Alternative Pathways: An Intersectional Analysis of U.S. Men and Women Boomers' Short-Term Workforce Stability, Exits, and Churn

Phyllis Moen, Sarah Flood, and Janet Wang
Life Course Center – University of Minnesota

*Paper prepared for the Population Association of America Annual Meeting, April 11-13. 2019 in Austin, TX

Alternative Pathways: An Intersectional Analysis of U.S. Men and Women Boomers' Short-Term Workforce Stability, Exits, and Churn

Phyllis Moen, Sarah Flood, and Janet Wang
Life Course Center – University of Minnesota
March 22, 2019

ABSTRACT

The timing/sequencing of short-term later life-course work pathways and their distribution across individuals in intersecting social locations (such as combinations of age, gender, and education) have considerable theoretical and policy relevance. Yet most later adulthood labor force exit/retirement research considers annual or biennial exits rather than month-to-month continuity and change, investigates variables rather than person-centered pathways in work participation, and controls for age, gender, education and race as separate indicators, rather than considering their intersections. We capitalize on massive micro-level monthly panel data from the Current Population Survey (CPS) over 10 years from 2008 to 2018 to examine disparities in biographical pacing—the timing and sequencing of remaining in or out of or exiting/reentering employment over a 16-month period. Panel data on 346,488 American women and men ages 50 to 75 reveals a patterned elasticity in the timing and nature of work attachments in the form of six distinctive short-term constellations of work attachments and exits. Divergences and disparities by interlocking social locations (gender, education, and race/ethnicity with age) suggest the need to think about disadvantage/advantage conjunctions as well as its cumulation (and contracting) over the life course, which, together with "churn," suggests the disrupted and disparate nature of the contemporary later life course.

Introduction

America's workforce and population are aging due to extended longevity, reduced fertility, and the large cohort of Boomers (some 76 million, born 1946-64) now moving to/through the conventional retirement years. Moreover "conventional retirement" as a one-time, one-way, irreversible exit around age 65 is becoming less orderly and less predictable (Cahill et al. 2016; Calvo et al. 2018). Boomers confront uncertainty in the form of employment as well as economic precarity; this reflects economic and technological changes, age discrimination, and the dismantling of the 1950s social contract linking seniority with job and income security (Burchell et al. 2002; Ebbinghaus and Radl 2015; Klehe et al. 2012; Lippman 2008; Quinn and Cahill 2016). These forces are compounded with reduced social protections, such as declines in pensions, low-cost health insurance, and public welfare supports (including Social Security payouts in line with living costs).

Many older Americans are both 1) broadening their time horizons, concomitant with greater life expectancy, and 2) shortening or at least doubting their career horizons, given the specter of skill obsolescence and job loss associated with off shoring and automating/artificial intelligence technologies. The result? The timing and, indeed, the very nature of later adult workforce exits is no longer a one-size-fits-all, but instead include other, often unexpected exits that may not be subjectively defined as being "retired." In light of the contemporary confluence of unprecedented demographic, technological, economic, and policy changes, Boomers are exiting, remaining in, or transitioning around paid work and retirement in historically unique, not fully understood ways.

This study seeks to capture the contemporary complexity, heterogeneity, and inequities in even short-term work pathways during the years around what used to be conventional retirement

(ages 50 to 75), what we term potentially encore years of adulthood (Flood and Moen 2015; Genadek et al. 2017; Moen 2016a; Moen and Flood 2013). We leverage the underutilized panel component of the Current Population Survey (CPS) monthly data, linking monthly surveys across 16 months to: 1) identify short-term constellations of work engagement and exits, including but not limited to self-reported retirement, for those ages 50 to 75; 2) analyze the distribution of these constellations by dimensions of disadvantage, including intersections of age and gender and combinations of age, gender, education, and race; and 3) investigate the degree of short-term "churn" – two or more movements in or out of various work "states" across constellations. Churn is typically associated with those in their 20s who are just beginning their labor force participation (Arnett 2004; Hirsch 2016). Identifying the existence and distribution of churn in the encore years can underscore the complexity of contemporary later adult work and retirement.

Motivation

The timing in the later life course of labor market exits has enormous consequences for individuals and families, as well as for governments confronting population aging in terms of rising social security and health care costs. A seemingly obvious policy solution is to encourage Boomers and those following in their wake to work longer, postponing retirement from the labor market. Indeed, the U.S. has delayed full Social Security benefit eligibility ages to age 67, while simultaneously offering the carrot of greater benefits for those who continue working to age 70. There are ongoing discussions about further postponing the age of eligibility (McNamara and Williamson 2013; Munnell and Sass 2008). But these "solutions" disregard the reality that many later adult workforce exits are not voluntary (Rhee et al. 2015; Van Solinge and Henkens 2007), whether because of being pushed out (Ebbinghaus and Radl 2015; Reynolds and Wenger 2010), exiting because of health problems (Martin, Freedman et a.l 2010; Martin et al. 2010), or leaving

because of family care responsibilities (Van der Horst et al. 2017). Moreover, many older workers in their early 60s experience job lock, remaining unwillingly in the labor force because of economic or health insurance needs, given their ineligibility for public supports (Fisher et al. 2016).

Arguments for working longer are primarily financial: it will increase the economic security of individuals and families, in addition to reducing the welfare burden on governments. What is troubling is that these policy discussions are taking place without evidence or, at best, in the context of possibly obsolete evidence. Much of what we know about retirement transitions comes from studies of earlier cohorts living through very different demographic, technological, social and economic environments, very different private-sector and public policy regimes.

Institutions, seniority protections, and safety nets are being "delegitimated," "unstandardized," or "deinstitutionalized" (Brynjolfsson and Mcafee 2014; DeSilver 2017; Kalleberg 2011; Kohli 2007; Moen 2019; World Economic Forum 2016). Thus, there are a great deal of unknowns around contemporary later adult employment/retirement pathways, given that conventional work attachments and conventional retirement exits are both shifting, playing out on a moving platform of technological, economic, demographic and policy change.

Contemporary Boomers' experiences also differ in that for many, age 65 no longer feels "old." Boomers in their 60s and 70s are more educated, healthier, and more engaged in paid work than their parents (but not necessarily their grandparents) at the same ages. We term the 50s, 60s, and 70s the encore years, arguing an evolving life stage is developing in the space opening up between conventional family and career obligations, on the one hand, and the frailties associated with old age, on the other (Flood and Moen 2015; Genadek et al 2017; Moen 2016a; Moen and Flood 2013; Moen and Lam 2015; Mortimer and Moen 2016). What is key to

understand is: How are diverse members of the large Boomer cohort (in their 50s, 60s, and 70s) navigating work engagement and disengagement? More specifically, what are Boomers' patterned yet heterogeneous short-term work pathways, in terms of the timing, sequencing, and nature of working hours, work participation, and exits?

Theoretical and Empirical Background

Our study is informed by a gendered life-course, constrained choice theoretical approach (Bird and Rieker 2008; Moen 2001, 2016a,b). The life course approach emphasizes the importance of trajectories and transitions, social change, subjective assessments and choices, and how institutional arrangements together with disadvantaged social locations constrain options (Berkman et al. 2014; Elder 1985; George 1993; Heinz and Marshall 2003; Moen 2013). Two fundamental social locations are gender and age, which together capture the distinctive and unequal gendered life courses of women and men (Moen 2001; Moen and Spencer 2006). A key life course process is the cumulativeness of advantage or disadvantage (Dannefer 2003; 2011; Diprete and Eirich 2006; Mirowsky and Ross 2008; O'Rand 1996; O'Rand and Henretta 1999) and, we would add, the compounding of dimensions of advantage and disadvantage by the intersections of age and gender in combination with class and race (Ferraro and Shippee 2009; see also Bird and Rieker 2008; Brown and Warner 2008; Calvo et al. 2018; Han and Moen 1999, 2001; Kim and Miech 2009; Pleau 2010; Van der Horst et al. 2017; Warner and Brown 2011).

But there are subjective and structural components of the life course as well. For example, age-graded subjective statuses like viewing oneself as "retired" should be more likely as one moves to or through age 65, the age of conventional retirement institutionalized by Social Security and Medicare eligibility (Moen 2013; Moen 2016a,b). Similarly, defining oneself as out of the workforce because of a disability is also partially institutionalized, leading to obtaining

public funds in the years preceding Social Security and Medicare eligibility (Kim and Miech 2009; Krueger 2017; Martin et al. 2010; Taylor 2008).

Evidence to Date

Despite the fact that stress process and life course scholars point to the dynamics of life course pathways (Almeida and Wong 2009; Brown and Warner 2008; George 1993; Gotlib and Wheaton 1997; Kim and Miech 2009; Kim and Moen 2002; Lynch 2003; Pearlin 1989, 2010; Pearlin et al. 2005; Warner et al 2010) and the structural embeddedness of individuals in intersectional social locations (Calvo et al. 2017; Dill and Zambrana 2009; Flippen and Tienda 200; Perkins and Sampson 2015), most later life labor force /retirement research considers annual or biennial states as opposed to short-term work pathways. Hence, sample size constraints often limit the focus to modal pathways or single transitions. Moreover, examination of transitions often results in analysts constraining samples to homogeneous baseline states, such as only full-time employees, and focusing on transitions out of that state, ignoring those who at baseline were not working full time.

Research to date shows: a) employment opportunities and constraints are unequally distributed among older Americans (Burr et al. 1996; Calvo et al, 2017; Carr et al. 2018; Flippen and Tienda 2000; Lippmann 2008; McDonough et al. 2017); and b) later life-course workforce and retirement paths and family living arrangements are in flux (Hardy 2011; James and Pitt-Catsouphes 2016; Johnson et al. 2009; Krueger 2017; McNamara and Willliamson 2013, Moen and Flood 2013; O'Rand 1996; Pleau 2010; Quinn and Cahill 2016; Reynolds and Wenger 2010; Rhee et al. 2015; Van Der Horst et al. 2017; Van Solinge and Henken 2007; Warner and Brown 2011; Warner et al. 2010). Later adulthood is thus increasingly precarious for large subgroups of the population, a period of uncertainty and risk in terms of job and income security, but also participation in the mainstream of society (Carr et al. 2018; Cherry et al. 2013; Ebbinghaus and

Radl 2015; Ferraro and Shippee 2009; Fisher et al. 2016; Flood and Moen 2015; Gallo et al. 2006; Glavin 2013; Lippmann 2008; Johnson et al 2009; Marshall et al 2001; McNamara and Williamson 2013; Quinn and Cahill 2016; Rhee et al. 2015; Wang 2012; Warner and Brown 2011). And yet at least educated Americans in their 50s, 60s, and 70s can expect unprecedented longevity (Crimmins 2004).

Hypotheses

Following a gendered life course, constrained choice framing, we theorize Boomer men and women as active decision-makers whose "choices" are constrained by: norms about age, gender, work, family, and retirement; discrimination (Posthuma et al. 2012) associated with age, gender, and race; outdated institutional arrangements (Fasang 2010; Moen 2016a,b; Riley et al. 1994); and dismantled, reduced, or postponed safety nets. All these forces are occurring in tandem with a globalized and automating economy (Brynjolfsson and Mcafee 2014; Burchell et al. 2002; DeSilver 2017; Krueger 2017; Lippmann 2008; Moen 2019). Along with these macro-level influences are micro-level situational exigencies (Van De Preter et al. 2013), such as long hours on the job (Hess et al. 2018); health problems (Cherry et al. 2013; Conley and Thompson 2013; Crimmins 2004; Kim and Miech 2009); family care obligations; the perceived need of some younger than 65/66 to keep working for financial or health insurance reasons (Fisher et al. 2016); and the disadvantage of being in marginalized social locations.

