

Who will I be when I retire? An investigation of anticipation and
experience of self-concept change in retirement

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Declaration

I declare that this thesis, *Who will I be when I retire? An investigation of anticipation and experience of self-concept change in retirement*, represents my own work, except where otherwise stated. None of the work referred to in this thesis has been accepted in any previous application for a higher degree at this or any other University or institution. All quotations have been distinguished by quotation marks and the sources of information specifically acknowledged.

Submitted by: Daniel Jolles

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Date:

Abstract

Work can provide activities, social interactions and meaning that are important to the self. As retirement involves loss of these work-based activities and relationships, it brings the potential for negative impacts to how people see themselves; their self-concept, which is important to psychological wellbeing. Older adults who have higher commitment to their work prior to retirement might anticipate and experience less positive self-concept changes than their less committed colleagues. Additionally, the availability of other important social relationships might act as a buffer to negative changes, allowing individuals to maintain positive self-concept. We investigated the relationship between work commitment and self-concept change in US adults aged 49 to 75 pre-retirement in Study 1, and post-retirement in Study 2 ($N = 506$ and $N = 215$). Contrary to hypothesis, higher work commitment was not associated with negative self-concept changes in retirement. Exploratory analyses showed that self-concept changes post-retirement were less positive than anticipated pre-retirement, and that more social groups were positively related to self-concept changes. In Study 3 ($N = 565$), we surveyed workers aged between 49 and 70 to test if framing the transition to retirement as a role entry, rather than an exit from the workforce, moderated the relationship between work commitment and anticipated self-concept change in retirement. We found no support for this moderating relationship, however framing retirement as a role entry did lead to an increase in positive anticipation of self-concept change. Our findings suggest self-concept change in retirement is not as positive as anticipated and point to the importance of multiple social groups in retirement. We discuss the applied implications of these findings for individual retirement transitions and wellbeing.

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Chapter 1. Introduction

For many older workers, retirement involves giving up work that provides them meaning, routines and relationships important to the way they see themselves. Increasing recognition is being given to the importance of retirement transition as a later life milestone, and the potential for retirement from satisfying work to cause disruption to health and wellbeing (Kubicek, Korunka, Raymo, & Hoonakker, 2011; Wang, 2007; Wang & Shi, 2014). Yet, very little is known about what happens to the self when people exit the workplace for the last time. Given the central role work plays in many people's lives and identities, exit from the workforce has the potential to change a person's sense of identity, the self-concept (Elsbach, 2015; McIntyre, Mattingly, Lewandowski, & Simpson, 2014). Self-concept is important to psychological wellbeing (Butzer & Kuiper, 2006; Campbell, Assanand, & Di Paula, 2003) and other life transitions that result in exiting an important role (e.g., relationship dissolution, job loss) are shown to negatively impact people's self-concept, especially when individuals are highly committed prior to the loss (Light & Visser, 2013; Slotter, Gardner, & Finkel, 2010).

Continuity theory suggests that retirees are motivated to maintain a consistent, positive self-identity across time (Atchley, 1989; Feldman, 1994). Yet for those highly committed to their work, retirement can represent the loss of an important identity that has taken a lifetime to build (Conroy & O'Leary-Kelly, 2014). Retirement inevitably leads to changes in routine and the loss or weakening of work-based social relationships (Van Tilburg, 1992), however, in losing the work role, other social relationships can provide important self-knowledge that supports

continuity of the self-concept in retirement (Henning, Lindwall, & Johansson, 2016; Simon, 1997). For example, multiple social groups can support identity and wellbeing in the transition to retirement (Haslam, McMahon et al., 2018). Better understanding of self-concept change in the transition from the workforce to retirement can help inform applied interventions that support positive identity change and wellbeing into later life.

The aim of this research is to expand on previous research of retirement transition by understanding how work commitment prior to retirement relates to the anticipation and experience of self-concept change in retirement. This research will also investigate the extent to which these self-concept changes are moderated by important social relationships (e.g., friend, volunteer).

1. Self-concept change in retirement.

Retirement is broadly defined as an individual's exit from the workforce occurring after middle age. It is often an eagerly anticipated later life milestone, yet exit from the workforce can result in loss of work groups, relationships and purpose built over many years, bringing potential for loss of self-identity (Conroy & O'Leary-Kelly, 2014). The wellbeing consequences of retirement remains an important research question, with mixed findings and a number of different variables including, work conditions, social relationships and socioeconomic status influencing the transition (Wang & Shi, 2014). Large longitudinal data sets have yielded mixed results about the impact of retirement on psychological wellbeing (Heller-Sahlgren, 2017). For example, some studies have shown retirement to have long-term beneficial effects on wellbeing and life satisfaction (e.g., Gorry, Gorry, & Slavov, 2018; Inslar, 2015; Lindwall et al., 2017), yet others have shown retirement leads to declines in

mental health (Dave et al., 2006; Heller-Sahlgren, 2017). Given the importance of work to the self, retirement represents a potential disruption to identity continuity, which might leave people vulnerable to feelings of loss, and subsequent declines in wellbeing (Kim & Moen, 2002). Better understanding how self-concept changes are anticipated and experienced in retirement might help to explain these divergent wellbeing outcomes post-retirement.

Working adults spend more than a third of their waking hours engaged in work, and this work can provide activities, social interactions and structure important to self-identity (Dutton et al., 2010; Wang & Shi, 2014). The uncertainty and discontinuity that can arise from life transitions such as retirement has been referred to as a rupture (Zittoun, Duveen, Gillespie, Ivinson, & Psaltis, 2003), with changes in relationships and interactions leading to changes in the way an individual views themselves, their identity. A person's sense of identity or self-knowledge can be understood as self-concept. It is comprised of attributes such as physical appearance, attitudes and beliefs, material belongings and social relationships that individuals feel are characteristic of who they are (James, 1890). Aspects of this self-knowledge might be positive or negative, related to the individual's present, past or future experiences, and subject to change over time and as a result of life transitions (Markus & Wurf, 1987). Self-concept measures tend to show correlations with self-esteem (DeMarree & Bobrowski, 2018), but are distinct in that they are concerned with the extent to which self-knowledge is meaningful and consistently organised (Campbell, 1990), rather than the extent to which the self is viewed as positive and worthwhile (Emery, Walsh, & Slotter, 2015; Rosenberg, 1965). Measures of self-concept include self-concept clarity, the extent to which a person's self-concept is clearly defined, consistent and stable (Campbell et al., 1996). Lower self-concept

clarity is associated with lower self-esteem (Campbell et al., 1996), less positive daily emotions (Diehl & Hay, 2010), stress, anxiety and depression (Butzer & Kuiper, 2006; Treadgold, 1999). Recent studies have also measured changes to the size or diversity of self-concept (Mattingly & Lewandowski, 2013; Slotter et al., 2010). For example, new activities such as learning a second language can increase the self-concept (i.e. “I am someone who is multilingual”), with a larger, expanded self-concept leading to greater self-efficacy, higher self-esteem and wellbeing (Hughes, Slotter, & Lewandowski, 2019; Mattingly, Lewandowski, & McIntyre, 2014). Over time, aspects of work including an individual’s occupation, organisation worked for, relationships with colleagues and daily work routines all have the potential to be integrated into the self-concept (Amiot, de la Sablonniere, Smith, & Smith, 2015; Elsbach, 2015; McIntyre et al., 2014). As a result, retirement transition brings the potential for self-concept change, forcing the question: who am I without my work?

Given the importance of work to people’s lives and self-concepts, the transition to retirement and loss of work identity represents a potential challenge to the self. However, retirement after a certain age is also a societal norm that brings opportunities to pursue new activities, learnings and social connections, which positively contribute to self-concept (Mattingly & Lewandowski, 2013; Solinge & Henkens, 2007). Life transitions can be periods of identity instability as individuals enter or exit different social roles that help underpin the self-concept (McConnell, 2011). Specifically, life transitions which concern role exits (e.g., relationship dissolution, job loss) have been shown to precipitate negative changes to self-concept (Light & Visser, 2013; McIntyre et al., 2014; Slotter et al., 2010) as meaning, relationships and routines relevant to the role are lost (Biddle, 1986; Miscenko & Day, 2016;). For example, Light and Visser (2013) had participants record both role

exits (e.g., divorce, job loss) and role entries (e.g., becoming a parent, commencing college) experienced in the past 12 months, finding a small, but significant association between role exits and reduced self-concept clarity. While retirement has traditionally been conceptualised in terms of an exit from the work role (Wang & Shi, 2014), unlike relationship dissolution or job loss, retirement is increasingly viewed by older adults as an entry into the role of retiree (Haslam et al., 2018), bringing opportunities to fulfil personal goals (Brougham & Walsh, 2009) and increase investment in existing roles (e.g., friend, grandparent; Barnes & Parry, 2004). Indeed, older workers expect to enjoy retirement and anticipate the transition positively (Taylor & Shore, 1995). Additionally, individuals who engage in novel activities often associated with retirement (e.g., learning a new skill, joining a club, visiting new places, making new friends, etc.) tend to have larger self-concepts (Mattingly & Lewandowski, 2014). Thus, while work is important to people's self-concept, retirement is likely to be anticipated as a time for positive self-change. However, the degree to which self-concept changes in this transition are anticipated and experienced positively might depend on how committed individuals are to their work prior to retirement, with greater commitment precipitating less positive self-concept changes (Conroy & O'Leary-Kelly, 2014).

2. Work commitment and self-concept in retirement

While no study has examined the effect of work commitment on self-concept change in retirement, there is evidence to suggest retirement creates greater identity challenges for those who are more committed to their work. Interviews have shown stronger athletic identity can lead to more emotional adjustment difficulties in retired athletes (Gordon, Lavalley, & Grove, 1997), and older adults with stronger work

identification at the time of retirement describe a more painful transition experience (Barnes & Parry, 2004). Equally, for individuals who experience work as stressful or who fear job loss, retirement can positively influence self-esteem (Reitzes, Mutran, & Fernandez, 1996). Commitment to a source of meaning results in thoughts, affect and behaviour which become part of the self-concept (Rusbult, Martz, & Agnew, 1998). Evidence from other life transitions shows higher levels of identification and commitment leads to more negative self-concept impacts when the source of meaning is lost or threatened (e.g., Slotter et al., 2010; Slotter, Winger, & Soto, 2015). For example, (McIntyre et al., 2014) found unemployed people who saw their previous job role as making a positive contribution to their self-concept, reported lower self-concept clarity and self-esteem after job loss. Additionally, a moderate relationship was found between self-concept clarity and people's commitment to the organisation prior to job loss (McIntyre et al., 2014). Similarly, Slotter et al. (2010) found a small but significant relationship between commitment to a romantic partner and self-concept, with those more committed (therefore seeing their relationship as more fundamental to their identity) anticipating and experiencing more negative impacts to their self-concept following relationship dissolution than those who less committed. In the transition to retirement, those with greater work commitment might therefore be expected to experience more negative self-concept changes upon exiting the workforce.

Given the importance of work to the self, it has been theorised that successful retirement requires individuals reduce their psychological commitment to work prior to being 'cut off' from the self-knowledge work provides (Feldman, 1994). Work provides important activities, social interactions and structures that all contribute to self-concept (Dutton et al., 2010; Elsbach, 2015; Van Dick, 2001), and meaningful

work can also make positive contributions to the self via increased abilities, perspectives and competency (Rusbult, Olsen, Davis, & Hannon, 2004; Treadgold, 1999). Yet despite its importance to the self, work is just one of many varied social roles (e.g., friend, parent) that contribute to the self-concept over time (Light & Visser, 2013; Lodi-Smith, Spain, Cologgi, & Roberts, 2017). As work-based routines and relationships important to self-concept are lost in retirement (Van Tilburg, 1992), the level of disruption to the self-concept in retirement might depend not only on work commitment, but also the alternative (non-work) relationships or routines available to guide information about the self.

3. Social relationships and self-concept in retirement

Social relationships and interactions are a critical source of self-knowledge (James, 1890; Markus & Wurf, 1987), and can potentially provide people alternative identities from which to maintain a positive self-concept during life transitions (Simon, 1997). The continuity theory of ageing proposes that individuals seek to maintain continuity of identity across the lifespan, with maintenance of identity continuity in retirement important to psychological wellbeing (Atchley, 1989; Feldman, 1994). For example, volunteering improves wellbeing for older adults post-retirement (but not pre-retirement), suggesting it might provide continuity to retirees after they finish work (Moen & Fields, 2002). This also demonstrates that while work might be important to self-concept, even after the work role is lost in retirement, other social relationships can still provide important self-knowledge that supports identity continuity (Henning et al., 2016).

Important non-work (social) roles such as partner, grandparent and friend have unique relationships and routines that influence the individual self-concept (Baldwin,

1992). For example, the role of parent is underpinned by a specific relationship or relationships to children under care, involves character traits specific to that parenting relationship, and routines associated with caregiving (e.g., dropping children at school, preparing a family meal). While the loss of work role in retirement may have negative consequences when people are highly committed, identification with other positive roles can provide continuity in retirement transition (Taylor-Carter & Cook, 1995). For example, older adults more strongly identified with the role of friend have more positive attitudes to retirement prior to transition and experience better retirement adjustment (Reitzes & Mutran, 2004). Social roles such as romantic partner (Slotter et al., 2010), friend (Aron et al., 2004) and group member (Coats, Smith, Claypool, & Banner, 2000; Slotter et al., 2015) have all been shown to be important to individual self-concept, and might therefore be expected to help maintain continuity of the self-concept when the work role is lost.

