b</sup>	.621 (.532)	.070 (.028)*	
No religion <sup>b</sup>	.376 (.703)	.076 (.047)	
Other religion <sup>b</sup>	-1.958 (2.695)***	042 (.090)	
Education	045 (.093) <sup>^</sup>	009 (.005)	
Mother's education	.031 (.056)	.000 (.003)	
Father's education	008 (.043)	.002 (.002)	
Number of previous marriages	415 (.374)	025 (.021)	
Husbands	,	` '	
Black	508 (3.407)	.172 (.128)	
Other race	-11.210 (2.798)***	065 (.094)	
Hispanic	.714 (1.051)	.016 (.089)	
Catholic	290 (.576) <sup>^</sup>	.002 (.030)	
No religion	.440 (.567)	.026 (.037)	
Other religion	-8.493 (2.098)***	023 (.09 <del>4</del> )	
Education	001 (.079) <sup>^</sup>	.001 (.004)	
Mother's education	004 (.058)	.001 (.003)	
Father's education	004 (.04I)	.000 (.003)	
Number of previous marriages	.310 (.374)	.025 (.021)	
Couple level	,	,	
Number of children	.022 (.110)	.005 (.006)	
Marital duration	03 I (.023)	003 (.001)*	
Assets	033 (.089)	003 (.00 <del>4</del> )	
Household income	.181 (.251)	001 (.008)	
West <sup>c</sup>	.046 (.455)	040 (.027)	
Northeast <sup>c</sup>	.009 (.533)	.006 (.029)	
Midwest <sup>c</sup>	.047 (.416)	004 (.024)	

Note: Model fit:  $\chi^2$  (degrees of freedom) = 1781 (260); root mean square error of approximation = .003; comparative fit index = 1.000. Each cell contains unstandardized (b) regression coefficients (and standard errors). All models adjust for the following time-varying covariates for husbands and wives: age, employment status, loneliness, cancer, heart disease, depression, and diabetes. Statistically significant coefficients are denoted:

baseline increases wives' heavy drinking over time. The standardized effect of husband's initial level of alcohol use in 1998 on change in wife's drinking is  $\beta$ = .189 (p< .01). In contrast, wives' heavy drinking at baseline decreases husbands' heavy drinking over time. The standardized effect of the wife's

baseline alcohol use on change in the husband's drinking is  $\beta = -.136$  (p < .05). Thus, wives' and husbands' alcohol use have opposing effects on spousal drinking, and the effect in the direction from husband to wife is greater in magnitude than vice versa.

<sup>&</sup>lt;sup>a</sup>Compared to non-Hispanic white.

<sup>&</sup>lt;sup>b</sup>Compared to Protestant.

<sup>&</sup>lt;sup>c</sup>Compared to South.

p < .05, \*\*p < .01, \*\*\*p < .001.

# Qualitative In-depth Interview Results

Guided by our effort to illuminate our quantitative findings, the qualitative analysis yielded two primary themes: (1) the gendered context of (re)marriage and (2) the gendered context of divorce. The qualitative themes reflect those that occurred most frequently in the data (Charmaz 2000) and provide a critical in-depth view of the most significant patterns observed in the quantitative portion of the study.

# The Gendered Influence of Long-term (Re)Marriage on Heavy Alcohol Use

The couple-level quantitative results show that in a stable marriage, men's and women's heavy drinking converges over time, with men's drinking having a stronger influence. Overall, our individual-level results show that never-married persons are more likely to drink heavily than married persons, while remarriage is associated with a decrease in heavy drinking among some men and an increase in heavy drinking among some women relative to the stably married. Our qualitative findings speak to (1) convergence and (2) social control processes that underlie these findings.

Convergence. Nearly three quarters of men and over one half of women who are currently or formerly married report that husbands are less likely to drink heavily in marriage because wives do not drink as heavily; wives are more likely to drink heavily because husbands drink more heavily. Charlie (age 87, currently remarried), illuminates this pattern:

[In] World War II, I was more active in the drinking than I was any other time in my life. And my present wife is a nondrinker. She does not ever want to touch it and pretty much tells me the same thing.... Maybe on Christmas or a birthday we might have a little wine but that's all.

Jim (68, currently in first marriage) describes how his drinking substantially declined over the course of his marriage.