Given these social and biographical shifts, one key contribution of this study is our focus on micro-processes over months not years. This offers a novel, and we would argue, insightful temporal framing of later adult work paths and passages as an important complement to patterns identified over years (Calvo et al. 2018; Fasang 2010; Flippen and Tienda 2000; Han and Moen 1999; McDonough et al. 2017; Van der Horst et al. 2017). Capturing continuity and change in short-term trajectories provides a more granular picture of divergences in the lead up to being

both out of the workforce and defining oneself as "retired" (Ekerdt and Deviney 1990). Given the large sample size of the CPS, we are able to consider a wide range of possible paths, including long hours (Hess et al. 2018; Kojola and Moen 2016), self-employment (Halvorsen and Morrow-Howell 2017), and reasons for possible exits, including unemployment (Ebbinghaus and Radl 2015; Klehe et al. 2012; Lippman 2008; Reynolds and Wenger 2010), disability (Conley and Thomspon 2013; Martin, Freedman et al. 2010; Taylor 2008; Warner and Brown 2011), and subjective retirement (Ekerdt and Deviney 1990; Hardy 2011).

A second key contribution is our intersectional theoretical approach (Collins 2015; Dill and Zambrana 2009), postulating that what Tilly (1998) termed enduring inequalities – such as gender, class, race, and, we would argue, age – neither exist nor operate independently from one another. Hence we expand on the cumulative disadvantage life course theme (Dannefer 2003, 2011; DiPrete and Eirich 2006) to consider compounded disadvantages (see also Calvo et al 2018; Perkins and Sampson 2015; Warner and Brown 2011). This builds on and extends scholarship on age (Burr et al. 1996; Ferraro and Shippee 2009; O'Rand and Henretta 1999), class (Kojola and Moen 2016; Van der Horst et al. 2017), and gender (Kim and Moen 2002).

Following the cummulation of advantage/disadvantage life course framing, we theorize men, and especially college-educated men are better able to shape the timing, sequencing and voluntariness of short-term work constellations. Consequently, (H1) their pathways are likely to be more orderly and "on time" (mid 60s), compared to college-educated women, women or men with less education, and women and men in minority races/ethnicities. We also theorize the long arm of structural lag in the form of outdated gender, retirement, and age norms. We propose these norms remain internalized and institutionalized by public policies, with non-employment in the 60s and early 70s more apt to be in a subjectively defined "retired" pathway, compared to

pathways characterized by unemployed, disability-related, or exits for other (typically family-care) reasons in the 50s (H2a). We also hypothesize that women are more apt to follow a self-defined retirement constellation, regardless of age (H2b).

We further test the hypothesis (H3) that contemporary short-term temporal work patterns of Americans in their 50s, 60s, and 70s are not stable, reflecting instead significant churn (World Economic Forum 2016) – operationalized here as two or more movements in and out of the workforce, across job types, or across work-hour categories. Churn is typically applied to the experiences of emerging adults in their 20s (Arnett 2004; Hirsch 2016), but we theorize such employment dynamics increasingly characterize the pathways of many older workers as well.

We theorize churn to be related to but not isomorphic with the deleterious effects of intersecting dimensions of social disadvantage in terms of gender, age, education, race/ethnicity. We hypothesize that later adult churn and remaining out of the workforce are gendered, with men in their 50s and 60s both more likely (H3a) to move in and out of the workforce and (H3b) to work longer than women.

Methods

To truly understand patterned heterogeneity and disparities in short-term later life course workforce pathways requires data on subjective contexts (e.g., voluntary versus involuntary part-time work, voluntary versus involuntary labor force nonparticipation, subjectively defining non participation as "retirement" or because of a "disability"). It also requires a detailed, repeated assessments of work engagement over a tightly focused time period during a concentrated age span when later life course employment transitions are most likely to occur. We leverage the underutilized panel component of the CPS by linking monthly surveys to identify and analyze the implications of constellations of workforce engagement and exits, including but not limited to self-reported retirement.

Data

Current Population Survey. The Current Population Survey (CPS) is the primary data source for information about labor force participation in the U.S. Key advantages of the CPS include large sample sizes, outstanding response rates, and expansive subject coverage. For our study, the CPS panel component is also a key advantage. Data are collected monthly, with sample sizes averaging 140,000 persons. The CPS has a rotating sample in which individuals in a particular dwelling are interviewed in four consecutive months, left out of the survey for eight months, and then return to the survey for four additional months ("4-8-4" design). Each month, 1/8 of the sample is new to the survey. By linking eight individual observations over a 16-month period from 2008 through 2018, we analyze short-term sequences of work "states" for those in the age 50-75 transitionary years.

Linking and Weighting Data. The CPS samples individuals who live in specific dwellings as opposed to sampling individuals. This is important because it means that some people who are in the CPS are not observed eight times. Attrition in the CPS is due to death and non-response as in other longitudinal surveys, but also because of migration. We use the IPUMS-generated variable CPSIDP to link CPS observations over time (Drew et al. 2014; Flood and Pacas 2018), check that we are linking the same people based on age, sex, and race, and retain only the linked observations that represent the same individuals observed eight times over 16 months. Because the CPS data are typically used as repeated cross-sections of the population, sample weights provided by the Census Bureau are not appropriate for use of the data as a linked panel. We use longitudinal weights created by IPUMS CPS for our analyses. We selected our sample of 346,488 individuals age 50 to 75 at month 1 of participation in the survey from 2008 to 2017.

Measures

Labor-Force Status. We use detailed employment status and labor force status information to classify individuals into one of nine states at each of the eight time points. First, respondents who are not in the labor force (NILF), that is, not employed or actively looking for work are classified according to the reason they are not in the labor force. We can consistently distinguish between retired, disabled, and other reason (often family care). Second, for individuals who are in the labor force, we distinguish between those who are unemployed, self-employed, involuntarily part time (for economic and unknown reasons), voluntarily part time (for noneconomic reasons), full time, and full time long hours (working 50 plus hours a week).

Social Locational Characteristics. The social locational characteristics we consider are gender, race, age, and education. Gender is a binary variable distinguishing between men and women. Race differentiates between White, Black, Hispanic, Asian/Pacific Islander, and a combined category for American Indian and Multiracial. Age is biological, social (institutionalized in expectations and policies), and biographical. We theorize and measure age as a non-linear variable, dividing observations into five age groups: ages 50-54, 55-59, 60-64, 65-69, and 70-75. Education, a proxy for class, is three categories: having a high school diploma or less education, some college, and college graduate. Table 1 presents descriptive statistics by age group.

Analytic Strategy

We use both sequence and cluster analysis to identify employment sequences and group them by similarity. Similar to Calvo and colleagues (2017), we sequence and cluster data related to work states and retirement. However, ours is a short-term lens to chart granular continuities and changes over months, not years. The size of the sample permits a finer look at nine separate "states" (such as long-hour work). Optimal matching analysis, a sequencing method, is used to create inputs for clustering. Sequences capture patterned constellations of "states" (such as

employed full time, not employed, self-reported retired, unemployed, etc.) over 16 months in the CPS panel. We use TraMineR and WeightedCluster packages in R to identify social heterogeneity in patterned state sequences, aggregating identical cases for computational ease. TraMineR is an R package used for mining, describing, and visualizing state sequences and events (Gabadinho et. al, 2011). For computational efficiency, we used WeightedCluster, a clustering package that can be used with TraMineR, to aggregate identical sequences and assign the unique sequence a weight. We also use longitudinal weights for the full 8-time point 16 month panel, ensuring individuals who link across all 8 time points are representative of the group of individuals who began the CPS at the same time.

After identifying patterned sequences, the TraMineR function "seqdist" produces a dissimilarity matrix by comparing differences across each sequence pair. We use optimal matching analysis, which allows for the computation of distances between sequences by defining simple algebraic operations (Abbott 1995). These operations include insertion: (one element is inserted into the sequence), deletion (one element is deleted from the sequence) and substitution (one element is replaced by another). All of these operations are assigned a "cost", a mathematical measure for assessing the amount of work necessary to render two different sequences the same. We set the insertion/deletion cost to .5 to lower the sensitivity of our results to timing in the CPS since when one appears in the CPS is based on when they begin the CPS as opposed to a specific age or year as in many uses of these methods. We use observed transition rates to assign substitution costs between pairs of states (Studer and Ritschard 2016). The sum of the insertion/deletion and substitution costs results in score that becomes the input into a dissimilarity matrix, which represents the cost of converting one sequence to every other

sequence in the data. For more information, see Abbott and Tsay (2000), which sets the groundwork for optimal matching settings used by many researchers today.

To shrink the number of micro-pathways across 16 months from 40,252 to a reasonable number that we can analyze, we use clustering. Clustering sequences is not strictly speaking a method, but a task. By clustering, we can identify patterns in the data that cannot be spotted by eye or by elementary calculations. To assign sequences to similar groups, we use hierarchical agglomerative clustering (Studer 2013). This process results in an agglomeration schedule which groups together similar sequences. This is arranged into a grouping tree, which can be "cut" at a specific place for the optimal number of clusters (Studer 2013).

To understand constellation participation by social locational factors (age, gender, education, race), we present descriptive relationships with social locations and estimate multinomial logistic regression models with constellations as our outcome. We estimate direct effects as well as interactions between social locations.

Results

Table 1 provides a description of our nationally representative sample of encore adults (ages 55 to 75) in the U.S. Note that proportions by gender, education, and race vary for different age groups, capturing the shifting heterogeneity in life course demography as well as selective mortality for disadvantaged subgroups of the population by gender and age. Appendix Table A reprises Table 1 separately by gender, capturing both the gendered nature and the heterogeneity of the later life course years.

(Table 1 about here)

Identifying Patterned Work Pathways

Nine work "states" at eight points over 16 months are the basis for identifying patterned short-term later-life work constellations. Figure 1 shows the heterogeneity in Boomers' work-hour and

labor market states in 2017. One-third of the sample (33%) was not working, defining themselves as "retired," 29% are employed full time, and an additional 9% are working 50 or more hours per week. The remaining third of the sample is distributed between part-time work, self-employment, unemployment, and other "not in the labor force" categories. Figure 1 shows that the commonly used working/retired dichotomy masks the heterogeneity of the actual circumstances of those in the encore years (ages 50 to 75).

(Figure 1 about here)

But this is a snapshot of one point in time, and we want to identify patterned short-term pathways. Recall much extant research assesses two possible states: in or out of the workforce, selecting only those who are working, often full time, at baseline. This is insufficient to capture the complexities, disparities, and risks characterizing the contemporary older adult labor market experience, especially as seniority and tenure no longer guarantee stable employment and normative exits.

Accordingly, we use the sequencing and Ward hierarchical clustering methods (Studer 2013) described above to identify patterned constellations of work participation. A key task in this process is to pinpoint the optimal number of pathways. To do so, we calculate the Calinski-Harabasz indexes for a range of pathway numbers. These indexes are calculated from the F statistics of analysis of variance (ANOVA). The CH and CH2 measures are computed using F statistics of distance and the F statistics of distance squared, respectively. The highest Calinski-Harabasz indexes indicate the preferred number of clusters (See Figure 2).