While identification with important social roles (e.g., grandparent, spouse) might support continuity of the self-concept in retirement, individuals may not need to be strongly identified with a particular social role in order to derive continuity benefits. For example, multiple social group memberships are associated with higher life satisfaction, wellbeing and adjustment in retirement (Haslam, Lam et al., 2018; Lam et al., 2018; Steffens, Jetten, et al., 2016), and life satisfaction has been shown to decrease by 10% for each social group lost in retirement and not replaced (Steffens, Cruwys, Haslam, Jetten, & Haslam, 2016). Work provides people with many social contacts that are often missed, particularly in the first years of retirement (Damman, Henkens, & Kalmijn, 2013). Having multiple social group memberships are thought to provide wellbeing benefits in retirement transition as they help individuals to maintain identity continuity (Atchley, 1989; Iyer, Jetten, Tsivrikos, Postmes, &

Haslam, 2009). It might be expected that multiple, group-based social relationships act as a self-concept buffer when exiting the workforce, providing alternate social identities to ‘fall back on’.

4. The present studies

The aim of the following studies can be summarized as follows: (i) understand how older adults anticipate and experience changes to self-concept in retirement; (ii) examine the relationship between work commitment and self-concept change in retirement; (iii) examine if any relationship between work commitment and self-concept change anticipated or experienced in retirement is moderated by social relationships.

We hypothesised that older workers anticipate positive changes to their self-concept in retirement, but those who are more committed to their work anticipate and experience these changes to be less positive than those who are less committed. We also expected the relationship between work commitment and self-concept change in retirement to be moderated by social relationships, specifically the importance of social roles to identity and the number of social group memberships they hold (see Figure 1). All study hypotheses were pre-registered (see Appendix 1).

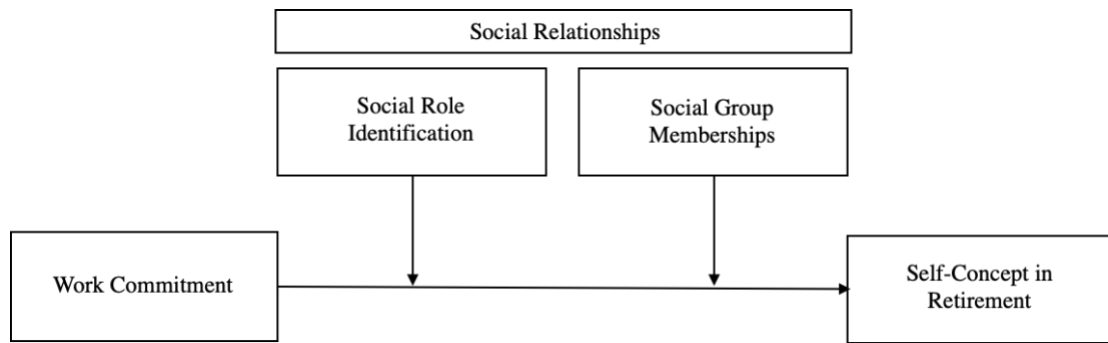


Figure 1. Hypothesised relationship between higher work commitment and less positive self-concept change in retirement, moderated by social relationships.

Chapter 2. Study 1. Anticipation of Self-Concept Change in Retirement

Study 1 aimed to investigate anticipation of self-concept change in retirement, specifically the association between work-commitment and self-concept change, and if this relationship is moderated by the importance of social roles to identity or the number of social group memberships held. Exit from the work role, like other important life transitions, brings potential for changes to important aspects of individual self-concept, including, appearance, activities and hobbies, social circles, goals for the future and values and beliefs (Slotter et al., 2010). When imagining the loss of an important roles such as romantic partner and group member people anticipate greater changes to their self-concept when they are highly committed to the role (Slotter et al., 2010, 2015).

It has been theorised that older workers reduce commitment to work as they near retirement (Feldman, 1994), with those who anticipate more positive identity change in retirement choosing to retire earlier (Brougham & Walsh, 2009). Thus, in addition to our main hypothesis, we also expected that older workers decrease their commitment to work and increase their anticipation of positive self-concept change as they near retirement, in preparation for life after work (see Appendix 1, Study 1. Pre-registered hypotheses).

A number of other characteristics might make particular groups of people more or less vulnerable to identity change in the transition to retirement. For example, those with higher levels of education are more likely to continue participation in work-style activities post-retirement (Fasbender, Wang, Voltmer, & Deller, 2016; Wang & Shi, 2014). These hypotheses were therefore tested after controlling for factors that might influence self-concept in retirement including, education, household income (e.g.,

Bonsang & Klein, 2012), gender (e.g., Kim & Moen, 2002) and time to or since retirement (e.g., Brougham & Walsh, 2009; Damman et al., 2013). Given the strong explanatory power of self-esteem in self-concept outcomes (see Demarree & Bobrowski, 2017 for a review), self-esteem was also controlled for in all tests.

1. Method

Participants. We recruited and tested 591 of a targeted 500 US participants from Amazon's Mechanical Turk (MTurk) via TurkPrime to take part in an online study of retirement transition. Studies have shown that MTurk provides more socio-economically diverse sample characteristics than other recruitment methods (e.g., via social media platforms), and scale reliability from MTurk participants is consistently identical (and sometimes superior) to data reliability using other recruitment methods (Casler, Bickel, & Hackett, 2013; Chandler & Shapiro, 2016). Pre-screening criteria was used to ensure all participants were aged between 49 and 70 years ($M = 57.37$, $SD = 5.23$), currently in full- or part-time employment and a resident of the United States. Participants were compensated with \$0.40 in exchange for their participation in the study, which took around 8 minutes to complete (hourly rate equivalent of \$3.14). Eighty participants failed to meet the pre-screening criteria and were excluded from analysis because they reported being outside of the target age ($N = 68$) or not working ($N = 12$). This left a final sample of 511 participants (63% women). The majority of participants were working full-time (84%; 16% part-time), had a household income between \$20,000 and \$69,000 (52%; 41% \$70,000 or more; 7% below \$19,000), and the majority held either an associate degree or bachelor's degree (49%; 23% some college; 20% postgraduate education; 9% high school diploma or lower).

Materials and Procedure.

Informed consent was sought from each participant, before presenting them with screening questions for age, country and employment status. Participants were also asked to commit to thoughtfully providing their best answers to study questions. Eligible participants then answered questions in a fixed order, measuring work commitment, self-esteem, forecast self-concept change, social and work role identification, social and work group memberships, followed by background and demographic questions (e.g., age, years to retirement, gender, household income, etc.) before being fully debriefed. Tasks were ordered to test the primary hypothesis prior to collecting social identification and group memberships information from participants. This was to avoid responses to these social relationship scales influencing the self-concept change anticipated by participants in retirement.

Forecast self-concept change. The forecast self-concept change scale was designed for this study and based on the 5-item forecast self-concept content change assessment used in Slotter et al. (2010) to capture changes across five life domains central to self-concept (based on James, 1890). Rather than total change to self-concept (quantitative), the scale was modified to capture positive and negative changes. The five original domains were expanded to 20 items (four items for each domain). Participants were asked to indicate how they might change after retirement in the domains of: social circle (e.g., “The individuals in my social circle”), appearance (e.g., “My concern for my appearance”), goals for future (e.g., “My goals related to my well-being”), values and beliefs (e.g., “The degree to which I appreciate, believe in, and care for others”) and activities and hobbies (e.g., “The time I spend or dedicate to new activities or hobbies”). For each item, participants

answered on a 7-point Likert scale (-3: *will change for the worse*; 0: *will not change*; +3: *will change for the better*). Mean responses to these 20 items were used to produce a forecast self-concept change score for each participant (Cronbach's $\alpha = 0.91$), (see Appendix 2, 1. Self-Concept Change).

Work commitment. Work commitment was measured across three dimensions: career commitment, organisation commitment and job commitment (Blau, Paul, & St. John, 1993). The work commitment scale was designed for this study and adapted from three existing work commitment scales to align to the Relationship Investment Model Scale (Rusbult, Martz, & Agnew, 1998). Participants were asked the extent to which they agreed or disagreed with 23 items in total (1: *strongly disagree*; 7: *strongly agree*). Career commitment was measured using five questions adapted from an organisational commitment scale by Jung & Yoon, 2016, e.g., "I am proud to tell others about my profession". Organisation commitment was measured using eight questions based on the Affective Commitment Scale (Meyer & Allen, 1984), e.g., "My organisation's problems are mine too". Job commitment was measured using ten questions, based on the Job Involvement Questionnaire (Kanungo, 1982), e.g., "My job is only a small part of who I am". The answers to the 23 items were averaged to compute a work commitment score ranging from 1 to 7 with higher scores indicating greater commitment (Cronbach's $\alpha = 0.95$), (see Appendix 2, 2. Work Commitment)

Social role identification. Participants indicated if they identified with any of a set of social roles by indicating how important this role was for them. Participants were presented with 11 separate social role identities on a 7-point Likert scale (1: *not important to my identity at all*; 7: *extremely important to my identity*) and asked to select the number that best described how important the role was to their identity. The

11 separate role identities were based on a previous study of social roles and self-concept clarity by Light and Visser (2013): spouse or dating partner, parent, grandparent, friend, worker, caregiver, student, volunteer, owner, member of a religious group or denomination, member of a club or social organisation. We computed a non-work social role identification score based on the mean identification of participants with the 10 roles that were not work related (Cronbach's $\alpha = 0.76$), (see Appendix 2, 3. Social Role Identification). This score therefore reflected both the diversity of roles held and importance of social roles to identity. Participant identification with the work role was used to measure work role identification separately.

Social group memberships. In this task, participants responded to a group membership question based on a listing task by Haslam et al. (2008) to identify the total number of unique social groups to which they belonged. Participants reported the number of groups they considered themselves to be members of. Participants were given 3 group categories to consider: leisure or social groups (e.g., book clubs, gardening clubs, tennis groups, etc.), community groups (e.g., church groups, volunteering, etc.) and work groups (e.g., work teams, professional organisations, alumni, business social groups, etc.). Participants were asked to provide up to a maximum of five groups for each group category (see Appendix 2, 4. Social Group Memberships). Participant group membership totals for leisure or social groups and community groups categories were combined to provide a measure of non-work social group memberships (maximum of ten groups). Participant work group memberships reflected the total number of work groups selected (maximum of 5 groups).

Self-esteem. Participants responded to a 10-item scale designed to measure self-esteem (Rosenberg, 1965). Items were measured on a 7-point Likert scale (1: *strongly disagree*; 7: *strongly agree*) and included items such as “At times I think I am no good at all”. All negatively worded items were reverse scored. Mean responses to these 10 questions were calculated for each participant, with higher mean scores indicating higher self-esteem (Cronbach’s $\alpha = 0.92$), (see Appendix 2, 5. Self-esteem).

Means and standard deviations (SDs) are presented in Table 1, correlations between the measures are presented in Table 2.

Table 1

Descriptive statistics for variables measured pre-retirement (Study 1) and post-retirement (Study 2)

Variable	Pre-Retirement (Study 1) <i>N</i> = 511				Post-Retirement (Study 2) <i>N</i> = 215			
	Mean	SD	Range	α	Mean	SD	Range	α
Self-Concept Change	0.83	0.69	-2.40 - 3.00	.91	0.50	0.78	-2.95 - 3.00	.90
Appearance	0.19	0.98	-3.00 - 3.00	.87	-0.35	1.11	-3.00 - 3.00	.89
Social Circle	0.58	0.96	-3.00 - 3.00	.84	-0.02	1.29	-3.00 - 3.00	.90
Goals	1.13	0.98	-2.50 - 3.00	.84	0.88	1.16	-3.00 - 3.00	.85
Values/Beliefs	0.63	0.88	-3.00 - 3.00	.82	0.72	0.93	-2.75 - 3.00	.77
Activities/Hobbies	1.64	0.94	-2.25 - 3.00	.85	1.26	1.08	-3.00 - 3.00	.80
Self-Concept Clarity	-	-	-	-	5.21	1.29	1.58 - 7.00	.93
Work Commitment	4.41	1.22	1.00 - 7.00	.95	4.86	1.05	1.45 - 7.00	.93
Career Commitment	5.32	1.43	1.00 - 7.00	.95	5.81	1.36	1.00 - 7.00	.94
Organisation Commitment	4.73	1.42	1.00 - 7.00	.90	4.98	1.25	1.75 - 7.00	.86
Job Commitment	3.61	1.34	1.00 - 7.00	.92	4.24	1.25	1.00 - 7.00	.91
Social Role Identification	4.24	1.15	1.00 - 7.00	.76	4.17	1.17	1.00 - 7.00	.74
Spouse	4.95	2.17	1.00 - 7.00	-	4.93	2.30	1.00 - 7.00	-
Parent	5.05	2.33	1.00 - 7.00	-	5.28	2.15	1.00 - 7.00	-
Grandparent	4.19	2.58	1.00 - 7.00	-	4.87	2.47	1.00 - 7.00	-
Friend	5.53	1.43	1.00 - 7.00	-	5.44	1.51	1.00 - 7.00	-
Carer	4.68	1.99	1.00 - 7.00	-	4.38	2.18	1.00 - 7.00	-
Student	2.32	1.80	1.00 - 7.00	-	2.15	1.72	1.00 - 7.00	-
Volunteer	4.11	1.96	1.00 - 7.00	-	3.72	2.10	1.00 - 7.00	-
Pet Owner	4.58	2.33	1.00 - 7.00	-	4.24	2.47	1.00 - 7.00	-
Group Member	3.63	2.33	1.00 - 7.00	-	3.78	2.43	1.00 - 7.00	-
Club Member	3.36	1.94	1.00 - 7.00	-	2.90	1.88	1.00 - 7.00	-
Work Role Identification	4.82	1.75	1.00 - 7.00	-	-	-	-	-
Groups Memberships	2.80	2.19	1.00 - 14.00	-	2.01	1.91	0.00 - 10.00	-
Social Group Memberships	1.79	1.68	0.00 - 9.00	-	1.62	1.55	0.00 - 7.00	-
Work Group Memberships	1.01	1.04	0.00 - 5.00	-	0.39	0.76	0.00 - 3.00	-
Self Esteem	5.79	1.08	1.10 - 7.00	.92	5.72	1.13	1.30 - 7.00	.92
Years to / from retirement	8.29	5.75	0.00 - 25.00	-	5.94	5.13	0.00 - 25.00	-
Age	57.37	5.23	49.00 - 70.00	-	63.88	4.95	54.00 - 74.00	-