It made it a little easier [to no longer drink] that we neither one drink. And that is what makes it a lot easier, the places we go it's almost never around. We go to a Baptist church—[alcohol is] not around. We go to a couple of organizations—it's usually not around. It doesn't bother us. And you grow where it bothers you less and less.

Respondents like Charlie and Jim reveal that their long-term marriages—wherein their wives do not drink and there is a shift in nondrinking activities—diminish men's heavy drinking via convergence.

Men's heavy drinking habits appear to also have a powerful influence on women's alcohol use. Some women recount that they did not drink alcohol prior to marriage but began drinking more heavily the longer they were married. Pat (68, currently in first marriage) says,

I come from a family of practically teetotalers.... But we have wine with dinner almost every meal now. But in my family we didn't do that and we didn't have drinks when somebody came over. You didn't offer them a beer right away. Because it wasn't even in the house.

As Pat suggests, this pattern of drinking with her husband every day under his influence—what she considers moderate to heavy drinking—emerged from a previous family history of nondrinking. Kimberly (51, currently divorced) describes a similar dynamic that emerged during the length of her former marriage to a heavy drinker.

That guy drank rum and tonics. So I'd have rum and tonic, and then I'd have a gin and tonic. When I was working in bars [before marriage] I never drank much when I worked. But... we [ex-husband and I] would go out to a place and I'd have a couple drinks.

Due to her husband's heavy drinking, Kimberly gradually increased her own drinking and became a heavier drinker than she was before marriage.

Other women drank occasionally prior to marriage but began drinking what they consider to be heavily after several years of marriage. Anna (52, currently divorced) says,

I was still working full-time, coming home, taking care of kids. I remember my husband and I would sit on the couch and we would each have a drink. And that just became a habit. During the summers we went camping or to the lake and drank beer. I guess that would just be it in the moment with people. But I never drank heavily on my own.

As Kimberly suggests, this habit of drinking "heavily" was never on her own but rather occurred as she began drinking more with her heavier-drinking husband.

Social Control. Social-control processes described by respondents further illuminate our quantitative findings. Men frequently reduced their heavy drinking over the course of marriage in order to be a "good husband." Bart (74, currently in first marriage) says,

I would be at the pubs down the block. It would be more than one [drink] at a time because I would be with the gang. In those days, you could have... maybe three glasses or something. I got married early so that saved me. I had no time. I couldn't go out with the guys or anything anymore. Never drank at home.

Men in this sample, as illustrated by Bart, describe the pressures of family life that diminish heavy drinking. This appears particularly true in remarriage. Duane (59, currently in second divorce) explained how substance use led to his first divorce.

It destroyed my marriage. I made her leave me because it had started to take a toll on her. I wasn't going to change and I thought she deserved something a little better.... It was me; I wasn't ready to change at that time. So I made her leave.

Duane subsequently remarried and his second wife urged his current involvement in Alcoholics Anonymous (AA). This was a common theme in this sample; men's heavy drinking problems contribute to divorce, yet nearly half of these men find subsequent relationships with women that lead to a decline in their drinking. This process may explain our quantitative findings regarding lower drinking among remarried men.

Men and women also describe how wives attempt to change husbands' heavy drinking in both first marriages and remarriages. Lou (81, currently in first marriage) provides an illustration:

She says I drink too much, but I don't think I do. If I drank too much she might tell me if I was getting over the line, which is all right. If I am going to do something that is going to affect her happiness I want to know about it.... She knows what's good for me and what is not.

Wives' social-control efforts sometimes take the form of confrontations over what they consider problem drinking. Irene (55, currently in first marriage, husband in second) describes attempts to stop her husband's heavy drinking.

It was like, "You get help. You stop drinking or you're out of here. You will not see us again; you're on your own." And that reaction from me... he immediately went every day to AA for about two months. I don't know if it was the look in my eye or what it was. But it was like, "You know what, I've called your bluff on this and I'm a different woman. I'm just not going to take responsibility for your bad behavior."

Brian (55), Irene's husband, similarly says of his heavy drinking, "I realized I had a problem and had to do something about it. Irene finally got fed up and said that she wasn't going to stay in the marriage if it continued like that." Brian had remained sober at the time of his interview.

# The Gendered Context of Divorce on Heavy Alcohol Use

Our individual-level quantitative findings show that the divorced have a significantly higher likelihood of drinking heavily among men but lower odds of heavy drinking among some women relative to their stably married counterparts. Our qualitative findings explain the gender-divergent paths of heavy drinking in divorce, revealing that more than one quarter of previously and currently divorce women describe divergence and non-alcohol-related stress processes, while more than one half of currently and previously divorced men describe divergence, stress, and social control processes.