(Figure 2 about here)

As can be seen in Figure 2, the CH2 measure offers global maximums at 2 and 6, and the CH measure offers local maximums at 2, 4, and 6. Two constellations mask the heterogeneity in

short-term work experiences. We conclude that six is the optimal number of work constellations, capturing the divergent ways encore adults are attached to or exit work in these transitional years.

After clustering, we ascertain whether the constellations are strong, or whether the resulting constellations are artificial in nature. To do so, we calculate the Average Silhouette Width. Kaufman and Rousseeuw (1990) put standard rules to determine the artificiality of clusters. An ASW of .71-1.00 identifies a strong structure. Under .25 means there is no structure. ASW of between .26 and .5 indicate the structure is weak and could be artificial, meaning the patterns spotted are not present in the data. ASW of .51-.7 identifies a reasonable structure. Our calculation of ASW = .58 dictates there is a reasonable structure in our constellations, and that the chance of artificiality is low.

Six distinct constellations are visually depicted in Figure 3. Each constellation is shows the most common short-term work and non-work patterns in the data over the 16-month period based on our nine "states". In the figures, each labor force state is represented by a different color. The largest (40.4%) constellation consists of those following full-time work paths. The next largest (31.5%) represents encore adults who are not working and identify as retired. About 7% each follow one of three distinct paths – full-time, long hours (7.5%) disabled (7.4%) or part time hours (7.7%). The final path represents a more heterogeneous constellation, consisting of those who are or become unemployed and those not in the workforce because of family care or other reasons. These six alternative short-term labor market constellations unfolding over a 16-month period underscore divergences and disparities in work participation across the transitional years from age 50 to age 75. Because of the staggering number of observations, actual shifts over

16 months may be difficult to see. However, different visualizations show that there is change as well continuity in each of these short-term pathways.

(Figure 3 about here)

Disparities in Constellations

We glean further insight into disparities by assessing variation in pathways by social location. Table 2 offers descriptive statistics on the distribution of constellations by social locations of advantage and disadvantage in the form of gender, education, and race/ethnicity. We see clear gender disparities in the likelihood of following constellations marked by being in the workforce with women more apt to follow a part-time pathway than men and men more apt to follow a long-hour constellation. Voluntary part-time employment is more common with age, and is more common for women across age groups. Those with a high school degree or less are more likely to follow the disability constellation, even as those with a college degree are more likely to be in the unemployed/NILF Other constellation. Blacks, followed by American Indian/multiracial individuals, are more likely than those in other race/ethnicities to follow the disability pathway and Hispanics are more apt to follow the unemployed/NILF Other pathway.

Men early in their 50s are more apt to report being unemployed, while women are more apt to report being out of the labor force for other (family) reasons. In fact, 10% of men in their 50s report being unemployed the whole 16-month period, compared to only a little over 2 percent of 50-something women. By contrast, over one third of women in their 50s remain out of the workforce for family reasons for the 16-months studied, compared to a little over 7 percent of men in this age group. The likelihood of being out of the labor force for family reasons and of being unemployed declines with age.

(Table 2 about here)

These descriptive statistics are less informative than intersectional analyses. We begin with the intersections of gender and age; Figure 4 represents participation in constellations by five age groups in combination with gender.

(Figure 4 about here)

We see both gradual trends and sharp disjuncture by age in the retirement, regular full time and long-hour constellations by age in combination with gender in these transitional (encore) years. The constellation defined by self-reports of being retired is dramatically higher among those in their 60s compared to their 50s and those in their 70s compared to the 60s, consistent with hypothesis 2a. And, in line with our expectations in hypothesis 2b, women in every age group are more apt than men to call themselves retired. Less than 10 percent of men in their later 50s are in the constellation defining themselves as retired, but this more than triples (to 30.7%) for men ages 60-64 and again doubles (to 61.2%) for men ages 65-69. A greater percentage of women ages 50-59 than men are in the retirement constellation, but this also triples (to 36.8% for women ages 60-64) and further grows to 68.4% for women 65-69. The sharp increases in participation in the retirement constellation are offset by sharp declines in the predominantly full-time paid work constellation.

We then test for and capture more complex intersections, in terms of interactions between age group, gender, and educational levels in our six patterned short-term work constellations (tables available upon request). For ease of interpretation we use the margins command in Stata to graph constellation participation at the intersections of age, gender, education, and race. Figure 5 illustrates age, gender, and educational differences by cluster participation. For those in their mid to late 50s and those in their mid to late 60s there appears to be little differentiation between men and women with a high school degree or less and those with some college in terms

of following a self-defined retirement constellation (see Figure 5a). Women in their 50s have about a .12 probability of following the retirement constellation regardless of education levels. Only men with a college education have slightly lower probabilities of participation in the retired cluster at each age, especially in the 60s and early 70s.

Figures 5c and 5d. provide support for Hypothesis 1; college-educated men are more apt than college-educated women and those with less education to be working full time or long hours, and to continue to do so into their mid and late 60s. The probabilities of participation in both full-time and long-hour constellations are more common among those with higher levels of education for both women and men, even though the probabilities are lower among women in this age group. In both cases, women with a college degree have probabilities of participation similar to those of men with a high school degree or less, so lower than men with more education but higher than their female counterparts with less education. The probability of being in the disability constellation (see Figure 5e) is related to class more than gender; the greater one's education the less likely is participation in this constellation for women and men alike. But it is the *combination* of age and class that matters, with lower probabilities for low-educated women and men in their mid/late 60s and early 70s (compared to the 50s and early 60s) of defining themselves as not working because they are disabled, even as the probabilities of defining themselves as retired increases.

Participation in the part-time work constellation varies by age, gender, and education. At all ages women have a higher probability of part-time employment than men (see Figure 5f). Women with a college degree always have the highest probabilities of part-time work, even if they are low compared to full-time work, for example. The likelihood of being in the part-time work constellation increase slightly among women in their 60s for those with a college degree

but declines for all women into their 70s. For men, on the other hand, we see increases in the probability that men are in the part-time work constellation, peaking in the 60s and declining into the 70s. There is divergence in the probability of one's participation in the labor force being dominated by part-time work in the 60s and 70s with the highest educated men always having the highest probability of part-time work, even if it is relatively uncommon. Thus it seems that short-term employment characterized by mostly part-time work is a state most likely to be occupied by well-educated men and women in their 60s.

Note also differences in the probabilities of following the unemployed/NILF other reasons constellation (see Figure 5b). Women in their 50s, and especially those with only a high school degree or less, have higher odds of being out of the workforce for other (most likely family) reasons; men in their 50s with no college are more apt to be unemployed. But by the late 60s and early 70s few consider themselves unemployed or out of the labor force for other reasons as most are predominately following the retirement cluster, seeing oneself not working because of being retired. What we see is a real congruence in the move to the retirement pathway following the achievement of eligibility age-graded Medicare and Social Security, a decline by age group in the probabilities of full-time and long hour work constellations, and a decline in the probability of following the disability constellation across these multiple dimensions of disadvantage from the 60-64 age group on.

(Figure 5 about here)

Are these patterns similar or different depending on one's race and ethnicity? The large CPS sample permits us to test for and examine a 4-way intersection of race with age, gender and education. The resulting figures (6 a-d) reveal variations in the age-graded probabilities of following some constellations when considered together with race/ethnicity, education, and gender. This provides unique and important insights into more fine-grained race/gender

differences in combination with other social locational markers. For instance, Figure 6d shows an educational gradient but also differences by race/ethnicity in participating in the disability constellation, with Blacks and the American Indian/Multiracial category with no college in their late 50s most apt to be at risk. In fact, at ages 55-59, black and Native American/Multiracial women and slightly more men have around a .18 probability of following the disabled pathway, which is about one-third the size for those ages 65-69 (to about a .06 probability). Figure 6d also shows convergence between Blacks and the American Indian/Multiracial individuals with other racial groups at older ages.

We also find racial differences in full-time and long-hour pathways as well as the unemployed/NILF Other constellation. Black, Hispanic, and Asian/Pacific Islander men with some college or a college degree (and women with a college degree, though to a lesser extent) have higher probabilities than white men or women to be following full-time pathways, though whites have higher probabilities of long-hour full-time work (see Figure 6b and 6c). Women with no college who are Hispanics or Asian/Pacific Islanders have the highest probability of following the unemployed/other pathway (see Figure 6a), most probably because of family reasons. By contrast there is not much difference in those following the retired pathway, with congruence across gender, education, and race categories by the 70s. Whites and American Indian/Multiracial college-educated women and men in their 60s are the most apt to be working part time. Taken together, this set of figures underscore the importance of disaggregating race and ethnic groups and studying the ways age gender, education and race produce compounding effects of advantage and disadvantage, or, conversely, result in similar patterns in the later life course.

(Figures 6a-d about here)

Distribution of Churn

The six patterned constellations suggest greater short-term stability than change is actually the case. We find fully over a third (34.6%) of those in this 50-75 encore stage experience two or more shifts in the nine possible "states" over the 16-month study period; another 13% experience one shift (see Table 5). This means that only slightly over half (52.4%) remain in a single state over 16 months, underscoring that these are truly transitionary years as we proposed in hypothesis 3. Remaining in a single state is more common for women than men at every age group with greater stability at every 5-year age group from the early 50s to the early 70s. We also observe an education gradient in stability and churn with 55% of men and women with a high school degree or less experiencing stability compared to 48% of men and women with a college degree; by contrast, making two or more transitions is most common among the most educated men and women.

But churn (two or more shifts) is unevenly distributed by constellation as well as by gender. Only the distribution of churn among the full-time work constellation, which is the largest (40%), closely resembles the distribution of churn for men and women. The most stable are the disabled and retirement constellations. For example, 68% of men and 69% of women in the self-defined retirement constellation and over 60% in the disabled constellation remain in those states (see Table 6). Between almost 20% and 25% of men and women in the retired and disabled clusters experience churn. Contrast this with the 67.9% of men in the unemployed/NILF and 67.5% of women and 72.8% of men in part-time constellations who experience churn. Stability is much less common in these constellations.

Most common examples of churn in the 50s are characterized by movement back and forth from full-time to long-hour employment, as well as moves from being not in the labor force

to being retired. The latter is most common for women; one in five women ages 60 to 75 move from being not in the labor force for family reasons to saying they are retired.

Discussion and Key Research Directions

An innovative use of rich data (the 16-month CPS panel) and methods (sequence analysis), together with a life course lens emphasizing pathways, timing, and intersectional compounding social-locational contexts, offer a more granular, short-term picture of divergences and disparities as well as convergences and similarities with age around contemporary work and nonwork in the later life course. Ours is a temporal framing, pointing to differences and similarities not only in short-term work constellations but in their timing in later adulthood, even as most in their 70s are not in the workforce, defining themselves as "retired." We show that men, especially college-educated, work more hours and longer than less-educated men and women, even college-educated women, as do white and Asian/Pacific Islander men. This could reflect a combination of opportunity, gender and age norms, resources, and constraints, including health constraints. Indeed, those following the disability constellation are disproportionately low educated as well as Black and American Indian women and men in their late 50s and early 60s. By their mid to late 60s the proportion following a disability exit path drops precipitously, even as the majority define themselves as following a retired constellation. This suggests the need to add a *disadvantage compounding and convergence* lens to the cummulation of disadvantage framing, and for sufficient data to look at differences across detailed subgroups by race, gender, education, and age. Race across age groups matters. Gender across age-groups matters. But most consequential seems to be social class across age-groups, and in some cases the intersections of all four dimensions combined.