Note. α : Cronbach's Alpha provided for all scales (- indicates concepts were measured with a single question)

Table 2

Study 1, correlations between variables in workers pre-retirement (N = 511)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Self-Concept Change	-								
(2) Work Commitment	.09*	-							
(3) Social Role Identification	.25**	.32**	-						
(4) Work Role Identification	.08^	.57**	.39**	-					
(5) Social Group Memberships	.19**	.12**	.26**	.07	-				
(6) Work Group Memberships	.10*	.23**	.13**	.19**	.26**	-			
(7) Self-Esteem	.13**	.30**	.14**	.19**	.04	.12**	-		
(8) Years to Retirement	-.01	.05	-.02	.13**	.01	.13**	-.02	-	
(9) Household Income	.09^	.08^	.13**	.06	.07	.14**	.09*	.03	-
(10) Education Level	.08^	.04	-.06	-.04	.20**	.20**	.04	-.04	.31**

Note. ** $p < .01$, * $p < .05$, ^ $p < .10$

Analytic Strategy.

To evaluate the nature of self-concept change we compared the responses of participants to zero (0 = no change expected). We then conducted a hierarchical regression analysis to assess the extent to which work commitment, social role identification, social group memberships and hypothesised interactions between work commitment and social role identification and social group memberships predicted forecast self-concept change in retirement. Education, household income, gender and years to retirement were included as control variables in the analysis. Self-esteem was also included to control for its strong explanatory power in self-concept outcomes (DeMarree & Bobrowski, 2018). Work role identification and work group memberships were included as controls when entering values of social role identification and social group memberships to distinguish between social relationships inside and outside work.

Predictors were added in stepwise blocks to the regression analyses to test for significant association with the main effects of self-esteem, work commitment, social role identification, worker role identification, social group membership, and work group membership; and, the two-way interactions between work commitment and social role identification, work commitment and social group membership, and social role identification and social group membership. To ease interpretation of the intercept, all variables were centred at the mean.

2. Results

Anticipated self-concept change.

As hypothesised, participants anticipated positive changes to all aspects of their self-concept in retirement, as confirmed by one-sample t-tests against a value of 0 (Table 3). A frequency distribution showed that the majority of participants anticipated positive changes to their overall self-concept in retirement (Table 3). These results show that as expected, retirement represents a major life transition for which people anticipate positive self-change (*Figure 2*).

The extent to which older workers anticipated different levels of positive or negative change to different aspects of their self-concept was tested using an exploratory repeated measures ANOVA with a within-subjects factor of self-concept domain (appearance, social circle, goals, values and beliefs, activities and hobbies). Mauchly's test showed that the assumption of sphericity was violated ($\chi^2 = 46.58, p < .001$), therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\epsilon = 0.96$), showing a significant main effect of self-concept domain, $F(3.84, 1960.64) = 298.99, p < .001$. Post hoc tests using the Bonferroni correction revealed significant differences between all five domains of self-concept

change ($p < .001$), confirming that different levels of self-concept change were anticipated for the five domains of self.

Table 3

Frequencies and results of one-sample t-tests for anticipated self-concept change means (N = 511)

Variable	Mean	SD	Frequency %			95% CI	df	t
			Positive	Negative	No Change			
Self-Concept Change	0.83	0.69	92%	5%	3%	0.77, 0.89	510	27.36***
Appearance	0.19	0.98	39%	27%	34%	0.11, 0.28	510	4.46***
Social Circle	0.58	0.96	69%	12%	19%	0.49, 0.66	510	13.59***
Goals	1.13	0.98	84%	5%	11%	1.04, 1.21	510	25.95***
Values/Beliefs	0.63	0.88	62%	4%	34%	0.55, 0.70	510	16.12***
Activities/Hobbies	1.64	0.94	92%	6%	2%	1.55, 1.72	510	39.51***

Note. *** $p < .001$; Comparison value = 0 (no change).

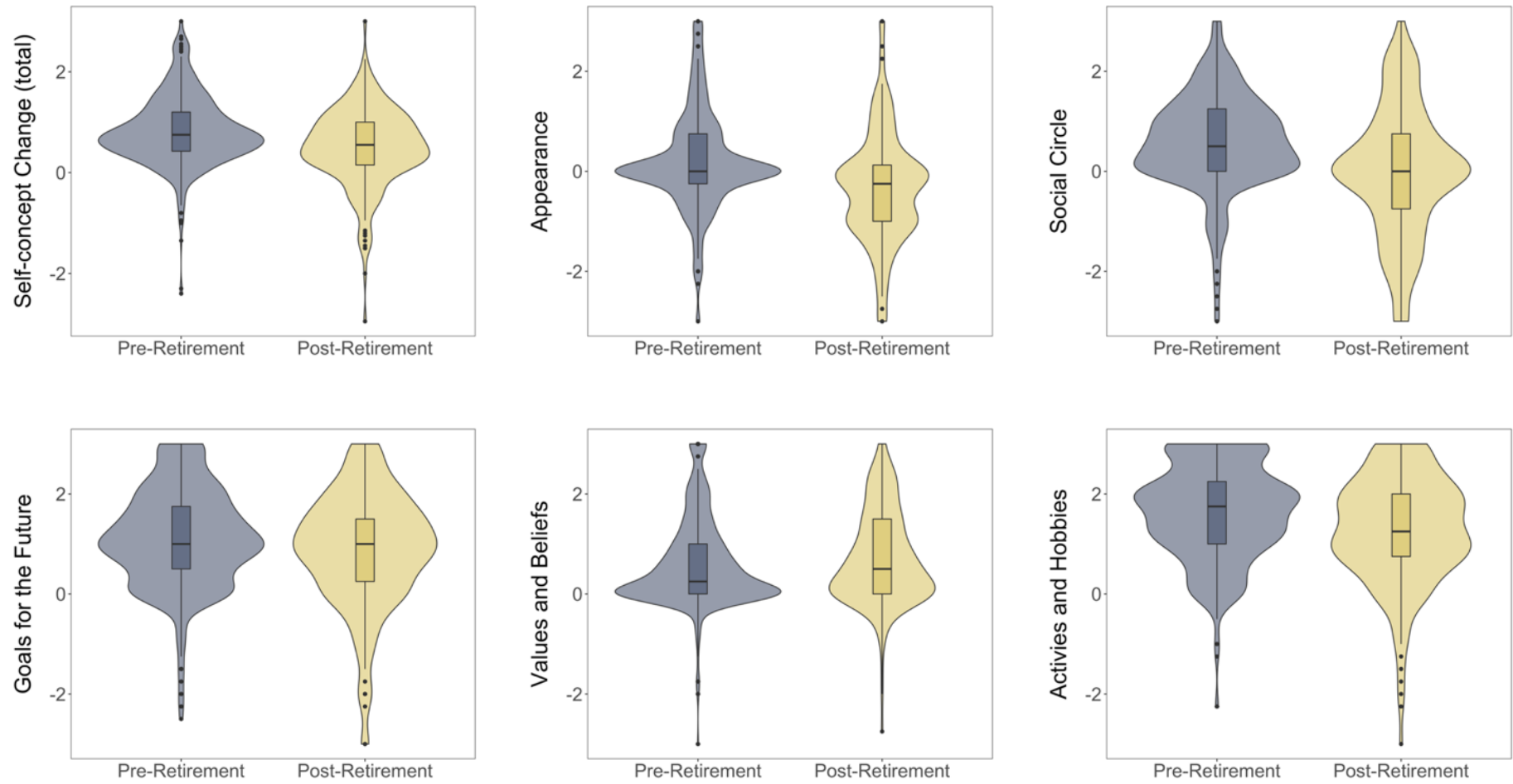


Figure 2. Violin plot for self-concept change anticipated pre-retirement (Study 1) compared with self-concept change experienced post-retirement (Study 2) across different domains of self-concept (total change top left). Boxplots represent self-concept change median, interquartile range and outliers.

What predicts anticipated self-concept change?

We hypothesized that participants with higher work commitment would anticipate less positive self-concept change following retirement than those with lower work commitment. However, the correlation analysis showed the opposite. Higher work commitment was associated with more positive anticipated self-concept change (Table 2), with those more committed to their work anticipating more positive self-concept change. However, when controlling for education, income, gender, years to retirement and self-esteem, we did not find a significant association between work commitment and self-concept change (Table 4, Block 2). We also hypothesised that those closer to retirement would anticipate more positive self-concept change, however no significant relationship was found between years to retirement and self-concept change (Table 4, Block 2).

We next tested our hypothesis that social relationships would moderate the relationship between work commitment and self-concept change (Table 4, Block 3). Results showed that more positive changes to self-concept in retirement were anticipated by people who identified more strongly with their social roles outside of work or held more social group memberships. However, contrary to hypothesis, social groups identification and number of social group memberships did not moderate the relationship between work commitment and anticipated self-concept change. The regression analysis showed that the two-way interactions between social role identification and work commitment and social group memberships and work commitment were not statistically significant predictors of self-concept change. Thus, people with higher social role identification and greater number of group

memberships, forecast positive self-concept changes in retirement regardless of how committed they were to their work.

Table 4

Multiple linear regression analysis on anticipated self-concept change in retirement (N = 511).

	Block 1		Block 2		Block 3	
	<i>df</i> = 505 <i>R</i> ₂ = .03*		<i>df</i> = 504 $\Delta R_2 = .00$		<i>df</i> = 497 $\Delta R_2 = .08^{***}$	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Intercept	.83	27.57***	.83	27.58***	.82	26.03***
Education Level	.03	1.26	.03	1.23	.03	1.10
Household Income	.02	1.21	.01	1.14	.01	0.61
Gender	.00	0.12	-.01	0.20	-.02	0.31
Years to Retirement	.00	0.24	-.00	0.30	-.00	0.02
Self-Esteem	.08	2.68**	.07	2.21*	.06	2.04*
Work Commitment			.03	1.22	-.01	0.15
Work Role Identification					-.01	0.57
Work Group Memberships					.01	0.51
Social Role Identification					.13	4.35***
Social Group Memberships					.04	2.15*
Work Commitment X Social Role Identification					.02	0.97
Work Commitment X Social Group Memberships					-.02	1.14
Social Role Identification X Social Group Memberships					.02	1.60

Note. ****p* < .001, ***p* < .01, **p* < .05, ^*p* < .10

What predicts work commitment in older workers?

We next tested the relationship between work commitment and years from retirement, based on our hypothesis that people would reduce their work commitment as retirement drew near. Regression analyses was performed to test the association between work commitment and the main effect of years to retirement; followed by an exploratory analysis of other measures (Table 5), specifically social role identification, worker role identification, social group membership, and work group membership. Again, education, household income, gender and self-esteem were included as controls in the analysis, and all variables were centred at the mean.

Contrary to our expectation, no association was found between years to retirement and work commitment (Table 5, Block 1). Our exploratory analysis showed positive associations between work commitment and self-esteem and work role identification (Table 5, Block 2). Importantly, our exploratory analysis also revealed a significant positive association between work group memberships and work commitment, such that older workers with a greater number of work-based group memberships reported higher commitment to their work, even after controlling for work role identification and self-esteem.

Table 5

Multiple linear regression analysis on work commitment (N = 511)

	Block 1		Block 2	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Intercept	4.41	85.69***	4.41	103.64***
Education Level	.019	0.49	.03	0.83
Household Income	.021	1.20	.00	0.18
Gender	.156	1.45	.07	0.77
Years to Retirement	.011	1.18	-.00	0.66
Self-Esteem	.33	6.83***	.20	4.92***
Work Role Identification			.34	12.51***
Work Group Memberships			.11	2.56*
Social Role Identification			.09	2.01*
Social Group Memberships			.02	0.68

Note. *** $p < .001$, ** $p < .01$, * $p < .05$, ^ $p < .10$

3. Discussion Study 1

The aims of this study were to understand how positively or negatively people anticipate changes to their self-concept in retirement, and any association between these anticipated changes and work commitment, together with the moderating effects of social relationships. Overall, people anticipated significant, positive changes to their self-concept in retirement. Contrary to hypothesis, higher work commitment was associated with more (rather than less) positive anticipation of self-concept change following retirement, however this association was not significant when controlling for demographic variables and self-esteem. Older adults anticipated more positive self-concept change in retirement when they had stronger identification with social roles and a greater number of social group memberships.