Divergence and Stress among Women. Consistent with couple-level quantitative findings that convergence processes in marriage appear to promote some women's drinking, divergence is clearly related to a decline in heavy drinking for some divorced women. When a marriage ends, women cut back on the drinking previously done to "match" their former husbands. For example, Kimberly (51, currently divorced three times) says,

When I got married the third time, he was a major drinker and he liked to drink wine, and he would buy it by the case. We'd go to these wine tastings and you know, it was easier to join him than not.... But I quit drinking when I left him. I wouldn't tolerate it, and it was because of alcohol.

Women's divorce from heavy drinkers in turn precipitates a decline in or abstention from alcohol use.

Instead of alcohol use, women describe using foodrelated coping mechanisms and an increase in depressive symptoms (Simon, 2002). Beverly (58), who is in the process of her first divorce, says, "My husband asked me for the divorce and I was just traumatized by that and just physically... I couldn't eat. I lost about 30 pounds." Other women, such as Rhonda (52, currently divorced), similarly described eating as a coping mechanism during the transition to divorce: "I stopped eating. I wasn't eating.... [My friends] would take me out and I would nibble. But they knew what I was going through. And they would just try to talk me through it." Rhonda's quote exemplifies one difference in the experience of divorce for men and women—Rhonda's friends tried to get her to eat, while many men's friends would encourage alcohol use, as shown below.

Divergence, Social Control, and Stress among Men. For men, a combination of divergence, the loss of social control, and increased stress of divorce prompted increased alcohol use. Billy (52, currently divorced) says,

This last divorce really took its toll on me. I was so in love with this woman that I did everything for her. After we broke up I didn't want to live anymore. I just gave up on life. I went down to a real low. I actually went out and started using and abusing because I was hurting from it and I was hoping for a reconciliation. When I knew we weren't going to get back together, that was when I went back out. I just said, "Hey, what the hell. My life's over." I went back to drinking and drugs. I just smoked crack and I drank beer.

Billy further describes that he would abuse substances with his social network of male friends who were present prior to his marriage. Like Billy, Jeffrey (57, currently in second marriage) describes his spiral back into substance use during his marital dissolution—behaviors similar to when he was single and socializing with his fellow musicians who were men.

As a musician, I guess from the age of 16 on, I was experimenting with drugs. Marijuana, alcohol, and cocaine. And then I think after my divorce I went back and just got way in over my head. It didn't really turn to real abuse until after the divorce. It was part of my lifestyle at that time.

Jeffrey has subsequently remarried and no longer drinks heavily because his wife does not approve of heavy drinking or drug use. These interviews suggest that some men who cope by turning to alcohol during divorce had preexisting histories of alcohol use that were obscured during marriage, often via socializing with other substance-using adults during times of heightened stressors.

## DISCUSSION

Conclusive research shows that marriage and remarriage are beneficial whereas marital dissolution is detrimental to health and health behaviors, particularly for men and especially in mid- to later life (Carr and Springer 2010; Williams and Umberson 2004). Yet, previous research fails to consider how multiple and accumulating gendered experiences of singlehood, marriage, marital dissolution, and remarriage-what we call the gendered marital biography—influence health and health behavior trajectories for mid- to later-life men and women. This study deploys and tests a gendered marital biography approach with a focus on heavy alcohol use. Heavy alcohol use is strongly associated with both (re)marriage and divorce and has significant effects on health in mid- to late life. Our individual and dyadic longitudinal survey analyses and individual and dyadic in-depth interview analyses provide a roadmap for the use of a gendered marital biography approach in future research on other health outcomes.

In regard to marriage, the individual-level findings from the HRS data show that rates of heavy alcohol use are lower for married than for nevermarried persons. Additionally, remarriage increases women's heavy drinking, relative to being stably married; although not significant, the results for men suggest remarriage leads to a decline in heavy drinking. The couple-level results demonstrate that convergence processes operate in one of two directions: wives' heavy alcohol use (which is still lower, on average, than husbands' heavy alcohol use) is associated with decreases in husbands' heavy alcohol use, whereas husbands' heavy alcohol use is associated with increases in wives' heavy alcohol use.