Another important finding relates to the work instability of the encore years. While "retirement" has been theorized as a single, one-point in time exit, we document six alternative

pathways as well as considerable work-related churn for this age group. Only a little over half of respondents experience stability in the form of no shifts in work states over even this short 16-month period, and considerable numbers have two or more shifts.

Defining churn as two or more changes in states, we find that churn is especially common for men in the unemployed/not in the labor force for family or other reasons constellation and for those women and men working long hours or part time. Clearly this is a dynamic, transitional phase of the life course, similar we would argue to the emerging adulthood phase in the 20s. The antecedents and consequences of voluntary and involuntary churn is an important topic for future research.

We know that work is important for health (Berkman et al. 2014; Leone & Hessel 2016; Marshall et al. 2001; Moen 2003; Rhee et al. 2015; Wang 2012), but we have shown that it is not evenly distributed across the 50s and 60s, with the compounding in some cases of intersectional disadvantages. But we were not able to demonstrate what constellations are most protective in the later adult years, or whether reasons for not working matter for health outcomes. These are fertile directions for scholarship promoting understanding of heterogeneities and inequalities, divergences and convergences, around later adult work.

References

Abbott, A. (1995). Sequence analysis: New methods for old ideas. *Annual Review of Sociology, 21,* 93-113.

Abbott, A., & Tsay, A. (2000). Sequence analysis and optimal matching methods in sociology. *Sociological Methods & Research, 29*, 3-33.

Almeida, D. M., & Wong, J. D. (2009). Life transitions and daily stress processes. In G. H. Elder and J. Z. Giele (Eds.), *The craft of life course research* (pp. 141-165). New York, NY: Guilford Press.

Arnett, J. J. (2004). *Emerging adulthood: The winding road from late teens through the twenties*. New York, NY: Oxford University Press.

Berkman, L. F., Kawachi, I., & Glymour, M. (2014). *Social epidemiology*. New York, NY: Oxford University Press.

Bird, C. E., & Rieker, P. P. (2008). *Gender and health: The effects of constrained choices and social policies*. New York, NY: Cambridge University Press.

Brown, T. H., & Warner, D. F. (2008). Divergent pathways? Racial/ethnic differences in older women's labor force withdrawal. *The Journals of Gerontology Series B, 63,* S122-S134. PMID: 18559687.

Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies.* New York, NY: W.W. Norton & Co.

Burchell, B., Ladipo, D., & Wilkinson, F. (2002). *Job insecurity and work intensification*. New York, NY: Routledge.

Burr, J. A., Massagli, M. P., Mutchler, J. A., & Pienta, A. M. (1996). Labor force transitions among older African American and white men. *Social Forces, 74,* 963-82.

Cahill, K. E., Giandrea, M. D., & Quinn, J. F. (2016). Evolving patterns of work and retirement. In L. K. George & K. F. Ferraro (Eds.), *Handbook of aging and the social sciences* (pp. 271-291). Amsterdam: Elsevier/Academic Press.

Calvo, E., Madero-Cabib, I., & Staudinger, U. M. (2018). Retirement sequences of older Americans: Moderately destandardized and highly stratified across gender, class, and race. *The Gerontologist, 58,* 1166-1176. PMID: 28586409

Carr, D., Moen, P., Perry-Jenkins, M., & Smyer, M. (2018). Post-retirement life satisfaction and financial vulnerability: The moderating role of control. *Journal of Gerontology.* doi:10.1093/geronb/gby105

Cherry, K. E., Jackson Walker, E., Silva Brown, J., Volaufova, J., LaMotte, L. R., Welsh, D. A., Su, L. J., Jazwinski, S. M., Ellis, R., Wood, R. H., & Frisard, M. I. (2013). Social

engagement and health in younger, older, and oldest-old adults in the Louisiana Healthy Aging Study (LHAS). *Journal of Applied Gerontology, 32,* 51-75.

Collins, P. H. (2015). Intersectionality's definitional dilemmas. *Annual Review of Sociology, 41,* 1-20.

Conley, D., & Thompson, J. (2013). The effects of health and wealth shocks on retirement decisions. *Federal Reserve Bank of St. Louis Review, 95,* 389-404.

Crimmins, E. M. (2004). Trends in the health of the elderly. *Annual Review of Public Health, 24,* 79-98. PMID: 15015913

Dannefer, D. (2011). Age, the life course, and the sociological imagination: Prospects for theory. In R. H. Binstock & L. K. George (Eds.), *Handbook of aging and the scial sciences* (pp. 3-17). New York, NY: Academic Press.

Dannefer, D. (2003). Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and the social science theory. *The Journals of Gerontology: Series B, 58,* S327-S337.

DeSilver, D. (2017). *5 ways the U.S. workforce has changed, a decade since the Great Recession began.* Washington, D.C.: Pew Research Center. Retrieved March 12, 2019. http://www.pewresearch.org/fact-tank/2017/11/30/5-ways-the-u-s-workforce-has-changed-a-decade-since-the-great-recession-began/

Dill, B. T., & Zambrana, R. E. (2009). *Emerging intersections: Race, class, and gender in theory, policy, and practice*. New Brunswick, NJ: Rutgers University Press.

DiPrete, T A., & Eirich, G. M. (2006). Cumulative advantage as a mechanism for inequality: A review of theoretical and empirical developments. *Annual Review of Sociology, 32,* 271-297.

Drew, J. A., Flood, S. F., & Warren J. R. (2014). Making full use of the longitudinal design of the Current Population Survey: Methods for linking records across 16 months. *Journal of Economic and Social Measurement, 39,* 121-144.

Ebbinghaus, B., & Radl, J. (2015). Pushed out prematurely? Comparing objectively forced exits and subjective assessments of involuntary retirement across Europe. *Research in Social Stratification and Mobility, 4,* 115-130.

Ekerdt, D. J., & Deviney, S. (1990). On defining persons as retired. *Journal of Aging Studies, 4*, 211-229.

Elder, G. H., Jr. (1985). *Life course dynamics: Trajectories and transitions, 1968-1980*. Ithaca, NY: Cornell University Press.

Fasang, A. E. (2010). Retirement: Institutional pathways and individual trajectories in Britain and Germany. *Sociological Research Online, 15,* 1-17.

Ferraro, K. F., & Shippee, T. P. (2009). Aging and cumulative inequality: How does inequality get under the skin? *The Gerontologist, 39,* 333-343.

Fisher, G. G., Ryan, L. H., Sonnega, A., & Naudé, M. N. (2016). Job lock, work, and psychological well-being in the United States. *Work, Aging and Retirement, 2,* 345-358.

Flippen, C., & Tienda, M. (2000). Pathways to retirement: Patterns of labor force participation and labor market exit among the pre-retirement population by race, Hispanic origin, and sex. The *Journals of Gerontology: Series B, 55,* 14-27.

Flood, S. M., & Moen, P. (2015). Healthy time use in the encore years: Do work, resources, relations, and gender matter? *Journal of Health and Social Behavior, 56,* 74-97.

Flood, S., & Pacas, J. (2018). Using the annual social and economic supplement as part of a Current Population Survey Panel. *Journal of Economic and Social Measurement, 42,* 225-248.

Gallo, W.T., Bradley, E.H., Dubin, J.A., Jones, R.N., Falba, T.A., Teng, H-M., & Kasl, S.V. (2006). The persistence of depressive symptoms in older workers who experience involuntary job loss: Results from the health and retirement survey. *The Journal of Gerontology: Social Sciences, 61*, 22-28. PMCID: PMC 513637

Gabadinho, A., Ritschard, G., Müller, N. S., & Studer, M. (2011). Analyzing and visualizing state sequences in R with TraMineR. *Journal of Statistical Software*, *40*, (4), 1-37. http://dx.doi.org/10.18637/jss.v040.i04

George, L. K. (1993). Sociological perspectives on life transitions. *Annual Review of Sociology, 19,* 353-373.

Genadek, K. R., Flood, S. M., & Moen, P. (2017). For better or worse? Couples' time together in encore adulthood. *The Journals of Gerontology, Series B, 74,* 329-338.

Glavin, P. (2013). The impact of job insecurity and job degradation on the sense of personal control. *Work and Occupations, 40,* 115-142.

Gotlib, I. H., & Wheaton, B. (1997). *Stress and adversity over the life course: Trajectories and turning points*. New York, NY: Cambridge University Press.

Halvorsen, C. J., & Morrow-Howell, N. (2017). A conceptual framework on self-employment in later life: Toward a research agenda. *Work, Aging and Retirement, 3,* 313-324.

Han, S-K, & Moen, P. (1999). Clocking out: Temporal patterning of retirement. *American Journal of Sociology, 105,* 191-236.

Han, S-K, & Moen, P. (2001). Coupled careers: Men's and women's pathways through work and marriage in the United States. In H-P Blossfeld & S. Drobnic (Eds.), *Careers of couples in contemporary societies: A cross-national comparison of the transition from male breadwinner to dual-earner families* (pp. 201-231). Oxford: Oxford University Press.

Hardy, M. (2011). Rethinking retirement. In R.A.J. Settersten & J. L. Angel (Eds.), *Handbook of sociology of aging* (pp. 213-227). New York, NY: Springer.

Heinz, W. R., & Marshall, V. W. (2003). *Social dynamics of the life course*: *Transitions, institutions, and interrelations*. New York, NY: Aldine de Gruyter.

Hess, M., Bauknecht, J., & Pink. S. (2018). Working hours flexibility and timing of retirement: findings from Europe. *Journal of Aging and Social Policy, 30,* 478-494.

Hirsch, A. S. (2016). Reducing new employee turnover among emerging adults. *Society for Human Resources Management,* June 2. Retrieved March 12, 2019. https://www.shrm.org/resourcesandtools/hr-topics/employee-relations/pages/reducing-new-employee-turnover-among-emerging-adults.aspx

James, J. B., & Pitt-Catsouphes, M. (2016). Introduction to the special issue: Change in the meaning and experience of work in later life. *Work, Aging and Retirement, 2,* 281-285.

Johnson, R. W., Kawachi, J., & Lewis, E. K. (2009). *Older workers on the move: Recareering in later life*. Washington, DC: AARP Public Policy Institute.

Kalleberg, A. L. (2011). *Good jobs, bad jobs: The rise of polarized and precarious employment systems in the United States, 1970s – 2000s*. New York, NY: Russell Sage.

Kaufman L., & Rousseeuw, P. J. (1990). *Finding groups in data: An introduction to cluster analysis*. Wiley, New York.

Kim J. Y., & Miech, R. (2009). The black-white difference in age trajectories of functional health over the life course. *Social Science & Medicine, 28,* 717-125.

Kim, J. E., & Moen, P. (2002). Retirement transitions, gender, and psychological well-being: A life-course, ecological model. *The Journals of Gerontology, Series B, 58,* 212-222

Klehe, U-C., Koen, J., & De Pater, I. E. (2012). Ending up on the scrap heap? The experience of job loss and job search among older workers. In J. W. Hedge & W.C. Borman (Eds.), *The Oxford handbook of work and aging* (pp. 313-340). New York, NY: Oxford University Press.

Kohli, M. (2007). The institutionalization of the life course: Looking back to look ahead. *Research in Human Development, 4,* 253-271.

Kojola, E., & Moen, P. (2016). No more lock-step retirement: Boomers' shifting meanings of work and retirement. *Journal of Aging Studies, 36,* 59-70.