While work commitment did not predict anticipated self-concept change upon retirement, it is possible that people who are highly committed to their work

underestimate how losing the role of worker in retirement might lead to negative self-concept changes. People often overestimate the good that a positive event (like retirement) will have on their life (Wilson & Gilbert, 2005), and work commitment might be positively associated with other personality traits, for example proactiveness and conscientiousness (Young, Glerum, Wang, & Joseph, 2018), that lead people to anticipate positive self-change in the future. What if people incorrectly anticipate these positive self-concept changes? We next set out to investigate the experience of self-concept change in retirement.

Chapter 3. Study 2. Experience of Self-Concept Change Post-Retirement

Study 2 aimed to investigate the experience of self-concept change post-retirement, specifically the association between work commitment and self-concept, and if this relationship is moderated by the importance of social roles to identity or the number of social group memberships held. As well as examining retiree experiences of self-concept change, Study 2 measured self-concept clarity, the extent to which a person's self-concept is clearly defined, consistent and stable (Campbell et al., 1996). Previous studies have shown that life transitions that involve role exits, including loss of meaningful work, can lead to lower self-concept clarity (e.g., Light & Visser, 2013; McIntyre et al., 2014), especially if commitment is high prior to the source of meaning being lost (Slotter et al., 2010, 2015). For example, Slotter et al. (2010) showed that romantic partners who were more committed to their relationship experienced lower self-concept clarity following relationship breakup than those who were less committed. Thus, we expected retirees who reported higher work commitment prior to retirement to be lower in self-concept clarity (see Appendix 1, Study 2. Pre-registered hypotheses).

1. Method

Participants. We recruited and tested 246 of a targeted 500 US participants from Amazon's Mechanical Turk (MTurk) via TurkPrime to take part in an online study of life transitions. Pre-screening criteria was used to ensure all participants were US residents, aged between 54 and 75 years ($M = 63.88$, $SD = 4.95$) and currently retired. Participants were compensated with \$0.40 in exchange for their participation in the study, which took around 10 minutes to complete (hourly rate equivalent of

\$2.34). Thirty-one participants who failed to meet the pre-screening criteria were excluded from analysis because they reported being outside of the target age ($N = 16$), or not working immediately prior to retirement ($N = 15$). Our final sample included 215 participants (67% women). The majority of participants were working full time immediately prior to retirement (87%; 13% part time), had a household income between \$20,000 and \$69,000 (58%; 28% \$70,000 or more; 14% below \$19,000), and the majority held either an associate degree or bachelor's degree (46%; 25% some college; 18% postgraduate education; 9% high school diploma or lower).

Materials and Procedure.

The same procedure was used as Study 1, with eligible participants completing an additional scale to measure self-concept clarity after self-concept change. The questions for work commitment were adapted to the past-tense, such that participants were asked to reflect on their level of commitment immediately prior to retirement. The self-concept change scale was adapted so that participants were asked to indicate how much they had experienced change to specific aspects of themselves post-retirement. As all participants were no longer working, the social role 'worker' was removed from the social role identification scale.

Self-concept clarity. 12-item scale (based on Campbell et al., 1996) used to measure self-concept clarity (e.g., "In general, I have a clear sense of who I am and what I am"; 1: *strongly disagree*; 7: *strongly agree*). Ten items were reverse scored and averaged to create an overall measure of self-concept clarity with higher scores indicating greater self-concept clarity (Cronbach's $\alpha = .93$), (see Appendix 2, 6. Self-concept clarity).

Means, standard deviations (SDs) and alphas (Cronbach's α) are presented in Table 1, correlations between the measures are presented in Table 6.

Table 6

Study 2, correlations between variables in older adults post-retirement (n = 215)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Self-Concept Change	-								
(2) Self-Concept Clarity	.31**	-							
(3) Work Commitment	-.02	.01	-						
(4) Social Role Identification	.22**	.04	.20**	-					
(5) Social Group Memberships	.30**	.08	.00	.30**	-				
(6) Work Group Memberships	.10	.07	.07	.03	.29**	-			
(7) Self-Esteem	.35**	.63**	.08	.08	.07	.16*	-		
(8) Years Since Retirement	-.09	-.10	.23**	.05	-.17*	-.11^	-.10	-	
(9) Household Income	.09	.05	.04	.15*	.21**	.11	.07	-.14*	-
(10) Education Level	.03	.06	-.06	-.16*	.25**	.16*	.04	-.21**	.31**

Note. ** $p < .01$, * $p < .05$, ^ $p < .10$

Analytic Strategy.

The same analytic strategy was employed for Study 2 as Study 1 to test self-concept change experienced and self-concept clarity in retirement.

2. Results

Experienced self-concept change.

Overall, participants reported experiencing positive changes to their self-concept following retirement, confirmed by a one-sample t -test (Table 7). Participants reported significant positive changes in their activities and hobbies, goals for the future, and values and beliefs. However, no significant changes were reported to social circle and negative self-concept changes were reported for appearance. These

results show that in retirement people experience positive changes to most, but not all aspects of their self-concept.

As in Study 1, different levels of positive or negative change experienced to different aspects of self-concept was tested using an exploratory repeated measures ANOVA. Mauchly's test showed that the assumption of sphericity was violated ($\chi^2 = 44.02, p < .001$), therefore degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\epsilon = 0.91$), showing a significant main effect of self-concept domain, $F(3.65, 781.54) = 116.76, p < .001$. Post hoc tests using the Bonferroni correction revealed that self-concept changes to appearance ($M = -0.35, SD = 1.29$) were significantly different from changes to social circle ($M = -0.02, SD = 0.78, p = .002$), goals ($M = 0.88, SD = 1.16, p < .001$), values and beliefs ($M = 1.26, SD = 0.93, < .001$), and activities and hobbies ($M = 1.26, SD = 1.08, p < .001$). Social circle changes were significantly different to goals ($p < .001$), values and beliefs ($p < .001$), and activities and hobbies ($p < .001$). Changes to activities and hobbies were significantly different to changes to goals ($p < .001$) and values and beliefs ($p < .001$). The only pair for which no significant difference was found in self-concept change experienced was between values and beliefs and goals ($p = .227$).

Table 7

Frequencies and results of one-sample t-tests for experienced self-concept change means (N = 215)

Variable	Mean	SD	Frequency %			95% CI	df	t
			Positive	Negative	No Change			
Self-Concept Change	0.50	0.78	80%	19%	1%	0.39, 0.60	214	9.34***
Appearance	-0.35	1.11	25%	57%	18%	-0.49, -0.20	214	-4.59***
Social Circle	-0.02	1.29	41%	38%	21%	-0.19, 0.16	214	-0.17
Goals	0.88	1.16	77%	9%	14%	0.72, 1.03	214	11.06***
Values/Beliefs	0.72	0.93	66%	8%	26%	0.59, 0.84	214	11.30***
Activities/Hobbies	1.26	1.08	86%	8%	6%	1.11, 1.40	214	17.11***

Note. *** $p < .001$; Comparison value = 0 (no change).

What predicts self-concept change and clarity in retirement?

We hypothesised that participants who reported being more committed to their work prior to retirement would experience less positive self-concept change following retirement and lower self-concept clarity. Contrary to hypothesis, work commitment prior to retirement was not correlated with either self-concept change or self-concept clarity (Table 6), this was confirmed by the regression analysis for self-concept change (Table 8, Block 2) and self-concept clarity (Table 9, Block 2).

We next tested our hypothesis that social relationships would moderate the relationship between work commitment and self-concept change and clarity (Table 8 & Table 9, Blocks 3). While social role identification was correlated with self-concept change in retirement (Table 6), after controlling for other variables in the regression analysis, no significant main effect of social role identification on self-concept change or clarity was found. This analysis did confirm a significant main effect of social group memberships on self-concept change experienced in retirement, but again, there was no significant effect on self-concept clarity. Contrary to

hypothesis, the regression analysis showed that the two-way interactions between work commitment and social role identification and work commitment and social group memberships were not statistically significant predictors of either self-concept change post-retirement or self-concept clarity. Thus, people who had more social group memberships experienced more positive changes to their self-concept following retirement regardless of their work commitment, with no significant effects found for self-concept clarity.

Table 8

Multiple linear regression analysis on self-concept change experienced in retirement (N = 215)

	Block 1		Block 2		Block 3	
	<i>df</i> = 209 <i>R</i> ² = .14***		<i>df</i> = 208 $\Delta R^2 = .00$		<i>df</i> = 202 $\Delta R^2 = .10$ ***	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Intercept	.50	9.95***	.50	9.94***	.50	9.87***
Education Level	-.01	0.34	-.03	0.36	-.03	0.81
Household Income	.02	1.19	.01	1.24	.01	0.38
Gender	.17	1.60	.11	1.63	.11	1.04
Years to Retirement	-.01	0.85	.00	0.67	-.01	0.53
Self-Esteem	.24	5.43***	.23	5.46***	.23	5.14***
Work Commitment			-.04	0.66	-.03	0.63
Work Group Memberships					-.01	0.15
Social Role Identification					.07	1.46
Social Group Memberships					.13	3.59***
Work Commitment X Social Role Identification					.06	1.60
Work Commitment X Social Group Memberships					.02	0.70
Social Role Identification X Social Group Memberships					.00	0.00

Note. ****p* < .001, ***p* < .01, **p* < .05, ^*p* < .10

Table 9

Multiple linear regression analysis on self-concept clarity in retirement (N = 215).

	Block 1		Block 2		Block 3	
	<i>df</i> = 209 <i>R</i> ² = .40***		<i>df</i> = 208 $\Delta R^2 = .00$		<i>df</i> = 202 $\Delta R^2 = .01$	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Intercept	5.21	75.48***	5.21	75.39***	5.19	70.25***
Education Level	.03	0.53	.03	0.51	.02	0.37
Household Income	-.00	0.13	-.00	0.07	-.00	0.16
Gender	.05	0.34	.06	0.38	.02	0.09
Years to Retirement	-.01	0.54	-.01	0.35	-.00	0.27
Self-Esteem	.72	11.63***	.73	11.62***	.73	11.42***
Work Commitment			-.05	0.73	-.04	0.60
Work Group Memberships					-.09	0.85
Social Role Identification					-.01	0.19
Social Group Memberships					.04	0.76
Work Commitment X Social Role Identification					-.01	0.15
Work Commitment X Social Group Memberships					-.00	0.08
Social Role Identification X Social Group Memberships					.03	0.83

Note. ****p* < .001, ***p* < .01, **p* < .05, ^*p* < .10

3. Discussion Study 2

The aims of this study were to understand how positively or negatively people experience changes to their self-concept in retirement, and how work commitment prior to retirement predicted self-concept change and clarity, and the moderating effects of social relationships. Overall, people experienced significant, positive changes to their self-concept in retirement. However, in contrast to Study 1, positive changes were not experienced across all domains of the self. Contrary to our main hypothesis, higher work commitment prior to retirement was not associated with less positive experience of self-concept change or lower self-concept clarity following retirement. After controlling for demographic variables and self-esteem, a greater number of social group memberships were found to be positively related to experience of positive self-concept change in retirement.

Study 2 found some further differences in the experience of self-concept change when compared to anticipation of self-concept change in Study 1. Firstly, work commitment was correlated with positive anticipation of self-concept change in retirement, yet no association was found between work commitment and self-concept change post-retirement. Secondly, higher social role identification and more social group memberships were associated with more positive anticipation of self-concept change pre-retirement. While both were correlated with self-concept change post-retirement, this relationship was only significant for social group memberships after controlling for other variables. Study 2 also introduced the measure of self-concept clarity, however we did not find any of the hypothesised associations for this measure. The Study 2 prior work commitment mean was higher than the current work commitment mean for Study 1 (see Table 1). Study 2 also revealed a positive

correlation between years since retirement and work commitment, suggesting that the more time that has passed since retirement, the greater people estimate their pre-retirement work commitment to have been. Thus, retrospective work commitment may be subject to inaccuracies, with participant recollections influenced by current post-retirement situational factors.

One limitation of this study was that the desired (pre-registered) population sample size of 500 participants was not achieved. Only 215 participants were reached, as only a limited number of MTurk contributors are retired. Therefore, any small effects, $f_2 \geq 0.05$ ($\Delta R_2 = 0.048$) are unlikely to have been detected at $p < .05$ with power at the standard guideline of .80 (Cohen, 1992). Finally, given that MTurk studies represent a form of paid work, there is also some ambiguity if the experience of these participants is comparable to retirees in the non-MTurk population.

4. Exploratory analyses of Studies 1 and 2

Findings from Studies 1 and 2 showed that prior to retirement, people anticipated significant, positive change to all aspects their self-concept. However post-retirement, positive changes were only experienced for activities and hobbies, values and beliefs and goals for the future, with no changes to social circle, and negative changes to appearance (Table 10). An exploratory MANOVA between pre-retirement and post-retirement groups showed that overall, self-concept change experienced was significantly less positive than anticipated (Table 10). The multivariate result between the two studies was significant, Pillai's Trace = .11, $F(5, 720) = 18.55$, $p < .001$, indicating a difference in self-concept change across domains in the two studies. This was the case for almost all domains of self-concept, with only values and beliefs not differing significantly between pre- and post-retirement groups. This suggests that

while retirement is a major life milestone for which older adults anticipate significant positive self-concept change, the changes experienced in retirement are not as positive as anticipated.