Our qualitative findings suggest two primary explanations for these effects. First, social-control processes influence men's alcohol use in first and—perhaps even more so—in subsequent marriages. This is most apparent when wives use social control to curtail their husband's alcohol use, consistent with notions of hegemonic masculinity and emphasized femininity wherein women are the "health behavior experts" who regulate men's "natural" proclivity toward unhealthy habits (Courtenay 2000; Reczek and Umberson 2012). Husbands are

also expected to control their alcohol use and "clean up their act" in order to be "good" husbands. This process may be especially evident for men in their second marriages; our qualitative findings suggest that when men transition out of a first marriage due to their heavy drinking, their second marriage tends to involve greater responsiveness to social-control effects, perhaps as a way to "right the wrongs" experienced in their prior failed marriage.

Second, our mixed-methods findings draw on and extend previous research on alcohol convergence showing that spouses' heavy alcohol use converges in bidirectional and interdependent ways (Falba and Sindelar 2008; Leonard and Mudar 2003; Reczek, 2012). Marriage is embedded within a broader network of social relationships that shape health behaviors via "social contagion" processes (Christakis and Fowler 2012). At the same time, marriage is considered a "greedy institution"; individuals spend less time with friends and coworkers and more time with their spouse, who may encourage either less (men) or more (women) drinking (Pienta and Franks 2006; Reczek 2012). Both our quantitative and qualitative findings suggest that a benefit of this greedy institution is that men's drinking converges with their wives' more moderate drinking patterns and diverges from the heavier drinking done when single (Duncan et al. 2006). In contrast, convergence promotes married women's engagement in heavy drinking-especially among women in remarriages (see also Graham and Braun 1999). Remarried women are more likely than never-married women to marry men who are also divorced (Fu and Goldman 2000). Because divorced men are more likely to be heavy drinkers, remarried women may be more likely to select into a drinking partnership with heavy-drinking men. Still, within each marital status group, women's rates of heavy drinking lag considerably behind men's.

Turning to findings on marital dissolution, individual-level quantitative findings show that dissolution is associated with heavy alcohol use in gendered ways. Our qualitative findings suggest that these trends reflect marital resource and convergence factors that dissipate after dissolution. Divorced men at age 60 have much greater odds of consuming three or more drinks per day relative to married men. While the rate of heavy drinking for divorced men declines with age and gradually approaches that of married men at about age 70, the odds of heavy drinking among divorced men always remain higher than married men's. Prior work suggests that the heavier drinking of divorced men in their 60s (relative to 70s) may reflect the fact that midlife men

have more friends and work colleagues on average than later-life men (van Tilburg 1998); these friends may support and promote heavy drinking. Moreover, later life may bring change in other social relationships that matter for heavy drinking among divorced men, including less contact with adult children, who tend to be regulators of their parents' alcohol use (Williams 2003; Williams and Umberson 2004). There may be selective attrition effects, as heavydrinking divorced men may have elevated mortality (Gunzareth et al. 2004; Thun et al. 1997). In our qualitative analysis, divorced men describe the loss of gendered marital resource (e.g., social control) and convergence processes that promoted their lower alcohol use in marriage. Divorced men may revisit the lifestyles they established as single men, which may include more time alone drinking heavily or in social networks drinking as a primary mode of socializing and stress-related coping (Courtenay 2000; Rosenfield et al. 2005). Divorced men tend to rely on externalizing coping mechanisms, such as heavy alcohol use, during divorce (Williams and Dunne-Bryant 2006). As acute stress diminishes and as men remarry, the consequences of divorce for heavy alcohol use may attenuate.

Women follow an interdependent trajectory of drinking divergence; divorced women at age 60 have a higher likelihood of heavy drinking than stably married women, yet heavy drinking declines significantly faster with age for divorced than for stably married women; this age-related decline is linear. Just as changes in married women's drinking were driven by alcohol convergence with their heavy-drinking husbands, qualitative findings suggest that women's decline in drinking appears to be largely driven by the absence of a drinking husband (see also Christakis and Fowler 2012), most notably via the disruption of established drinking convergence (see also Pienta and Franks 2006). Women, like their male counterparts, may reenter social networks that are presumably homogenous in terms of gender (McPherson, Smith-Lovin, and Cook 2001); these women-based social networks are likely characterized by lower alcohol consumption. Additionally, while our qualitative findings show that divorce-related stress may increase men's drinking, this stress may trigger depressive symptoms among women (Rosenfeld et al. 2005; Simon 2002) as well as food-related coping (Laitinen, Ek, and Sovio 2012). This finding extends previous literature demonstrating that stress-coping processes in mid- to later life are highly gendered (Rosenfeld et al. 2005; Umberson, Thomeer, and Williams 2013) in ways that have distinctive consequences for women's heavy-drinking trajectories.