Krueger, A. B. (2017). Where have all the workers gone? An inquiry into the decline of the U.S. labor force participation rate. In *Brookings Papers on Economic Activity, Fall 2017* (pp. 1-59). https://www.brookings.edu/wp-content/uploads/2018/02/kruegertextfa17bpea.pdf

Leone, T., & Hessel, P. (2016). The effect of social participation on the subjective and objective health status of the over-fifties: Evidence from SHARE. *Ageing & Society, 56,* 968-987.

Lippmann, S. (2008). Rethinking risk in the new economy: Age and cohort effects on unemployment and re-employment. *Human Relations, 61,* 1259-1292. https://doi.org/10.1177/0018726708094912

Lynch, S. M. (2003). Cohort and life-course patterns in the relationship between education and health: A hierarchical approach. *Demography, 40,* 309-31.

Marshall, V., Clark, P. J., & Ballantyne, P. J. (2001). Instability in the retirement transition: Effects on health and well-being in a Canadian study. *Research on Aging, 23,* 379-409. https://doi.org/10.1177/0164027501234001

Martin, L. G., Freedman, V. A., Schoeni, R. F., & Andreski, P. M. (2010). Trends in disability and related chronic conditions among people ages fifty to sixty-four. *Health Affairs, 29,* 725-731.

Martin, L. G., Schoeni, R. F., & Andreski, P. M. (2010). Trends in health of older adults in the United States: Past, present, future. *Demography, 47,* S17-S40.

McDonough, P., Worts, D., Corna, L. M., McMunn, A., & Sacker, A. (2017). Later-life employment trajectories and health. *Advances in Life Course Research, 35,* 22-33. https://doi.org/10.1016/j.alcr.2017.09.002

McNamara, T. K., & Williamson, J. B. (2013). *Unequal prospects: Is working longer the answer?* New York, NY: Routledge.

Mirowsky, J., & Ross, C. E. (2008). Education and self-rated health: Cumulative advantage and its rising importance. *Research on Aging, 30,* 93-122.

Moen, P. (2019). Bending futures and meanings of work, careers and life-course pathways." In *Futures of Work, Vol. II*.

Moen, P. (2016a). *Encore adulthood: Boomers on the edge of risk, renewal, and purpose*. New York, NY: Oxford University Press.

Moen, P. (2016b). Work over the gendered life course. In J. Shanahan, J. T. Mortimer, & M. K. Johnson (Eds.), *Handbook of the life course: Vol II* (pp. 249-275). New York, NY: Springer Publishing.

Moen, P. (2013). Constrained choices: The shifting institutional contexts of aging and the life course. In L. Waite (Ed.), *Panel on new directions in social demography, social epidemiology, and the sociology of aging, perspectives on the future of the sociology of aging* (pp. 175-216). Washington, DC: National Research Council.

Moen, P. (2003). *It's about time: Couples and careers*. Ithaca, NY: Cornell University Press.

Moen, P. (2001). The gendered life course. In L. George & R. H. Binstock (Eds.), *Handbook of aging and the social sciences* (pp. 179-196). San Diego, CA: Academic Press.

Moen, P., & Flood, S. (2013). Limited engagements? Women's and men's work/volunteer Time in the encore life course stage. *Social Problems, 60* (2), 206-233.

Moen, P., & Lam, J. (2015). Retirement and encore adulthood: The new later life course. In J. D. Wright (Ed.), *International encyclopedia of the social & behavioral sciences*, 2nd edition, (pp. 592-597). New York, NY: Elsevier

Moen, P., & Spencer, D. (2006). Converging divergences in age, gender, health, and well-being: Strategic selection in the third age. In R. H. Binstock & L. George (Eds.), *Handbook of aging and the social sciences* (pp. 127-144). Burlington, MA: Elsevier Academic Press.

Mortimer, J., & Moen, P. (2016). The changing social construction of age and the life course: Precarious identity and enactment of 'early' and 'encore' stages of adulthood. In M. J. Shanahan, J. T. Mortimer, & M. K. Johnson (Eds.), *Handbook of the life course: Vol II* (pp. 111-129). New York, NY: Springer Publishing.

Munnell, A. H., & Sass, S. A. (2008). *Working longer: The solution to the retirement income challenge*. Washington, DC: The Brookings Institute.

Neumark, D. and Kawaguchi, D.K. 2001. Attrition bias in economic relationships estimated with matched CPS files. Washington, DC: National Bureau of Economic Research – working paper 8663.

O'Rand, A. (1996). The precious and the precocious: Understanding cumulative disadvantage and cumulative advantage over the life course. *The Gerontologist, 36,* (2), 230-38.

O'Rand, A. M., & Henretta, J. C. (1999). *Age and inequality: Diverse pathways through later life*. Boulder, CO: Westview Press.

Pearlin, Leonard I. (1989). The sociological study of stress. J*ournal of Health and Social Behavior, 30* (3), 241-56. PMID: 2674272

Pearlin, L. I. (2010). The life course and the stress process: Some conceptual comparisons." *The Journals of Gerontology, Series B*, *65.* (2), 207-15. https://doi.org/10.1093/geronb/gbp106

Pearlin, L. I., Schieman, S., Fazio, E. M., & Meersman, S. C. (2005). Stress, health, and the life course: Some conceptual specifications. J*ournal of Health and Social Behavior, 46,* 205-19.

Perkins, K. L., & Sampson, R. J. (2015). Compounded deprivation in the transition to adulthood: The intersection of racial and economic inequality among Chicagoans, 1995-2013. *RSF: The Russell Sage Foundation Journal of the Social Sciences, 1,* 35-54.

Pleau, R. L. (2010). Gender differences in postretirement employment. *Research on Aging, 32,* 267-303.

Posthuma, R. A., Wagstaff, M., & Campion, M. A. (2012). Age stereotypes and workplace age discrimination: A framework for future research. In J. W. Hedge & W. C. Borman (Eds.), *The Oxford Handbook of Work and Aging* (pp. 298-312). New York, NY: Oxford University Press.

Quinn, J. F., & Cahill, K. E. (2016). The new world of retirement income security in America. *American Psychologist, 71,* 321-33.

Reynolds, J., & Wenger, J. B. (2010). Prelude to a RIF: Older workers, part-time hours, and unemployment. *Journal of Aging & Social Policy, 22,* 99-116.

Rhee, M-K., Mor Barak, M. E., & Gallo, W. T. (2015). Mechanisms of the effect of involuntary retirement on older adults' self-rated health and mental health. *Journal of Gerontological Social Work, 59,* 35-55.

Riley, M. W., Kahn, R. L., & Foner, A. (1994). *Age and structural lag: Society's failure to provide meaningful opportunities in work, family, and leisure*. Oxford, UK: John Wiley & Sons.

Studer, M. (2013). WeightedCluster library manual: A practical guide to creating typologies of trajectories in the social sciences with R. LIVES Working Papers, 24. doi: 10.12682/lives.2296-1658.2013.24

Studer, M. & Ritschard, G. (2016). What matters in differences between life trajectories: A comparative review of sequence dissimilarity measures, J*ournal of the Royal Statistical Society, Series A, 179*, (2), 481-511.

Taylor, M. G. (2008). Timing, accumulation, and the black/white disability gap in later life: A test of weathering. *Research on Aging, 30,* 226-250.

Tilly, C. (1998). *Durable inequality*. Berkeley, CA: University of California Press.

Van De Preter, H., Looy, D., & Mortelmans, D. (2013). Individual and institutional push and pull factors as predictors of retirement timing in Europe: A multilevel analysis. *Journal of Aging Studies, 27,* 299-307.

Van der Horst, M., Lain, D., Vickerstaff, S., Clark, C., & Baumberg Geiger, B. (2017). Gender roles and employment pathways of older women and men in England. *SAGE Open*. https://doi.org/10.1177/2158244017742690 (200)

Van Solinge, H., & Henkens, K. (2007). Involuntary retirement: The role of restrictive circumstances, timing, and social embeddedness. *The Journals of Gerontology, Series B, 62,* S295-S303. https://doi.org/10.1093/geronb/62.5.S295

Wang, M. (2012). Health and fiscal and psychological well-being in retirement. In J. W. Hedge and W. C. Borman, (Eds.), *The Oxford handbook of work and aging* (pp. 570-584). New York, NY: Oxford University Press.

Warner, D. F., & Brown, T. H. (2011). Understanding how race/ethnicity and gender define age-trajectories of disability: An intersectionality approach. *Social Science & Medicine, 72,* 1236-1248.

Warner, D. F., Hayward, M. D., & Hardy, M. A. (2010). The retirement life course in America at the dawn of the twenty-first century. *Population Research and Policy Review, 29,* 893-919.

World Economic Forum. (2016). *The future of jobs: Employment, skills, and workforce strategy for the fourth industrial revolution*. Retrieved March 12, 2019. http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf

Table 1. Descriptive Statistics for Individuals Ages 50-75 (and 5-year Age Groups) who were in the CPS Eight Times between 2008 and 2018

Variable (%)		**All Ages**	**50-54**	**55-59**	**60-64**	**65-69**	**70-75**
	N	*346488*	*86753*	*84261*	*75377*	*58326*	*41771*
Gender							
Men	*163412*	47.2	48.2	48.1	47.9	46.2	43.2
Women	*183076*	52.8	51.8	51.9	52.1	53.8	56.8
Education							
HS Degree or less	*146392*	42.3	40.7	40.2	39.5	44.3	51.7
Some college	*93506*	27	27.8	28	27.8	25.9	23.2
College graduate	*106590*	30.8	31.5	31.8	32.7	29.8	25
Race							
White	*276156*	79.7	77	79.1	80.7	81.5	82.2
Black	*28267*	8.2	8.5	8.3	8.1	7.8	7.8
Hispanic	*23210*	6.7	8.43	7.06	5.89	5.67	5.28
Asian/Pacific Islander	*13071*	3.77	4.28	3.81	3.65	3.42	3.35
American Indian/Multiracial	*5784*	1.7	1.8	1.7	1.6	1.6	1.4

Note: Column percentages sum to 100 within Gender, Education and Race.

Table 2. Participation in 16 Month Work Constellations by Age, Gender, Education, and Race

		1: Retired	2: Unemployed and NILF Other	3: Full time	4: Full time, long hours	5: Disabled	6: Part time
Full Sample		31.5	5.4	40.4	7.5	7.4	7.7
Age							
	50-54	3.6	8.2	60.7	11.8	8.8	7.0
	55-59	10.6	7.2	54.1	10.3	10.2	7.7
	60-64	33.9	4.7	37.5	6.8	8.6	8.6
	65-69	65.1	2.4	17.5	2.8	3.6	8.7
	70-75	80.4	1.5	8.4	1.3	2.0	6.5
Gender							
	Men	28.3	3.0	44.6	11.4	7.3	5.4
	Women	34.3	7.5	36.8	4.1	7.4	9.9
Education							
	HS Degree or less	35.3	6.4	35.5	4.5	11.6	6.6
	Some college	30.4	5.3	42.9	6.6	6.7	8.2
	College graduate	27.2	4.2	45.1	12.5	2.2	8.9
Race							
	White	32.1	4.8	40.1	8.4	6.5	8.2
	Black	32.1	5.8	38.5	3.3	15.2	5.1
	Hispanic	25.9	10.0	44.5	4.1	9.5	6.1
	Asian/Pacific Islander	27.4	8.3	47.8	6.4	3.8	6.3
	American Indian/Multiracial	30.0	7.2	36.5	5.8	13.8	6.7

Note: Rows sum to 100.