Table 10

Univariate effects between self-concept change pre-retirement (Study 1, N = 511) and post-retirement (Study 2, N = 215).

Variable	df	df error	F	d	Study	Mean	95% Confidence Interval	
							Lower Bound	Upper Bound
Self-Concept Change	1	724	32.71***	0.43	Pre-Retirement	0.83	.77	.89
					Post-Retirement	0.50	.40	.59
Appearance	1	724	42.38***	0.48	Pre-Retirement	0.19	.10	.28
					Post-Retirement	-0.35	-.48	-.21
Social Circle	1	724	46.51**	0.51	Pre-Retirement	0.58	.48	.67
					Post-Retirement	-0.02	-.16	.13
Goals	1	724	8.77***	0.22	Pre-Retirement	1.13	1.04	1.22
					Post-Retirement	0.88	.74	1.02
Values/Beliefs	1	724	1.63	0.09	Pre-Retirement	0.63	.55	.70
					Post-Retirement	0.72	.60	.84
Activities/Hobbies	1	724	22.24***	0.35	Pre-Retirement	1.64	1.55	1.72
					Post-Retirement	1.26	1.13	1.39

Note. *** $p < .001$, ** $p < .01$

Studies 1 and 2 were run as independent studies, and participant data was gathered at different time periods, which might limit the extent to which these two studies can be compared. Further, neither study captured the extent to which retirement is anticipated or experienced as either an exit from the work role or an entry into the role of retirement. Retirement has traditionally been viewed as an exit from the work role, with role exits associated with reduced self-concept clarity (Light & Visser, 2013; Wang & Shi, 2014). Therefore, the extent to which work commitment influences anticipated self-concept changes in retirement might depend

on the framing of retirement as either an exit from the work role or entry into a new role of retiree.

Chapter 4. Study 3. Effect of Framing on Anticipation of Self-Concept Change in Retirement

Study 3 aimed to understand how framing retirement as an exit from work role (vs. entry into retirement role) alters anticipation of self-concept change. Given role exits, but not entries, negatively impact self-concept (Light & Visser, 2013), we expected older workers to forecast less positive self-concept change when retirement is framed as an exit from work role compared to entry into the retirement role. Additionally, we expected the framing of retirement to moderate the relationship between work commitment and self-concept in retirement. We also expected this framing to moderate the previously hypothesised associations between self-concept and social relationships, as measured by importance of social roles to identity and the number of social group memberships held (see Figure 3).

In order to better understand the positive changes anticipated to self-concept in retirement, Study 3 introduced a measure of self-expansion, positive changes to the self-concept that lead to increased abilities, perspectives and feelings of competency (Aron & Aron, 1997). Studies have found greater work satisfaction and commitment in those who consider their work to be self-expanding (McIntyre, Mattingly, Lewandowski & Simpson, 2014), thus higher work commitment might be associated with lower perceived opportunity for self-expansion in retirement. Study 1 showed that social relationships (e.g., social group memberships) were associated with anticipation of positive self-concept changes in retirement. Social and community groups can create opportunities to participate novel activities and pursuits in retirement (e.g., volunteering, community activities), which have been shown to lead to self-expansion (Mattingly & Lewandowski, 2013). Thus, we expected social relationships, as measured by importance of social roles to identity and the number of

social group memberships held to moderate any relationship between work commitment and perceived opportunity for self-expansion in retirement (see Figure 3). For detailed hypotheses see Appendix 1, Study 3. Pre-registered hypotheses.

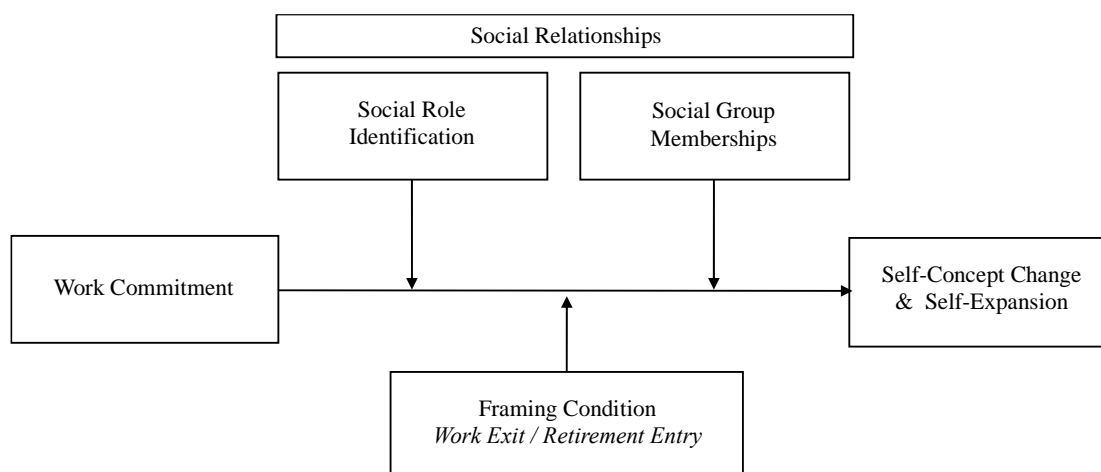


Figure 3. Hypothesised relationship between higher work commitment and less positive anticipated self-concept change and lower opportunity for self-expansion, moderated by social relationships and framing condition.

1. Method

Participants. We recruited and tested 565 of a targeted 600 US participants from Amazon's MTurk via TurkPrime to take part in an online study of retirement transition. Pre-screening criteria was used to ensure all participants were aged between 49 and 70 years ($M = 55.90$, $SD = 4.91$), currently in full- or part-time employment and a resident of the United States. Any MTurk users that successfully completed Study 1 were also excluded from this study. Participants were compensated with \$0.40 in exchange for their participation in the study, which took around 10 minutes to complete (hourly rate equivalent of \$2.28). Seventeen participants failed to meet the pre-screening criteria and were excluded from analysis

because they reported being outside of the target age ($N = 16$) or not working ($N = 1$). This left a final sample of 548 participants (70% women). The majority of participants were working full-time (83%; 17% part-time), had a household income between \$20,000 and \$69,000 (55%; 38% \$70,000 or more; 7% below \$19,000), and the majority held either an associate degree or bachelor's degree (45%; 22% some college; 21% postgraduate education; 12% high school diploma or lower).

Materials and Procedure.

Informed consent was sought from each participant, before presenting them with screening questions for age, country and employment status. Participants were also asked to commit to thoughtfully providing their best answers to study questions. Eligible participants then completed survey measures in a fixed order for work commitment, social role identification, social group memberships and self-esteem. Participants were then asked to reflect on how they anticipated the experience of retirement transition before being randomly assigned to either the *work exit* condition or *retirement entry* condition. In the *work exit* condition, participants were asked to list three things in their life that they expected to lose when they stopped working that would have a significant impact on their everyday life. In the *retirement entry* condition, participants were asked to list three things they expected to gain when they retired that would have a significant impact on their everyday life. Participants then completed survey measures for forecast self-concept change and opportunity for self-expansion in retirement. Finally, participants completed some background and demographic questions (e.g., age in years, years to retirement, gender, household income, etc.) before being fully debriefed. Measures were the same as Study 1, with the addition of the framing task and self-expansion scale. The task order was altered

from Study 1 to ensure that only the dependent variable of forecast self-concept change measure (and self-expansion) would be influenced by the framing condition.

Opportunity for self-expansion in retirement. Participants completed a 14-item scale (based on McIntyre et al., 2014) measuring perceived opportunity for self-expansion in retirement (e.g., “Retirement will expand your sense of the kind of person you are”; 1: *not very much*; 7: *very much*). Items were then averaged to create an overall measure of perceived opportunity for self-expansion in retirement, with higher scores indicating greater anticipated opportunity for self-expansion (Cronbach’s $\alpha = .93$), (see Appendix, 7. Opportunity for Self-Expansion in Retirement)

See Table 11 for the descriptive statistics and correlations between the study measures.

Table 11

Study 3, correlations between variables in workers pre-retirement (n = 548)

Variable	Mean	SD	Range	α	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Self-Concept Change	.82	.75	-2.25 – 3.00	.92	-									
(2) Self-Expansion	4.64	1.15	1.00 – 7.00	.93	.61**	-								
(3) Work Commitment	4.44	1.15	1.05 – 6.59	.95	.13**	.16**	-							
(4) Social Role Identification	4.24	1.11	1.00 – 7.00	.72	.19**	.21**	.24**	-						
(5) Work Role Identification	5.24	1.37	1.00 – 7.00	-	.12**	.18**	.55**	.36**	-					
(6) Social Group Memberships	1.75	1.56	0.00 – 10.00	-	.10*	.11**	.18**	.25**	.00	-				
(7) Work Group Memberships	1.12	1.12	0.00 – 5.00	-	.15**	.17**	.35**	.16**	.17**	.32**	-			
(8) Self-Esteem	5.68	1.09	1.40 – 7.00	.91	.29**	.25**	.25**	.19**	.11*	.10*	.10*	-		
(9) Years to Retirement	10.02	6.20	0.00 – 25.00	-	-.13**	-.22**	-.01	-.02	.03	-.08	-.05	-.10*	-	
(10) Household Income	-	-	-	-	-.01	.05	.04	.10*	-.06	.14**	.19**	.10*	-.06	-
(11) Education Level	-	-	-	-	.01	.02	.07^	-.11**	-.10*	.19**	.30**	.07^	-.07^	.36**

Note. ** $p < .01$, * $p < .05$, ^ $p < .10$; Consistency measure Cronbach's Alpha (α) (not included for single-item measures); See *Participants* for Household Income and Education %

Analytic Strategy.

We conducted hierarchical regression analysis to assess the extent to which the framing condition (work exit vs. retirement entry), work commitment, social role identification, social group memberships and hypothesised interactions predicted anticipated self-concept change and opportunity for self-expansion in retirement. The same analytical approach was employed as was used for Study 1, with three-way interactions between framing condition, work commitment, and social relationships entered as an additional step. To ease interpretation of the intercept, all variables were centred at the mean.

2. Results

Work exit or retirement entry?

We hypothesised that participants in the work exit framing condition would anticipate less positive self-concept change and less opportunity for self-expansion (see Figure 4) following retirement than those in the retirement entry role framing condition. An independent samples *t*-test confirmed that participants in the work exit condition forecast less positive changes to self-concept upon retirement ($M = 0.64$, $SD = 0.78$) than participants in the retirement entry condition ($M = 1.01$, $SD = 0.67$; $t(546) = 5.94$, $p < .001$). Those in the work exit condition also reported less opportunity for self-expansion in retirement ($M = 4.34$, $SD = 1.21$) than participants in the retirement entry condition ($M = 4.93$, $SD = 1.01$; $t(546) = 6.16$, $p < .001$). These results suggest that people anticipate more positive self-change and greater opportunity for self-expansion in retirement when retirement is viewed as an entry into a new role, rather than an exit from the workforce.

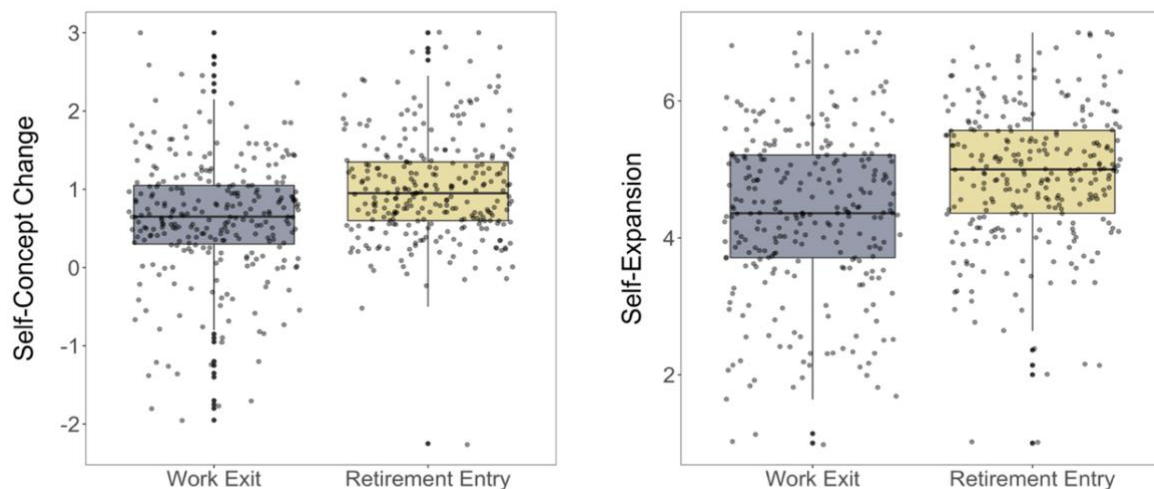


Figure 4. Boxplot distribution of anticipated self-concept change and self-expansion responses in work exit and retirement entry conditions.

What predicts anticipated self-concept change and expansion in retirement?