### Limitations

This study provides new insights into the gendered marital biography and heavy alcohol use, but limitations must be noted. We identified multiple distinct marital biographies in our data, yet we also detected several groups with small cell sizes that we do not analyze (see Table 1). We call on future researchers to analyze these trajectories in order to identify potential unique risk. Our research is based on self-reports of alcohol use, which is the most widely used measure in population-based studies of alcohol use and wellbeing (Midanik 1982). Still, this measure has limitations. We conceptualize heavy drinking as a record of drinking at least three drinks a day each week over a three-month period. This measures consistent alcohol use over time but may include individuals whose alcohol use is more moderate and unproblematic; this has the potential to underestimate the effects of marital transitions on the heaviest of alcohol-use trajectories. More nuanced change in alcohol use below and above our threshold may be shaped by marital biography trajectories in ways not captured in this analysis. Supplemental analyses (available upon request) show that using a continuous measure of any change in alcohol use across the study period reveals similar patterns. In addition, according to the NIAAA, for both mid- to later-life men and women, any alcohol use over three drinks on a single day each week is predictive of health (Fleming et al. 2010; Lawrence et al. 2001; NIAAA 2005). Future research should examine gendered measures of light and moderate alcohol use in relation to marital biographies, as these categories are more sensitive to gender differences than is heavy alcohol use, especially among young adults. We cannot discern whether findings reflect actual differences in behavior or reporting bias. Because heavy drinking is more acceptable and less stigmatized among men than among women (Nolen-Hoeksema 2004; Rolfe et al. 2009), men may overreport whereas women may underreport their heavy alcohol use. Spouses may also misreport drinking behaviors, especially retrospectively in the qualitative data, or have nonstandard definitions of problematic or heavy drinking. However, these concerns are allayed by prior work showing validity in spousal reports (Graham and Braun 1999). Although we find concordance between the qualitative and quantitative results, the samples differ in their sociodemographic characteristics (e.g., age, race, and geography), limiting our ability to draw definitive contrasts between the results—this is particularly true in regard to our results around age, divorce, and heavy drinking. Moreover, heavy drinkers may introduce selection

bias, as they may be more likely to exit from, or not complete all waves of, the survey due to selection effects, such as mortality or other health problems. This may impact estimates of marital trajectories on heavy alcohol use. Even as we use longitudinal analyses that account for selection effects, additional selection effects may be at play that cannot be accounted for. For example, couples that engage in discrepant drinking behaviors may have lower marital quality (Homish and Leonard 2007) and an elevated risk of divorce (Ostermann et al. 2005). Finally, our goal is to explore these dynamics among mid- to later-life individuals, and older individuals may abide by more traditional gender norms (England 2010) and drinking behaviors than do cohorts that follow (Keyes et al. 2011). We are unable to differentiate age and cohort effects in our analysis. Future research should explore the extent to which gender differences persist among younger cohorts and ages.

#### CONCLUSION

We extend previous research by identifying how mid- to later-life men's and women's current and past union statuses, transitions, and gendered dynamics intersect to shape heavy alcohol use. On the basis of our findings, we suggest that whether and how marital status and transitions contribute to or deter heavy alcohol use depends on the gendered processes present across men's and women's codependent marital biographies; a change in women's alcohol use is dependent on men's alcohol use across the marital biography and vice versa. A gendered marital biography approach can be used in future research to demonstrate that health behaviors do not exist within static marital statuses or transitions that take a linear course. Rather, men's and women's health behaviors exist as part of a gendered trajectory that unfolds across the life course as one transitions into and out of relational contexts, encompassing first and higher-order marriages. Indeed, a marital biography approach is highlighted with couple-level data, and future research should use such data to explore crossover effects or the way that one spouse's health behaviors affect the other spouse's health behaviors. We encourage scholars to shift the view of marriage and health to one that not solely is theorized as a cumulative effect of the earlier marital biography on subsequent biography but, rather, draws attention to the ways in which health behavior trajectories can change direction, stop, and start multiple times as individuals shift into and out of marital contexts.

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