Table 3. 16 Month Work Constellations by Age, Gender, and Education for 55-59 and 65-69 Year Olds

Panel 1: Ages 55-59	Men			Women		
	HS Degree or Less	Some College	College Degree	HS Degree or Less	Some College	College Degree
N	*16549*	*10960*	*12984*	*17314*	*12663*	*13791*
1: Retired	9.22	10.16	7.89	12.31	11.71	12.04
2: Unemployed and NILF Other	4.42	4.15	2.79	13.34	9.56	7.21
3: Full time	55.04	58.68	60.25	45.17	53.51	55.07
4: Full time, long hours	10.33	13.65	22	3.07	4.86	10.33
5: Disabled	17.02	9.04	2.46	16.23	9.58	3.39
6: Part time	3.98	4.32	4.6	9.88	10.79	11.96

Panel 2: Ages 65-69	Men			Women		
	HS Degree or Less	Some College	College Degree	HS Degree or Less	Some College	College Degree
N	*10998*	*6752*	*9190*	*14852*	*8335*	*8199*
1: Retired	66.79	63.14	53.03	70.85	68.06	64.25
2: Unemployed and NILF Other	1.68	1.82	1.64	3.3	2.75	2.45
3: Full time	16.99	20.82	26.24	11.72	15.9	17.69
4: Full time, long hours	2.59	3.7	7.29	0.62	1.22	2.72
5: Disabled	5.98	2.58	1.09	5.79	2.4	1.07
6: Part time	5.97	7.94	10.72	7.72	9.67	11.82

Note: Columns sum to 100.

Table 4. 16 Month Work Constellations by Age, Gender, and Race for 55-59 and 65-69 Year Olds

		White	Black	Hispanic	Asian/ Pacific Islander	American Indian/ Multiracial
Panel 1: Men, Ages 55-59	*N*	*32479*	*3114*	*2804*	*1448*	*648*
1: Retired		9.0	11.4	7.2	7.2	11.7
2: Unemployed and NILF Other		3.3	6.6	5.4	5.4	6.2
3: Full time		57.5	51.4	64.5	67.3	47.5
4: Full time, long hours		16.8	5.2	7.0	11.3	11.6
5: Disabled		9.1	21.1	11.8	4.5	18.7
6: Part time		3.3	4.2	4.1	4.4	4.3
Panel 2: Women, Ages 55-59	*N*	*34182*	*3879*	*3146*	*1765*	*796*
1: Retired		12.3	12.6	9.8	11.6	11.3
2: Unemployed and NILF Other		9.5	7.6	19.6	14.3	11.8
3: Full time		51.1	49.8	46.8	52.8	47.6
4: Full time, long hours		6.5	3.0	2.2	6.8	4.5
5: Disabled		8.9	21.0	13.0	5.3	16.5
6: Part time		11.7	6.1	8.7	9.2	8.3
Panel 3: Men, Ages 65-69	*N*	*22204*	*1931*	*1482*	*889*	*434*
1: Retired		60.9	65.5	62.2	58.6	60.6
2: Unemployed and NILF Other		1.6	2.1	2.5	2.3	3.2
3: Full time		21.0	17.8	23.1	30.2	15.9
4: Full time, long hours		5.0	1.6	2.1	2.6	3.5
5: Disabled		2.8	8.7	5.5	2.1	9.0
6: Part time		8.8	4.3	4.5	4.3	7.8
Panel 4: Women, Ages 65-69	*N*	*25317*	*2633*	*1827*	*1105*	*504*
1: Retired		68.9	67.2	64.8	65.9	65.9
2: Unemployed and NILF Other		2.5	3.2	7.4	5.2	3.0
3: Full time		14.2	15.2	13.9	18.0	13.9
4: Full time, long hours		1.4	0.6	0.9	1.5	2.2
5: Disabled		2.9	8.2	6.8	3.1	6.6

6: Part time	10.1	5.7	6.2	6.4	8.5

Note: Columns sum to 100.

Table 5. Participation in 16 Month Work Constellations by Age, Gender, Education, and Race

		Stability	One Transition	Two or More Transitions
Full Sample		52.4	13.0	34.7
Age				
	50-54	46.9	12.4	40.7
	55-59	47.0	13.2	39.8
	60-64	49.0	15.4	35.7
	65-69	59.5	12.9	27.6
	70-75	70.7	9.5	19.8
Gender				
	Men	49.8	12.9	37.3
	Women	54.7	13.0	32.3
Education				
	HS Degree or less	55.0	13.7	31.4
	Some college	52.9	12.9	34.2
	College graduate	48.2	12.2	39.6
Race				
	White	52.7	12.7	34.6
	Black	52.5	14.7	32.9
	Hispanic	48.5	14.0	37.5
	Asian/Pacific Islander	52.7	12.5	34.8
	American Indian/Multiracial	49.3	14.6	36.2

Note: Rows sum to 100.

Table 6. 16 Month Continuity and Change in States Across Work Constellations by Gender

	Full Sample	1: Retired	2: Unemployed and NILF Other	3: Full time	4: Full time, long hours	5: Disabled	6: Part time
%	*100.0*	*31.5*	*5.4*	*40.0*	*7.5*	*7.4*	*7.7*
Panel 1: Men							
Number of Transitions							
0	*49.8*	68.1	15.5	47.1	30	65.8	15.1
1	*12.9*	13.5	16.6	13.2	11.4	10.8	12.1
2+	*37.3*	18.4	67.9	39.7	58.6	23.4	72.8
Panel 2: Women							
Number of Transitions							
0	*54.7*	69.3	31.2	56.7	26.6	61.7	20.4
1	*13.0*	12.9	21.9	11.7	11.5	13.3	12.1
2+	*32.3*	17.7	46.9	31.7	61.9	25.0	67.5

Note: Columns sum to 100 for both men and women by constellation.

Figure 1: Heterogeneity in Boomers' Work-Hour and Labor Market States, 2017

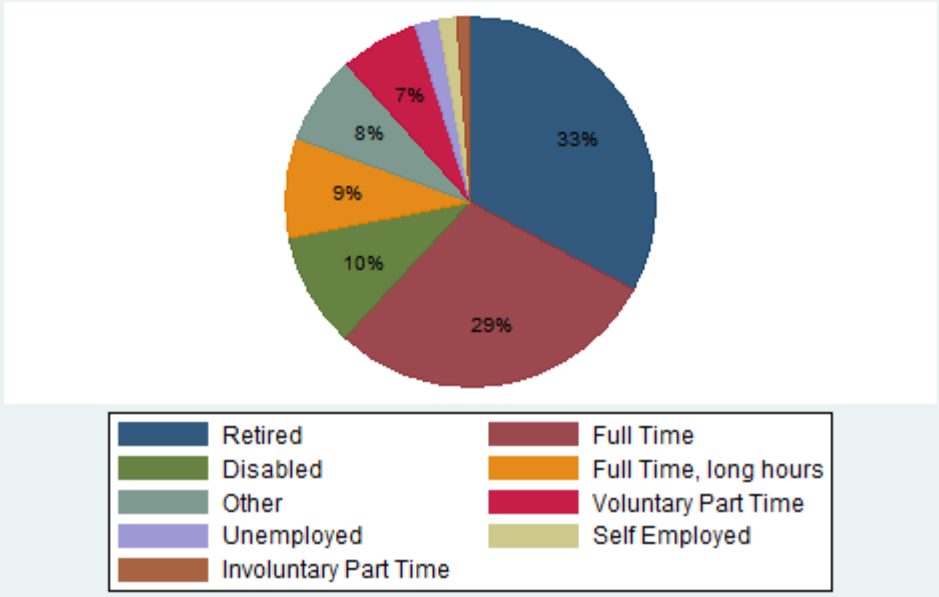


Figure 2. Identifying the Optimal Number of Constellations of Short-Term (16 Month) Work/Non-Work, Ages 50-75

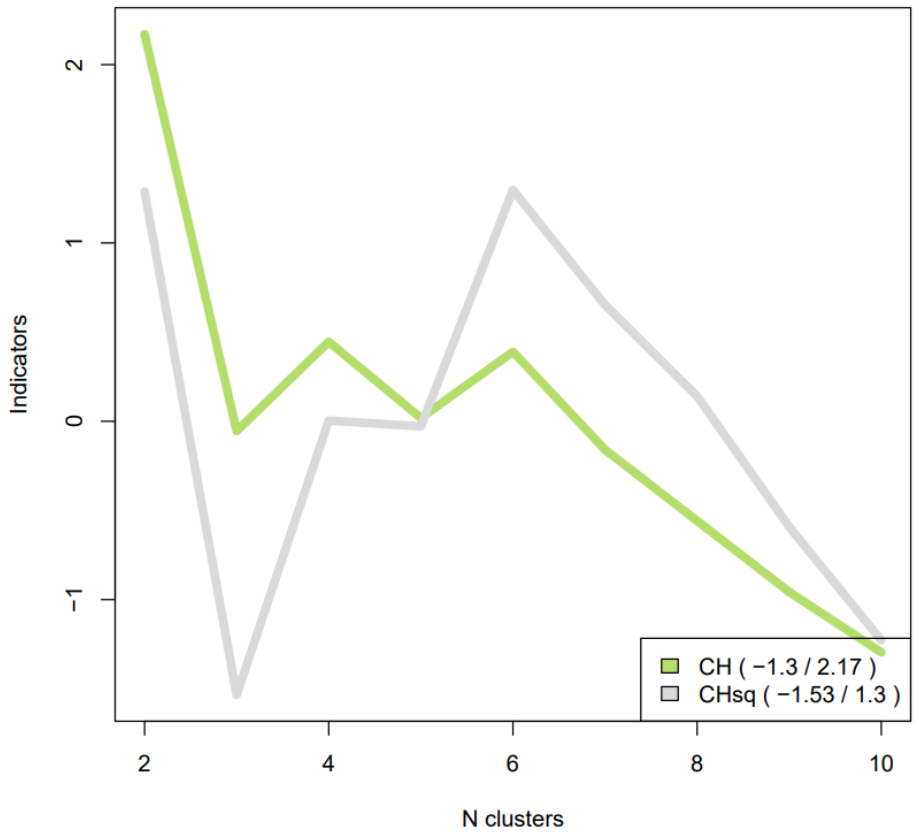


Figure 3. Six Patterned Short-Term (16 month) Constellations of Work and Non-Work, Ages 50-74.