We hypothesised the framing of retirement as either work exit or a retirement entry would moderate the relationship between work commitment and self-concept in retirement. Specifically, we expected that in the work exit condition, those higher in work commitment would experience less positive self-concept change following retirement and lower self-concept clarity (see Figure 5). However, contrary to hypothesis, the framing condition did not influence the relationship between work commitment and self-concept (Table 12 and Table 13, Blocks 3). The regression analysis showed that the two-way interactions between framing condition and work commitment were not statistically significant predictors of anticipated self-concept change or self-expansion in retirement. Thus, in both framing conditions, work commitment did not significantly change participant's anticipated self-concept change or perceived opportunity for self-expansion in retirement.

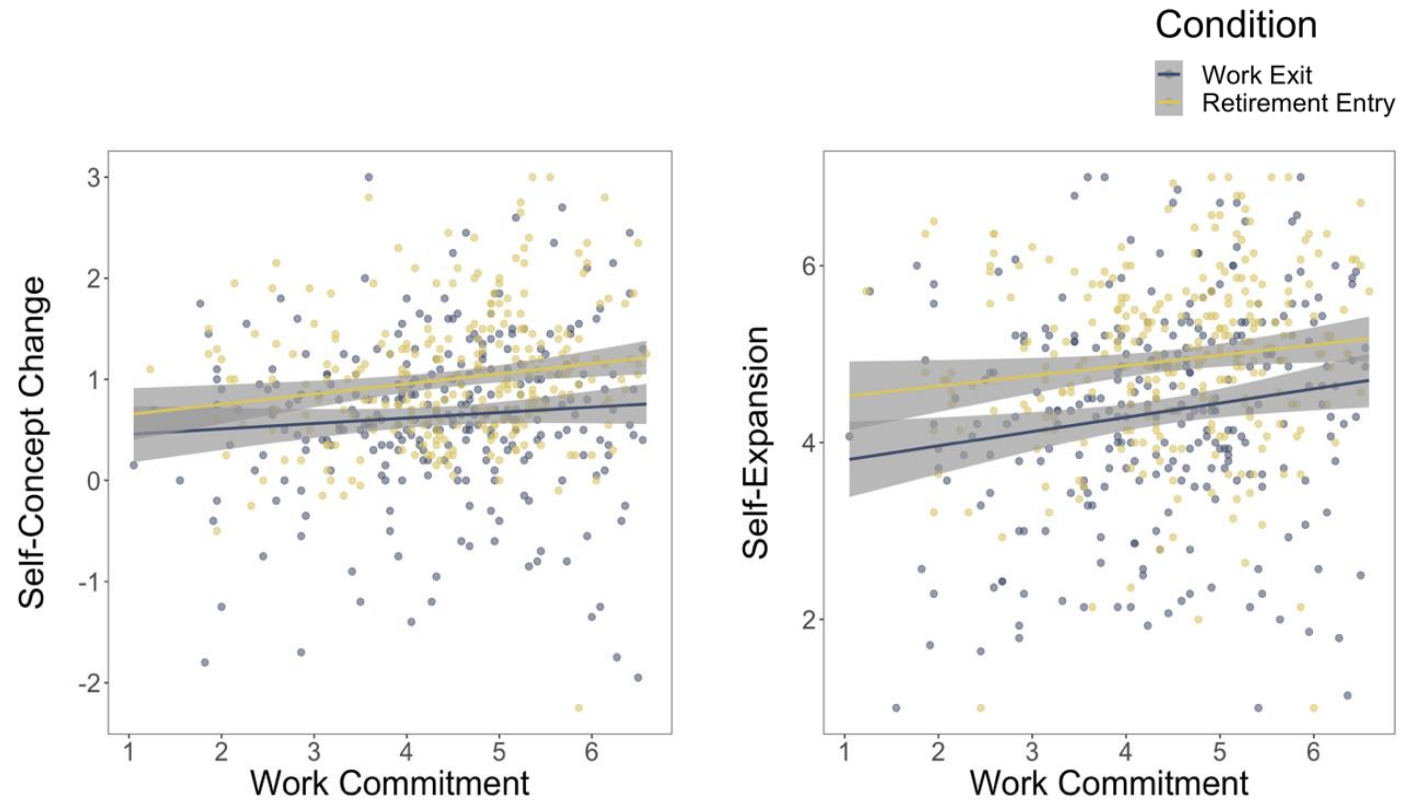


Figure 5. Relationship between work commitment and self-concept change and self-expansion in the work exit and retirement entry conditions.

Table 12

Multiple linear regression analysis on anticipated self-concept change in retirement (N = 548).

	Block 1		Block 2		Block 3		Block 4	
	<i>df</i> = 541		<i>df</i> = 539		<i>df</i> = 529		<i>df</i> = 527	
	$\Delta R^2 = .10^{***}$		$\Delta R^2 = .06^{***}$		$\Delta R^2 = .04^{**}$		$\Delta R^2 = .01^*$	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Intercept	.82	26.82***	.82	27.65***	.83	26.80***	.82	26.51***
Education Level	-.00	0.06	-.00	0.19	-.00	0.12	.00	0.01
Household Income	-.01	0.69	-.01	0.90	-.02	1.44	-.01	1.32
Gender	.07	1.03	.07	0.99	.05	0.73	.04	0.58
Years to Retirement	-.01	2.27*	-.01	2.48*	-.01	2.35*	-.01	2.35*
Self-Esteem	.20	6.85***	.18	6.17***	.16	5.56***	.16	5.57***
Condition (Entry / Exit)			.34	5.75***	.35	5.80***	.32	5.22***
Work Commitment			.03	1.25	-.06	1.42	-.07	1.75^
Work Role Identification					.02	0.60	.01	0.48
Work Group Memberships					.08	2.46*	.07	2.34*
Social Role Identification					.14	3.26**	.14	3.35**
Social Group Memberships					.00	0.06	-.00	0.09
Condition X Work Commitment					.08	1.48	.11	1.90^
Condition X Social Role Identification					-.10	1.74^	-.10	1.72^
Condition X Social Group Memberships					-.02	0.37	-.03	0.73
Work Commitment X Social Role Identification					-.02	1.00	-.02	0.76
Work Commitment X Social Group Memberships					.02	1.03	-.03	1.06
Social Role Identification X Social Group Memberships					-.02	1.08	-.02	0.89
Condition X Work Commitment X Social Role Identification							-.01	0.17
Condition X Work Commitment X Social Group Memberships							.09	2.64**

Note. *** $p < .001$, ** $p < .01$, * $p < .05$, ^ $p < .10$

Table 13

Multiple linear regression analysis on perceived opportunity for self-expansion in retirement (N = 548).

	Block 1		Block 2		Block 3		Block 4	
	<i>df</i> = 541		<i>df</i> = 539		<i>df</i> = 529		<i>df</i> = 527	
	$\Delta R_2 = .11^{***}$		$\Delta R_2 = .07^{***}$		$\Delta R_2 = .05^{***}$		$\Delta R_2 = .00$	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Intercept	4.64	99.14***	4.64	102.94***	4.64	99.37***	4.64	98.73***
Education Level	-.02	0.53	-.03	0.75	-.02	0.46	-.02	0.54
Household Income	.00	0.22	.00	0.00	-.01	0.59	-.01	0.44
Gender	-.13	1.23	-.15	1.45	-.14	1.39	-.15	1.47
Years to Retirement	-.04	5.06***	-.04	5.43***	-.04	5.53***	-.04	5.59***
Self-Esteem	.25	5.64***	.20	4.71***	.19	4.35***	.19	4.25***
Condition (Entry / Exit)			.55	6.08***	.56	6.24***	.53	5.70***
Work Commitment			.10	2.37*	-.01	0.22	-.02	0.35
Work Role Identification					.11	2.52*	.11	2.52*
Work Group Memberships					.12	2.62**	.12	2.53*
Social Role Identification					.14	2.28*	.14	2.18*
Social Group Memberships					-.04	0.90	-.04	0.92
Condition X Work Commitment					-.08	1.01	-.06	0.70
Condition X Social Role Identification					-.04	0.46	-.04	0.51
Condition X Social Group Memberships					.09	1.46	.08	1.35
Work Commitment X Social Role Identification					-.01	0.35	-.04	1.03
Work Commitment X Social Group Memberships					-.02	0.64	-.03	0.89
Social Role Identification X Social Group Memberships					.02	0.57	.01	0.48
Condition X Work Commitment X Social Role Identification							.08	1.16
Condition X Work Commitment X Social Group Memberships							.03	0.59

Note. ****p* < .001, ***p* < .01, **p* < .05, ^*p* < .10

We next tested our hypothesis that social relationships, measured by social role identification and social group memberships would moderate the relationship between work commitment and self-concept change and self-expansion in the work exit condition (Table 12 & Table 13, Blocks 4). Social role identification did not influence the relationship between work commitment and self-concept in either framing condition. The regression analysis did not show any significant interaction between framing condition, social role identification and work commitment predicting either anticipated self-concept change or self-expansion in retirement. The main effect of social role identification on anticipated self-concept change and self-expansion in retirement was significant, such that older workers with greater identification with social roles forecasted more positive changes to their self-concept and greater opportunity for self-expansion in retirement regardless their level of work commitment or framing condition.

Finally, we tested if social group memberships would moderate the relationship between work commitment and self-concept change and self-expansion in the work exit condition (Table 12 & Table 13, Blocks 4). Social group memberships did not influence the relationship between work commitment and self-expansion, however the regression analysis showed that the three-way interaction between framing condition, work commitment and anticipated self-concept change was significant. To probe this interaction, we split the data between participants in the work exit and retirement entry framing conditions and found, contrary to hypothesis, the interaction between work commitment and social groups was significant in the retirement entry condition, $b = 0.07$, $t(259) = 2.71$, $p = .007$, but not the work exit condition, $b = -0.03$, $t(256) = 1.20$, $p = .229$. We then used tests of slopes with high

versus low values of work commitment and social group membership represented as the centred mean ± 1 SD. Tests of slopes revealed that in the retirement entry condition, work commitment significantly predicted forecast self-concept change among participants with higher social group memberships $+1$ SD; $b = 0.20$, $t(272) = 3.63$, $p < .001$, such that those with higher group memberships low in work commitment actually forecasted less positive change than those more committed to their work (see Figure 6).

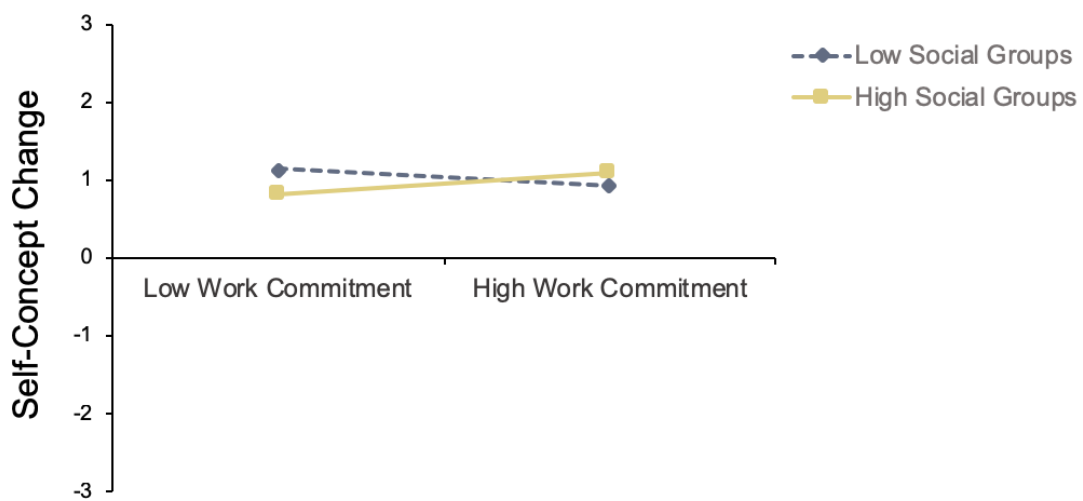


Figure 6. Interaction between work commitment and social group memberships in the retirement entry condition predicts self-concept change (high and low values of work commitment and social group memberships represented at ± 1 SD).

3. Discussion

The aim of this study was to understand anticipation of self-concept change and opportunity for self-expansion in retirement based on the transition being framed as either an exit from work role or an entry into retirement role. Specifically, the study aimed to understand if these different framing conditions would moderate the relationship between work commitment and anticipated self-concept in retirement,

while also considering the role of social relationships as a potential buffer to negative change.

As hypothesised, when retirement was presented as an entry into a new role, older workers anticipated more positive self-concept change and greater opportunity self-expansion in retirement compared to when retirement was framed as an exit from the work role. We expected that in the work exit framing condition, those more committed to their work would anticipate less positive self-concept change following retirement, but that this relationship would be buffered by social relationships.

Greater identification with social roles led older workers to anticipate more positive changes to their self-concept and greater opportunity for self-expansion in retirement, regardless of their level of work commitment or the framing condition. Contrary to expectations, in the retirement entry condition, older workers with more group memberships forecasted less positive change when lower, rather than higher, in work commitment. One possible interpretation of this result is that the retirement entry manipulation may have alerted older workers low in work commitment and social groups to the potential to acquire new social groups and positive identity changes in retirement.

As found in Study 1, higher work commitment was again correlated with more (rather than less) positive anticipation of self-concept change following retirement, as well as greater potential for self-expansion. However, associations were not significant when controlling for other variables. The correlation between anticipation of more positive self-concept change in retirement and social relationships was again replicated from Study 1, however only identification with social roles was significant after controlling for other variables.

Limitations.

This study did not achieve the desired (pre-registered) number of 600 participants, with only a small percentage of MTurk workers passing the study pre-screening criteria (aged between 50 and 70, actively working). A post-hoc power analysis was completed on the three-way interaction between framing condition, work-commitment and social group memberships predicting self-concept change, $\Delta R^2 = .01$, $F(2, 527) = 3.58$, $p = .029$. The observed power of this effect at $p < .05$ was .59, below the standard guideline of .80 (Cohen, 1992).

Chapter 5. General Discussion

1. Summary of findings

The aim of these studies was to understand how self-concept change in retirement is anticipated and experienced, examining the relationship between self-concept change and work commitment, and the extent to which this relationship is moderated by social relationships. We expected older workers more committed to their work to anticipate and experience less positive change to self-concept in retirement, especially when they had lower identification with social roles or fewer social group memberships to support identity continuity in this transition.

While retirement represents a major life milestone, which is often eagerly anticipated, our studies suggest that the experience of self-concept change in retirement might not be as positive as anticipated. While previous studies have found major life transitions involving role exits can have negative impacts to self-concept (e.g., Light & Visser, 2013; McIntyre et al., 2014; Slotter et al., 2010), our findings show that for retirement transition, older adults anticipate and experience significant, positive changes to their overall self-concept. These results should be viewed with the caveat that positivity biases can influence future state projections (Wilson & Gilbert, 2005) and equally, a ‘rosy view’ can colour past experiences with the passing of time (Mitchell, Thompson, Peterson, & Cronk, 1997; Sutton, 1992). Participants post-retirement experienced less positive self-concept changes than anticipated by participants pre-retirement. Our results also showed that post-retirement, older adults did not experience the positive changes to their appearance or social circles that were anticipated pre-retirement.

Our main hypothesis that higher levels of work commitment would lead to more negative anticipated and experienced self-concept change in retirement was not supported in our three studies. The hypothesis was based on evidence that higher commitment can lead to greater anticipated and experienced self-concept change in other life transitions (e.g., relationship dissolution; Slotter et al., 2010) and the importance of work to the self-concept (Elsbach, 2015). Pre-retirement, our findings showed higher work commitment among older workers was positively correlated with anticipation of more, rather than less, positive self-concept change (Studies 1 & 3) and greater opportunity for self-expansion (Study 3). While this result was unexpected, previous research has shown older workers can hold positive attitudes to both work and retirement simultaneously (Adams et al., 2002), and higher occupational prestige is associated with higher retirement satisfaction (Dorfman, 1989). Work commitment is also associated with other personality traits including proactiveness and conscientiousness (Young et al., 2018), and these underlying traits may predispose people to think more positively about self-change in retirement. Thus, strong work commitment might be a resource from which positive self-concept change can be anticipated, with the possible expectation that retirement will bring new sources of meaning and commitment. These finding might also be due to the nature of retirement itself, as an expected life-course event retirement can be viewed as a normative transition. According to Zittoun (2012) people are likely to be positively engaged in normative transitions, as distinct from non-normative transitions such as relationship dissolution or job loss, for which a sense of rupture is likely to be felt with more intensity. Indeed retirement, at the right time, is often viewed as an achievement (Van Solinge & Henkens, 2007). Further, a number of other variables associated with retirement attitudes have not been measured in this

research, and these might influence how positively self-concept change in retirement is anticipated. For example, retirement fears are shown to be lower amongst older workers with greater self-efficacy (Hayslip, Beyerlein, & Nichols, 1997) and better physical health and finances (Haslam et al., 2018). Retirement adjustment is positively associated with retirement planning (Muratore & Earl, 2015) and perceived control of the retirement decision (de Vaus, Wells, Kendig, & Quine, 2007), and it is possible that these measures might also influence older worker's attitudes to self-concept change in retirement.

We expected social relationships to moderate the relationship between work commitment and self-concept change in retirement, finding social relationships were associated with self-concept change across the three studies. This is consistent with findings that social relationships can provide support to older workers in retirement transition (Henning et al., 2016), and literature showing the importance of social roles such as romantic partner (Slotter et al., 2010) and group member (Coats et al., 2000) to the self-concept. Pre-retirement, those more identified with important social roles anticipated more positive self-concept change (Studies 1 and 3) and greater opportunity for self-expansion (Study 3). Post-retirement, greater social role identification was correlated with more positive self-concept change, however this was not significant when controlling for other variables. Those with more social group memberships anticipated and experienced more positive self-concept change (Studies 1 and 2). Social relationships are thought to provide continuity of self in retirement (Atchley, 1989; Henning et al., 2016; Steffens, Jetten, et al., 2016), however group memberships can also support positive identity changes in retirement. For example, Haslam et al. (2018) showed that multiple group memberships can increase retiree identification, leading to better retirement wellbeing. Many social

roles are underpinned by consistent relationships and routines (e.g., grandparent, spouse). Study 2 measured positive and negative changes to, rather than continuity of, self-concept post-retirement. Given that novel and interesting activities lead to positive self-concept change (Mattingly & Lewandowski, 2013), our results suggest multiple groups memberships (e.g., sports clubs, volunteer groups) might provide greater opportunities than social role identities for positive identity change in retirement.

Throughout our studies, self-esteem, the extent to self is viewed as positive and worthwhile (Emery et al., 2015; Rosenberg, 1965), was consistently associated with measures of anticipated self-concept change (Studies 1 & 3), experienced self-concept change (Study 2), self-concept clarity (Study 2) and self-expansion (Study 3). Self-esteem was included as a variable in our analysis due to previous research showing strong correlations with measures of self-concept clarity and self-expansion (Campbell, 1990; DeMarree & Bobrowski, 2018; Emery et al., 2015). Our findings showed that self-esteem was also strongly associated with self-concept change anticipated and experienced, in other words, the extent to which individuals view themselves positively was associated with how positively changes to the self were anticipated and reported retrospectively. Pre- and post-retirement, self-esteem had a moderate to strong relationship with work commitment. Given the centrality of work to the self (Elsbach, 2015), this association between work commitment and self-esteem might be expected amongst older workers. However the post-retirement association is also consistent with previous findings from Reitzes and Mutran (2006) that stronger work identification pre-retirement can positively influence self-esteem in the years post-retirement.

Previous research has shown that role exits, but not entries can lead to reduced self-concept clarity (Light & Visser, 2013). Study 3 found that presenting retirement as an entry into a new role, compared to an exit from the workforce, led older workers to anticipate more positive self-concept change and greater opportunity self-expansion in retirement. This is consistent results with other future identity framing effects, for example students who are presented with an academic goal / journey metaphor show greater academic intent compared to students presented a non-academic metaphor (Landau, Oyserman, Keefer, & Smith, 2014). Role entries often correspond with positive events (e.g., starting a new relationship, becoming a parent), and exits negative events (e.g., divorce, loss of a job). Further, the emotions felt about the transition can influence how changes are experienced to self-concept, regardless of exit or entry, with negative, but not positive emotionality towards a transition experienced associated with lower self-concept clarity (Slotter & Walsh, 2017). It is possible that the anticipation of self-concept change from the framing condition might be mediated by the emotion experienced, such that entry framing solicits more positive emotion towards the transition, leading to more positive anticipation of self-concept change.

Finally, this study has, at times, drawn from qualitative literature, where the term 'identity' is been used to describe a narrative method in which an individual's job attitudes and understanding of themselves in relation to their work is understood through qualitative interviews (e.g. Conroy & O'Leary-Kelly, 2014; Dutton et al., 2010). In particular, Conroy & O'Leary-Kelly (2014) theorised that for those highly committed to their work, exiting a work identity is likely to result in a stronger sense of identity loss. These qualitative studies are focused on work identity and emphasise the importance of work related-transitions (e.g. promotion, job change or retirement)

as key periods of potential identity change (Miscenko & Day, 2016). In contrast to qualitative approaches, quantitative studies often use general measures of self-concept, self-esteem and wellbeing. In our study, and studies that have influenced our hypotheses, work identity is one of just many social identities that make up the self (e.g. Light & Visser, 2013; Steffens, Jetten et al., 2016). Our studies did not support an association between greater work commitment and negative self-concept change in retirement as found by Conroy & O’Leary-Kelly (2014), and this difference in findings might be partly attributable to a quantitative methodological approach removing the emphasis on transition-specific changes.

2. Applied implications

The anticipation of positive self-concept change in retirement might have consequences for retirement preparation and decision-making. Our results showed that older workers largely anticipate positive self-concept changes in retirement, yet the actual experience is not as positive as anticipated. Engaging in part-time work after retirement age can increase post-retirement satisfaction and wellbeing (Dingemans & Henkens, 2015; Seongsu & Feldman, 2000), and it is possible that an overly positive anticipation of self-concept change in retirement might also lead older adults to reject work opportunities. This overly positive anticipation might also lead to lack of retirement planning and preparation, especially in social and recreational domains. While research evaluating the effectiveness of formal retirement preparation and planning programs is scarce (Leandro-França, Van Solinge, Henkens, & Murta, 2016), there is evidence that preretirement programs lead to lower, more realistic expectations of post-retirement opportunities (Cohen-Mansfield & Regev, 2018).

Our studies consistently showed the importance of social relationships to self-concept change in retirement, with the implication that increasing social relationships can enhance the retirement experience. The link between social group memberships and more positive self-concept change in retirement contributes to the growing literature on the importance of social groups to retirement wellbeing and adjustment (Haslam et al., 2018, 2019; Lam et al., 2018; Steffens, Jetten, et al., 2016). Yet, social relationships are often perceived by the public to be far less important for health and wellbeing than they actually are (Haslam, McMahon et al., 2018). Our studies found social circles did not change for the better post-retirement, work-based group memberships were largely lost, and other social group memberships declined as people get deeper into retirement. Interventions pre- and post-retirement that aim to preserve work-based group affiliations (e.g., alumni) and increase the number of social groups in which people participate (e.g., volunteer pathways, retiree community groups) might help address this wellbeing concern.

Finally, our studies consistently showed older workers who held more work-based group memberships had higher levels of work commitment (Studies 1 and 3; see Appendix 3, Table 14 for Study 3 supplementary analysis). Work commitment is positively associated with work engagement, productivity and worker retention (Mackay et al., 2016), and this finding might have important implications for employers seeking to improve these metrics. Formal team and work group memberships can increase organisational identification and productivity (Van Dick, 2001), and social group memberships are associated with a range of wellbeing outcomes (Iyer et al., 2009; Jetten, Haslam, Haslam, & Branscombe, 2009). Thus, a longitudinal study that specifically investigates work-based social group memberships in workers of all ages (e.g., 18 – 70 years) might help understand if

these increase work commitment in different age cohorts, with the aim of shaping potential interventions to improve engagement and productivity.

3. General limitations

Our study did not find any support for the hypothesised relationship between pre-retirement work commitment and self-concept change in retirement. However, there are several limitations to the generalisability of this finding. Firstly, rather than retirement being immediate, our participants were on average 8-10 years from retirement in the pre-retirement studies and 6 years past retirement in the post-retirement study, and labelling just one transition within such a period might hide a series of related transitions and adjustments (Zittoun, 2009). Previous studies that have found reduced self-concept clarity following life transitions were conducted within one year of transition (e.g., Light & Visser, 2013; Slotter et al., 2010). Similarly, negative effects of retirement on wellbeing have been observed within the first 12 months following work exit, before a recovery trend (e.g., Richardson & Kilty, 2005; Wang, 2007).

Given our study was not longitudinal, and post-retirement participants were often many years past retirement transition, any short-term consequences to self-concept in the first 6-12 months were not captured by this study. This could be overcome with either a cross-sectional or a longitudinal study that looks at participants within 12 months of the retirement transition.

Like many studies of identity and retirement wellbeing, our studies were further limited by being correlational in nature and research in this area requires more experimental research designs to reveal causal relationships among variables.

Secondly, all three studies were limited to MTurk users in the United States, and while studies have shown that Mturk provides socio-economically diverse sample characteristics with good scale reliability (Casler et al., 2013; Chandler & Shapiro, 2016), it is possible that there are particular factors in this US Mturk population that might make people pre-disposed to a different way of thinking about work and retirement when compared with either non-Mturk or other western counterparts. For example, Mturk has been shown to have a high number of workers who are underemployed compared to non-Mturk populations (Shapiro, Chandler, & Mueller, 2013), which might influence anticipation of retirement. Replicating these findings in a non-MTurk population might be important to the generalising these findings to different demographics or regions in which retirement regulations are different.

Thirdly, self-beliefs are studied from a variety of theoretical perspectives (e.g., self-concept, self-esteem, self-efficacy, expectations of success, etc.), with self-concept measures often showing limited validity over related measures such as self-efficacy (Marsh et al., 2019) and self-esteem (DeMarree & Bobrowski, 2018). Study 3 showed a strong correlation ($r = .61$), and similar outcomes between measures of self-concept change and self-expansion. Our research was based on studies that found major life transitions can lead to reduced self-concept clarity (e.g., Light & Visser, 2013; McIntyre et al., 2014; Slotter et al., 2010). However, rather than self-concept clarity our significant results were found for the custom measure of self-concept change, which included positive or negative domain evaluation (e.g., changes to my appearance, for better / worse). Self-concept clarity has traditionally been used as a non-evaluative measure of the consistency of self-knowledge, distinct from the evaluative measure of self-esteem (Campbell, 1990), thus our measure was more similar to specific self-concept measures used to assess competence in specific

domains (e.g., academic performance, athletic abilities) (Oyserman, Elmore, & Smith, 2012). Thus, further examination is required of the predictive ability of this measure over and above self-expansion on retirement adjustment, wellbeing and satisfaction.