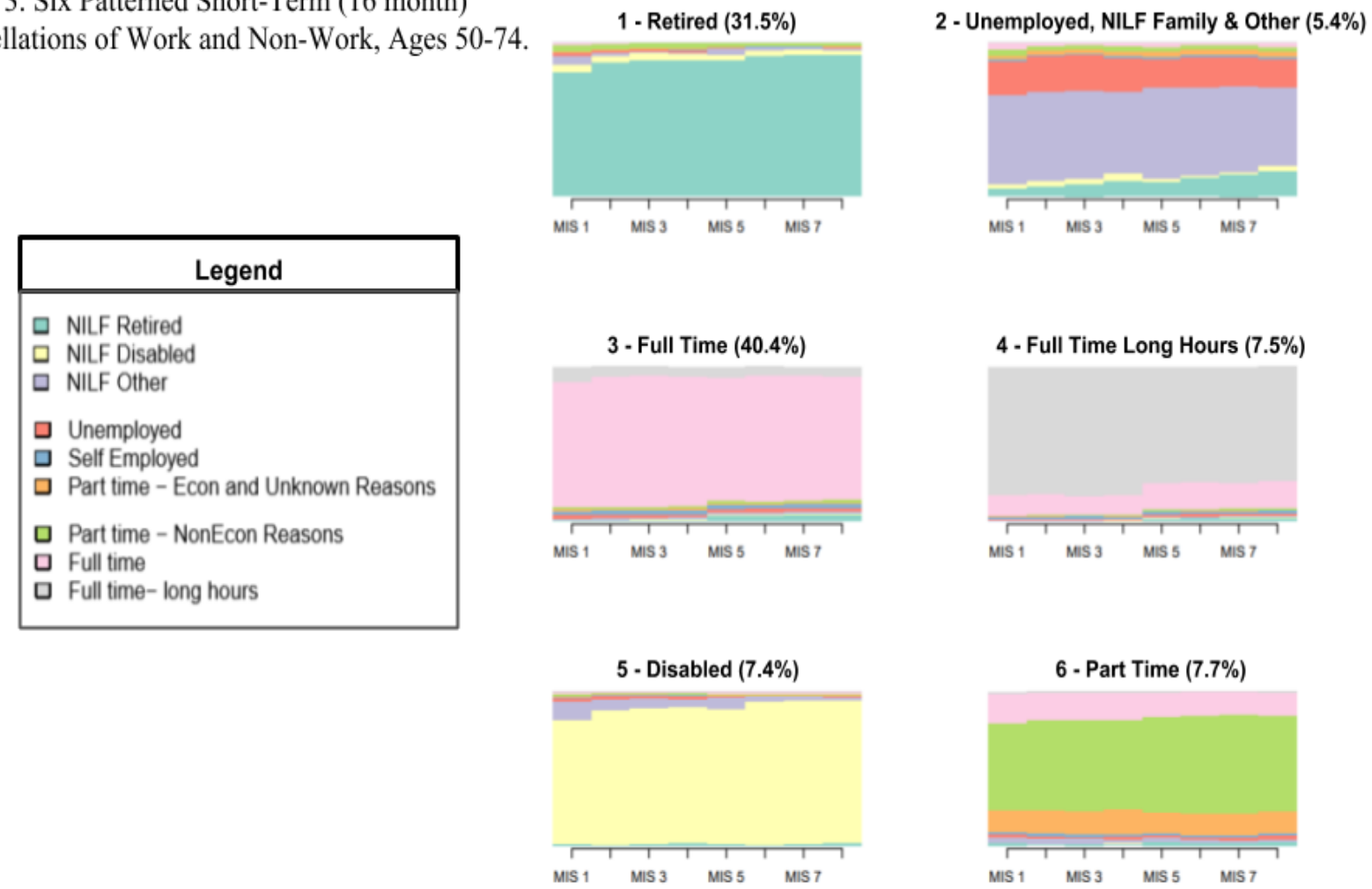
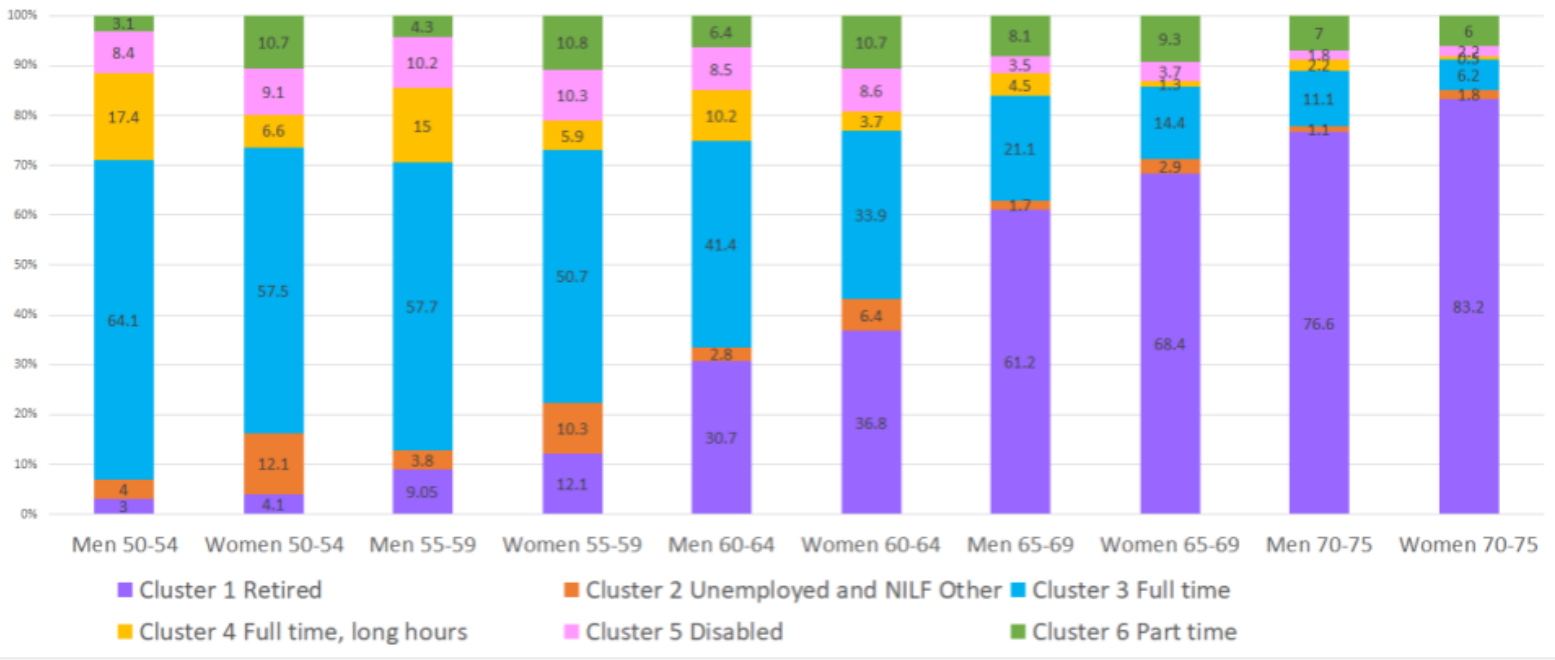
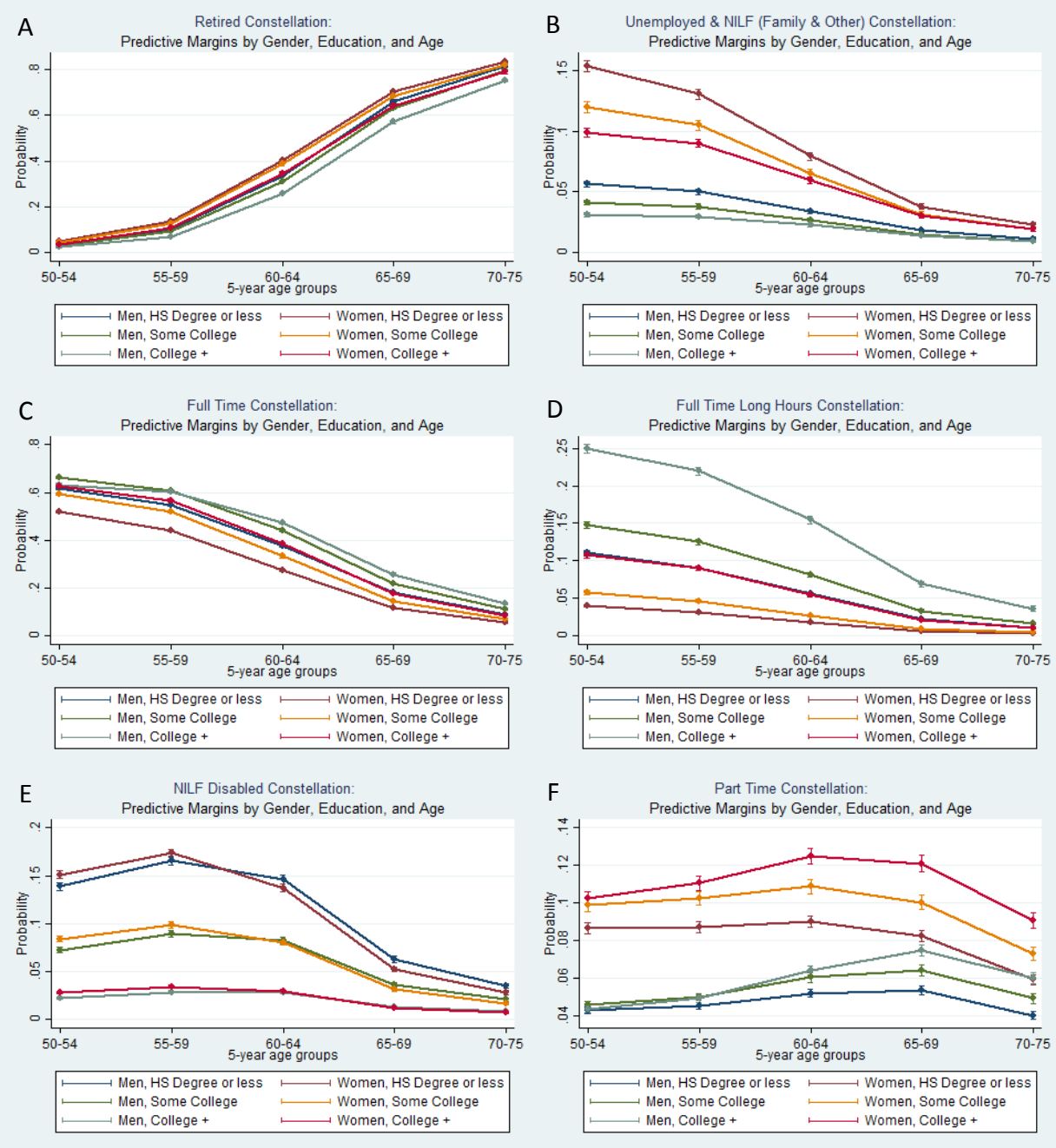


Figure 4. Short-Term (16 Months) Constellations by Age Group and Gender Intersections