Finally, there were some inconsistencies in findings between Study 1 and Study 3 for the anticipation of self-concept change in retirement. Study 1 found older workers with more social group memberships anticipated more positive self-concept changes than those with fewer social group memberships. This result was not replicated in Study 3, where those with more work (but not social) groups anticipated self-concept changes. Task order was changed between the two studies. In Study 1, participants anticipated self-concept change prior to nominating group memberships so as reflection on social identification or group memberships did not influence anticipated self-concept change. In Study 3, participants nominated group memberships before framing of retirement as either work exit or retirement entry, after which self-concept changes were forecast to measure the effects of the framing condition. Therefore, the change in task order or the framing exercise itself could have influenced results (Schwarz, 1999). This study could have used a control condition when examining framing effects of retirement as work exit or retirement entry and randomised task orders.

4. Future directions

Continuity theory (Atchley, 1989) suggests that important social relationships (e.g., social groups) and routines outside the workplace can provide identity continuity in the transition to retirement (Henning et al., 2016). A more recent theory suggests that in addition to supporting identity continuity in transition to

retirement, belonging to multiple groups creates opportunities to join new groups that positively contribute to identity (Haslam et al., 2018, 2019). Our research builds on these findings by showing a relationship between multiple group memberships and positive anticipation and experience of self-concept change in retirement.

Longitudinal studies which consider how work identity and identification change over time, and in the transition to retirement might provide complimentary evidence of the influence of group multiple memberships on positive identity change pre- and post-retirement (Miscenko & Day, 2016).

Importantly, the current retirement landscape is undergoing dramatic changes due to ageing populations (Henkens et al., 2018). In many countries, the minimum retirement age is increasing and more people are choosing to engage in work activities beyond the traditional retirement age (Truxillo, Cadiz, & Hammer, 2015). In a recent study of time-use pre- and post-retirement transition, about half the participants continued to engage in work activities in the first 12-months post-retirement (Olds et al., 2018). Rather than a hard exit from the workforce, retirement transitions can now include periods of part-time work with new or former employers, and self-employment (Feldman & Beehr, 2011). Thus, future studies of self-concept change in retirement might examine the relationship with retirement intentions and decisions, incorporating these new, diverse transitions (Kojola & Moen, 2016).

5. Conclusion

In conclusion, the present findings contribute to the existing psychological literature on retirement and identity during life transitions by showing that self-concept changes experienced in retirement might not be as positive as anticipated by older workers. Older workers more committed to their work anticipate more (rather

than less) positive changes post-retirement, however the actual changes experienced to self-concept in retirement are not associated with pre-retirement work commitment. These findings also point to the importance of social group memberships to positive identity changes post-retirement. Finally, viewing retirement as a role entry, rather than an exit from the workforce allows people to anticipate more positive self-changes and greater opportunities for self-expansion in their retirement years.

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Appendix

1. Studies and pre-registration

Ethical approval for the below studies has been awarded on behalf of the Faculty Ethics Sub-Committee (Ref: DJ1801). All hypotheses were pre-registered on the *As Predicted* database, Study 1 (24/10/2018, #15524), Study 2 (11/02/2019, #19456) and Study 3 (04/06/2019, #15524).

Study 1. *Pre-registered hypotheses*

1. On average, participants are predicted to expect more positive (relative to more negative) changes to their self-concept post-retirement.
2. Participants further from retirement will,
 - a) Report higher levels of work commitment
 - b) Forecast less positive self-concept change upon retirement
3. Participants with high work commitment will forecast less positive self-concept change following retirement than those with low work commitment.
4. Social role identification and work commitment will interact to predict anticipated self-concept change following retirement. Participants who report greater importance of non-work social roles will forecast more positive changes to their self-concept upon retirement when low in work commitment relative to those with high work commitment. No differences in work commitment predicting self-concept change are expected to emerge for people low in social role identification.
5. Social group memberships and work commitment will interact to predict anticipated self-concept change following retirement. Participants who report more social group memberships will forecast more positive changes to their self-concept upon retirement when low in work commitment relative to those with high work

commitment. No differences in work commitment predicting self-concept change are expected to emerge for people with fewer social group memberships.

Study 2. *Pre-registered hypotheses*

The main question being asked in this study is, how do people experience changes to their self-concept after retirement (self-concept change)? Main hypotheses being tested in this study,

1. Participants who retrospectively report being more committed to their work prior to retirement will report: a. less positive self-concept change following retirement, b. lower self-concept clarity
2. Participants with higher social role identification post retirement will report: a. more positive self-concept change following retirement, b. higher self-concept clarity
3. Participants with more group memberships post retirement will report: a. more positive self-concept change following retirement, b. higher self-concept clarity
4. The impact of retrospectively reported pre-retirement work commitment on self-concept will be moderated by social role identification. Specifically, participants who report being more committed to their work prior to retirement, but also report greater identification with social roles will report: a. more positive self-concept change following retirement, b. higher self-concept clarity. No differences in self-concept change or clarity are expected for those who retrospectively report low work commitment prior based on identification with social roles.
5. The impact of retrospectively reported pre-retirement work commitment on self-concept change in retirement will be moderated by the number of group memberships

a person holds post-retirement. Participants who report high work commitment prior to retirement and report affiliation with a greater number of non-work groups will report: a. more positive self-concept change following retirement, b. higher self-concept clarity. No differences in self-concept change or clarity are expected for participants who retrospectively report low work commitment based on post-retirement group memberships.

Study 3. *Pre-registered hypotheses*

1. Participants in the exit role framing condition will forecast less positive self-concept change and less self-expansion following retirement than those in the entry role framing condition.
2. Participants with (i) higher social role identification & (ii) more social group memberships pre-retirement will forecast more positive self-concept change and greater self-expansion following retirement in both framing conditions.
3. There will be a significant 2-way framing condition by work commitment interaction. We expect a simple effect of work commitment for participants in the exit framing condition such that participants who report being more committed to their work will forecast,
 - a. less positive anticipated self-concept change following retirement
 - b. less anticipated opportunity for self-expansion in retirement

The simple effect of work commitment is not expected to be significant in the entry framing condition.

4. There will be a significant 3-way framing condition by (i) social role identification by work commitment, and a significant 3-way framing condition by (ii) social group membership by work commitment interaction predicting anticipated self-concept

change and self-expansion in retirement. We expect a significant simple effect of (i) social role identification & (ii) social group membership in the exit framing condition, such that people with greater (i) social role identification & (ii) more social group memberships will predict more positive anticipated self-concept change and greater anticipated opportunity for self-expansion in retirement when high in work commitment, compared to those with lower (i) social role identification & (ii) fewer social group memberships. The simple effect of (i) social role identification & (ii) social group membership is not expected to be significant for those with low work commitment in the exit framing condition. No significant (i) social role identification & (ii) social group membership by work commitment interaction predicting anticipated self- concept change and self-expansion in retirement is expected in the entry framing condition.

2. Surveys used

1. *Self-Concept Change*

When people enter new phases of their lives they may or may not experience changes to various aspects of themselves and their situation. Some changes may be positive, whereas others may be negative.

For the following items, please use the scale provided to indicate how much you might change after retirement,

1. My appearance
2. My clothing and style choices
3. The effort I invest in my appearance

4. My concern for my appearance
5. The amount of time I spend with my current social circle
6. The individuals in my social circle
7. The degree to which I depend on others in my social circle
8. The enjoyment I get from interacting with people in my social circle
9. My goals for the future
10. My goals related to my physical health
11. My goals related to my well-being
12. My goals related to helping others
13. The degree to which I appreciate, believe in, and care for others
14. My commitment in terms of loyalty, bravery, and tenacity
15. The degree to which I believe that my actions and intentions affect my reality
16. My religious belief or belief in others, such as that all people should be treated as equal
17. The time I spend or dedicate to my current activities and hobbies
18. The time I spend or dedicate to new activities and hobbies
19. My openness to new experiences and to trying new activities and hobbies
20. The time or resources I have available for new activities and hobbies

2. *Work Commitment*

Please indicate to what extent you agree/disagree with the below statements about your career / chosen profession,

1. My line of work has a great deal of personal meaning to me
2. I find that my values and the values of my chosen profession are very similar
3. I care about the fate of this profession

4. I am proud to tell others about my line of work

Please indicate to what extent you agree/disagree with the below statements about the organisation in which you are working,

1. I don't feel like I belong to my organisation
2. I'm not emotionally attached to my organisation
3. My organisation has personal meaning for me
4. I do not feel like part of my organisation
5. I'd be glad to spend rest of days in my organisation
6. I discuss my organisation with outsiders
7. My organisation's problems are mine too

Please indicate to what extent you agree/disagree with the below statements about your job,

1. Most important things for me involve my job
2. My job is only a small part of who I am
3. I'm very much involved personally in my job
4. I live, eat, and breathe my job
5. Most of my interests are centered around my job
6. My ties to my job are very difficult to break
7. I usually feel detached from my job
8. Most of my personal life goals are job-oriented
9. My job is very central to my existence
10. I like to be absorbed in my job most of the time

3. *Social Role Identification*

Please indicate if you identify with any of the below social roles by indicating how important this role is to you.

Select the number from 1 (not important at all) to 7 (extremely important) that best describes how important this role is to your identity,

1. My role as a spouse or dating partner
2. My role as a parent or custodial parent
3. My role as a grandparent
4. My role as a close friend
5. My role as a worker
6. My role as a caregiver
7. My role as a student
8. My role as a volunteer
9. My role as a pet owner
10. My role as a member of religious group or denomination
11. My role as a member of a club or social organisation

4. *Social Group Memberships*

Below you will be asked the number of groups to which you belong. These may take the form of leisure or social groups, community groups and work-related groups.

Please reflect on the groups you belong to and select up to a maximum of five groups for each category,

1. Leisure or social groups (e.g. book clubs, gardening clubs, tennis groups, etc.).

Please select the number of leisure or social groups to which you belong.

2. Community groups (e.g. church groups, volunteering, etc.). Please select the number of community groups to which you belong.
3. Work groups (e.g. work teams, professional organisations, alumni, business social groups etc.). Please select the number of work groups to which you belong.

5. *Self-esteem*

Please indicate to what extent you agree/disagree with the below statements,

1. On the whole, I am satisfied with myself
2. At times I think I am no good at all
3. I feel that I have a number of good qualities
4. I am able to do things as well as most other people
5. I feel I do not have much to be proud of
6. I certainly feel useless at times
7. I feel that I'm a person of worth
8. I wish I could have more respect for myself
9. All in all, I am inclined to think that I am a failure
10. I take a positive attitude toward myself

6. *Self-concept clarity*

Please indicate to what extent you agree/disagree with the below statements,

1. My beliefs about myself often conflict with one another
2. On one day I might have one opinion of myself and on another day I might have a different opinion
3. I spend a lot of time wondering about what kind of person I really am
4. Sometimes I feel that I am not really the person that I appear to be

5. When I think about the kind of person I have been in the past, I'm not sure what I was really like
6. I seldom experience conflict between the different aspects of my personality
7. Sometimes I think I know other people better than I know myself
8. My beliefs about myself seem to change very frequently
9. If I were asked to describe my personality, my description might end up being different from one day to another day
10. Even if I wanted to, I don't think I could tell someone what I'm really like
11. In general, I have a clear sense of who I am and what I am
12. It is often hard for me to make up my mind about things because I don't really know what I want

7. Opportunity for Self-Expansion in Retirement

Please answer each of the following questions according to how you feel about your retirement,

1. Retirement will result in having new experiences
2. Retirement will bring you greater awareness
3. Retirement will increase your ability to accomplish new things
4. Retirement will make you more appealing to others
5. Retirement will expand your sense of the kind of person you are
6. Retirement will allow you to expand your own capabilities
7. Do you often learn new things about your retirement?
8. Retirement will be a source of exciting experiences
9. Retirement will allow you to compensate for some of your own weaknesses as a person

10. Retirement will allow you to have a larger perspective on things
11. Retirement will result in you learning new things
12. Retirement will make you a better person
13. Retirement will increase the respect other people have for you
14. Retirement will increase your knowledge

3. Supplementary analysis

Table 14

Multiple linear regression analysis on work commitment Study 3 (N = 548)

	Block 1		Block 2	
	<i>df</i> = 541 <i>R</i> ² = .08***		<i>df</i> = 537 $\Delta R^2 = .34$ ***	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Intercept	4.44	93.26***	4.44	117.16***
Education Level	.06	1.54	.03	0.89
Household Income	.00	0.26	.00	0.10
Gender	.25	2.37*	.19	2.20*
Years to Retirement	.01	0.75	.00	0.58
Self-Esteem	.26	5.98***	.18	5.09***
Work Role Identification			.42	13.96***
Work Group Memberships			.23	5.92***
Social Role Identification			-.03	0.84
Social Group Memberships			.07	2.56*

Note. ****p* < .001, ***p* < .01, **p* < .05, ^*p* < .10