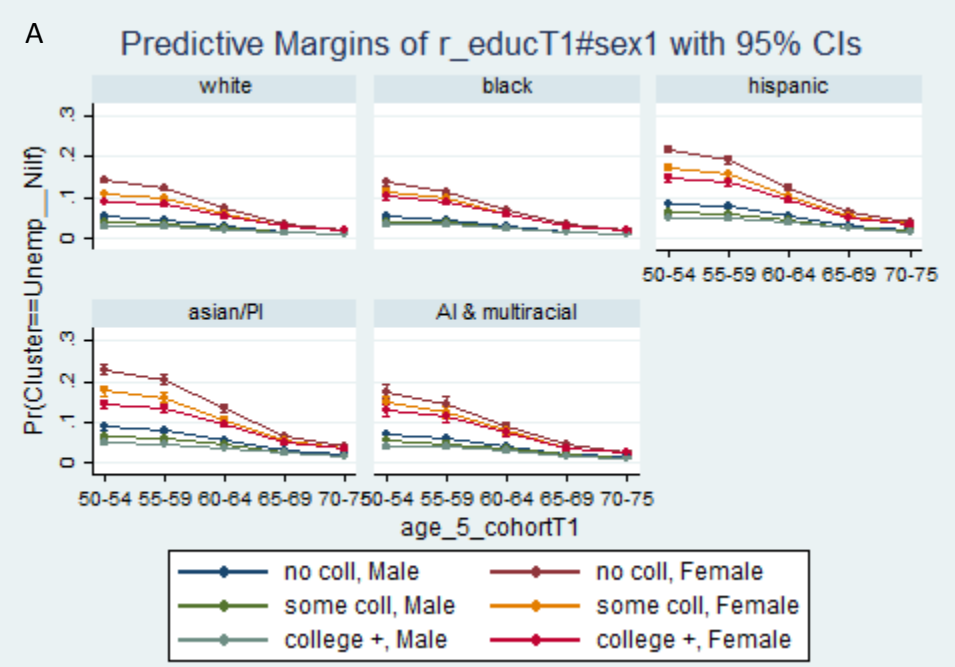


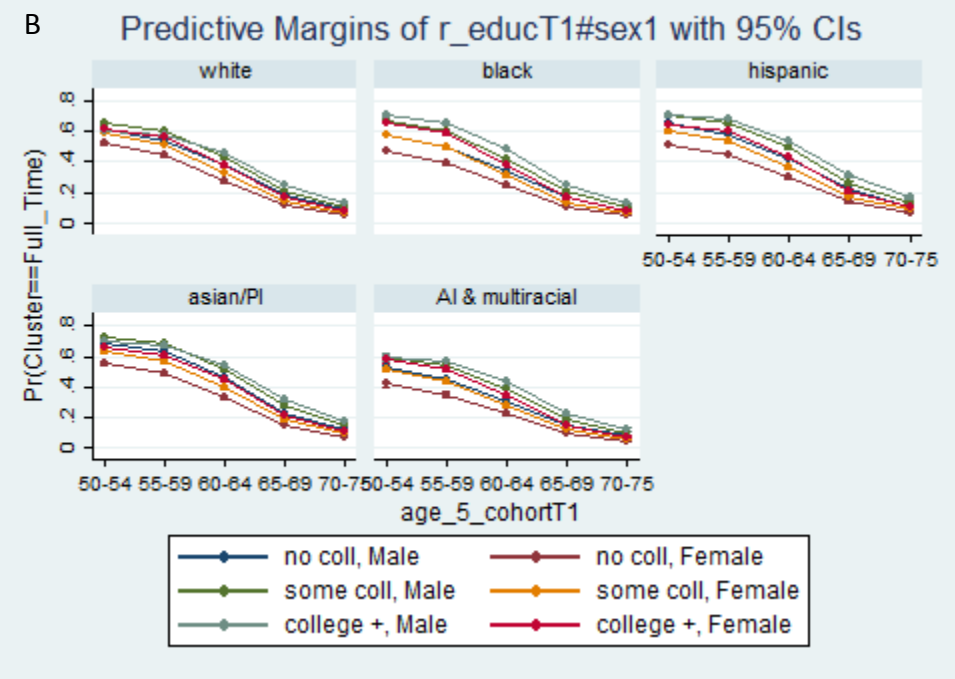
16-month Panel, Data from 2008-2017 CPS

Figures 5a-f. Probabilities of Short-Term Constellation Participation by Age Group, Gender, and Education Intersections

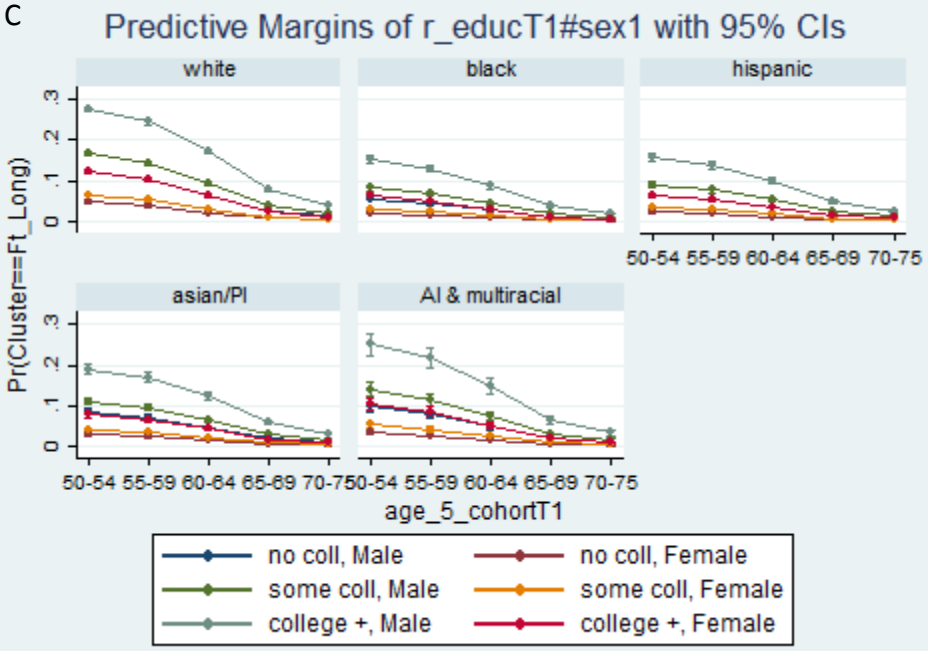


Figures 6a-d. Probabilities of Short-Term Constellation Participation by Age Group, Gender, Education, and Race/Ethnicity Intersections

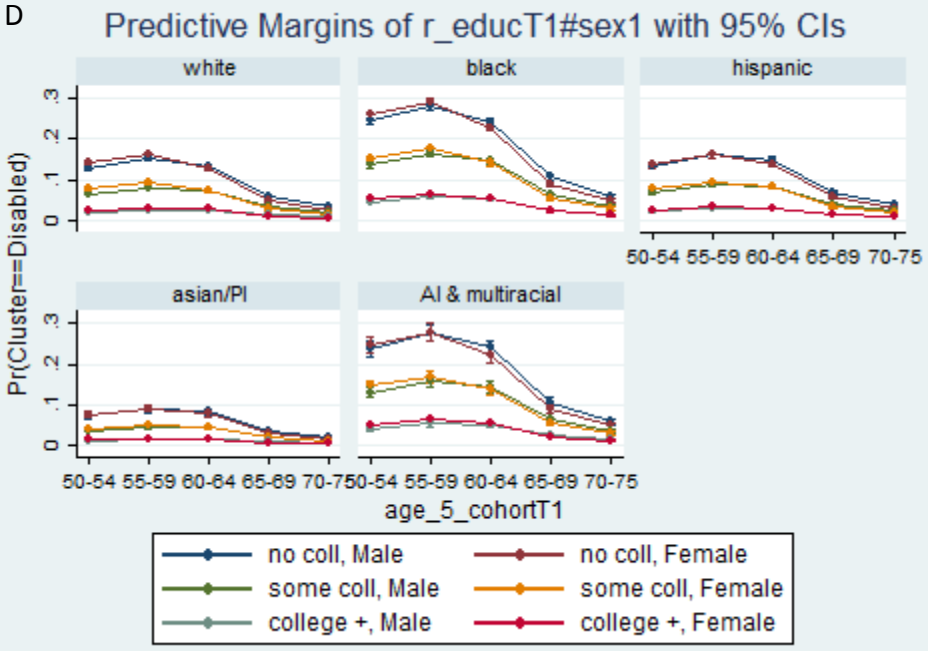




C


Predictive Margins of r_educT1#sex1 with 95% CIs
white
black
hispanic
asian/PI
AI & multiracial
Pr(Cluster==Ft_Long)
0
.1
.2
.3
50-54 55-59 60-64 65-69 70-75
age_5_cohortT1
no coll, Male
some coll, Male
college +, Male
no coll, Female
some coll, Female
college +, Female

D


Predictive Margins of r_educT1#sex1 with 95% CIs
white
black
hispanic
asian/PI
AI & multiracial
Pr(Cluster==Disabled)
0
.1
.2
.3
50-54 55-59 60-64 65-69 70-75
age_5_cohortT1
no coll, Male
some coll, Male
college +, Male
no coll, Female
some coll, Female
college +, Female

Appendix A. Descriptive Statistics for Men and Women Ages 50-75 (and 5-year Age Groups) who were in the CPS Eight Times between 2008 and 2018

Panel A: Men							
Variable (%)		**All Ages**	**50-54**	**55-59**	**60-64**	**65-69**	**70-75**
	N	*163,412*	*41,816*	*40,493*	*36,105*	*26,940*	*18,058*
Education							
HS Degree or less	*67,842*	41.5	43.2	40.9	37.8	40.8	47.5
Some college	*42,270*	25.9	25.7	27.1	27.1	25.1	22.2
College graduate	*53,300*	32.6	31.1	32.1	35.1	34.1	30.3
Race							
White	*131,830*	80.7	77.9	80.2	81.8	82.4	83.3
Black	*12,220*	7.5	7.8	7.7	7.4	7.2	7.0
Hispanic	*10,794*	6.6	8.5	6.9	5.8	5.5	4.9
Asian/Pacific Islander	*5,902*	3.6	4.1	3.6	3.5	3.3	3.3
American Indian/Multiracial	*2,666*	1.6	1.8	1.6	1.6	1.6	1.5
Panel B: Women							
Variable (%)		**All Ages**	**50-54**	**55-59**	**60-64**	**65-69**	**70-75**
	N	*183,076*	*44,937*	*43,768*	*39,272*	*31,386*	*23,713*
Education							
HS Degree or less	*78,550*	42.9	38.4	39.6	41.1	47.3	54.9
Some college	*51,236*	28.0	29.8	28.9	28.5	26.6	24.0
College graduate	*53,290*	29.1	31.9	31.5	30.5	26.1	21.1
Race							
White	*144,326*	78.8	76.2	78.1	79.8	80.7	81.3
Black	*16,047*	8.8	9.1	8.9	8.8	8.4	8.4
Hispanic	*12,146*	6.8	8.4	7.2	6.0	5.8	5.6
Asian/Pacific Islander	*7,169*	3.9	4.4	4.0	3.8	3.5	3.4
American Indian/Multiracial	*3,118*	1.7	1.9	1.8	1.7	1.6	1.4

Note: Column percentages sum to 100 by Gender and Age Group within Education and Race.

Appendix B. 16 Month Work Constellations by Age and Gender Intersections

Panel 1: Men

	50-54	**55-59**	**60-64**	**65-69**	**70-75**
	N 41816	*40493*	*36105*	*26940*	*18058*
1: Retired	3.0	9.1	30.7	61.2	76.6
2: Unemployed and NILF Other	4.0	3.8	2.8	1.7	1.1
3: Full time	64.1	57.7	41.4	21.1	11.1
4: Full time, long hours	17.4	15.0	10.2	4.5	2.2
5: Disabled	8.4	10.2	8.5	3.5	1.8
6: Part time	3.1	4.3	6.4	8.1	7.0

Panel 2: Women

	50-54	**55-59**	**60-64**	**65-69**	**70-75**
	N 44937	*43768*	*39272*	*31386*	*23713*
1: Retired	4.1	12.1	36.8	68.4	83.2
2: Unemployed and NILF Other	12.1	10.3	6.4	2.9	1.8
3: Full time	57.5	50.7	33.9	14.4	6.2
4: Full time, long hours	6.6	5.9	3.7	1.3	0.5
5: Disabled	9.1	10.3	8.6	3.7	2.2
6: Part time	10.7	10.8	10.7	9.3	6.0

Note: Columns sum to 100.