Advances in Life Course Research 33 (2017) 11–22

Contents lists available at ScienceDirect

Advances in Life Course Research

journal homepage: www.elsevier.com/locate/alcr

A life course model for a domains-of-life approach to happiness: Evidence from the United States

Anthony R. Bardo

Duke University, Department of Sociology and Population Research Institute, Soc-Psych Building, Box 90088, Durham, NC, 27708, USA

ARTICLE INFO

Keywords:
Aging
Domain satisfaction
Happiness
Subjective well-being

ABSTRACT

A great deal of methodological attention has been given to identifying age patterns in happiness. Yet, few studies have questioned why any specific age pattern should exist, and researchers have tended to focus on socio-psychological rather than socio-structural mechanisms. Thus, I blend life course and subjective well-being theories and utilize multiple waves of nationally representative cross-sectional data from the United States to throw light on the important role of socio-structural mechanisms. Specifically, the age pattern in happiness is driven by distinct patterns in levels, and importance, of satisfaction with specific areas of life. These distinct patterns, which are grounded in the successful aging paradigm, largely explain the slightly increasing quadratic age pattern in American's happiness that researchers have become familiar with. These findings have broad implications for developing initiatives aimed at improving quality of life, and they draw attention to the need for more life course research on subjective well-being.

1. Introduction

Knowledge surrounding quality of life judgments has grown dramatically over the past forty years (Seligman & Csikszentmihalyi, 2000), and the usefulness of subjective well-being (SWB) indicators for policy making and evaluation is gaining recognition (Layard, 2010; Oswald & Wu, 2010). Despite this increasing recognition, life course research in this area of scholarship is scant. Consequently, we know little about age patterns in SWB (George, 2010, 2006), which represents a crucial area of inquiry in light of increasing life expectancy and population aging. Thus, the current study aims to establish conceptual linkages between life course and subjective well-being theories, and empirically examine whether these linkages contribute to the current understanding of SWB and age.

Guided by Hagestad and Neugarten & s (1985) *normal expectable life course*, and subjective well-being's *domains-of-life approach* (Rojas, 2007), the current study shows that the age pattern in American's happiness is largely driven by distinct patterns in levels, and importance, of satisfaction with specific areas of life (i.e., family, friends, health, hobbies, and place of residence). The net result is the slightly increasing quadratic age pattern in American's happiness that researchers have become familiar with (see Bardo, Lynch, & Land 2017; Fukuda, 2013; Glenn, 2009; Yang, 2008). The current study is among the first to highlight the importance of age-graded socio-structural mechanisms in shaping SWB across the life course.

2. Background

2.1. Subjective well-being and the domains-of-life approach

Subjective well-being comprises three unique components: (1) affect (e.g., positive and negative emotions), (2) domain-specific satisfaction (e.g., satisfaction with family, friends, health, hobbies, and place of residence), and (3) global assessments (e.g., happiness, and life satisfaction) (Diener, Scollon, & Lucas, 2003), and the current study focuses on the latter two components. These two components, according to subjective well-being's cognitive perspective, are largely based on individual evaluations that are independent from one's affective state and grounded in his or her broader culture (Rojas & Veenhoven, 2013; Schwarz & Strack, 1999). These components are recognized to reflect the gap between one's *expectations* and his or her *achievements* (see Kahneman 1999; Rojas & Veenhoven, 2013). Specifically, domain-specific satisfaction represents perceived gaps in specific areas of life, and happiness reflects an overall evaluation of these gaps (e.g., a cognitive averaging) (Cummins, 1996).[1]

There is some controversy surrounding the relationship between happiness and domain-specific satisfaction (see Argyle, 2001), but a large body of evidence supports a domains-of-life approach (see Rojas,

E-mail address: anthony.bardo@duke.edu.

[1] The enumeration and demarcation of specific domains is somewhat arbitrary. For example, the number of domains generally vary from a few to thirty or more, but they should meaningfully reflect the way in which people evaluate their lives (see Rojas, 2007).

http://dx.doi.org/10.1016/j.alcr.2017.06.002
Received 5 March 2017; Received in revised form 16 May 2017; Accepted 12 June 2017

2007). This approach holds that happiness is a function of satisfaction with specific areas of life that are pertinent to the way people evaluate their lives, rather than vice versa (Cummins, 1996; Headey, Veenhoven, & Wearing, 1991; Van Praag & Ferrer-i-Carbonell, 2008). For example, cross-sectional analyses have identified life cycle patterns in the contribution of domain-specific satisfaction to happiness (Easterlin, 2006; Margolis & Myrskyla, 2013), and longitudinal studies have shown that age patterns in domain-specific satisfaction and global life satisfaction map directly on to one another (McAdams, Lucas, & Donnellan, 2012). Therefore, in the present study, happiness is understood to be a product of domain-specific satisfaction. This conceptual framework for understanding happiness is further developed after a brief review of the related literature.

2.2. Subjective well-being and age

The aging-related domain-specific satisfaction literature is broad and relatively non-dialogic, but there are a few notable consistencies. First, satisfaction with health decreases across the life course (Ferraro, 2006; Franks, Gold, & Fiscella, 2003), which is understood to be the result of a normal aging process (see Pedersen & Svedberg, 2000). Second, a positive association between age and satisfaction with place of residence has been consistently documented (see Pinquart & Burmedi, 2003). Previous findings regarding other areas of life are less consistent. However, prominent theories that fall under the umbrella of the successful aging paradigm (Rowe & Kahn, 1987; e.g., socioemotional selectivity theory (Carstensen, 1992)), suggest that satisfaction with social relationships and leisure increases and becomes more important for happiness with age (Menec, 2003; Nimrod & Shrira, 2014).

The aging-related global SWB literature is more integrated than the domain-specific literature, but the findings are somewhat less consistent. For example, the age pattern in happiness has been reported to be constant, positive, negative, U-shaped, and upside-down J-shaped (see Yang, 2008). While many studies have examined these patterns, few have addressed why any specific age pattern should exist. Aside from the fact that perceptions of overall life quality are often expected to decrease with age in light of average declines in physical health, income, and social ties, theoretically grounded expectations for gross age patterns in happiness are practically non-existent (George, 2010, 2006).

Indeed, only a small number of theories have consistently emerged in the related literature, and they tend to support either a stable or slightly increasing level of happiness across age (see Martin, 2002). However, these theories are generally based on subjective well-being's affective perspective (e.g., happiness as a function of human nature), as they have primarily focused on socio-psychological mechanisms that are thought to influence happiness evaluations (see Heckhausen, Wrosch, & Schulz, 2010). For example, social comparison theory posits that reference points used to evaluate happiness shift downward with age (see Gana, Alaphilippe, & Bailly, 2004; Heckhausen & Brim, 1997). The maturational perspective on aging suggests that positive psychological traits increase with age (see Gove, Ortega, & Style, 1989). Selective optimization with compensation theory (Baltes & Baltes, 1990) highlights the general ability of older adults to maintain positive perceptions in face of aging-related losses (see Neubauer, Schilling, & Wahl, 2015). These theories are certainly useful, but it is obvious that key life course insights – namely the age-graded structuring of the life course itself – have been underemphasized.

Another impediment to contemporary aging-related SWB research has been its focus on global assessments. In fact, pioneers in this field recognized the limitations of this narrow focus and called for a domains-of-life approach (e.g., Cutler, 1979; Neugarten, Havighurst, & Tobin, 1961). Yet, their calls have gone relatively unanswered—with a few exceptions. Economists have identified life cycle patterns in the contribution of domain-specific satisfaction to happiness (Easterlin, 2006), demographers have shown that a domains-of-life approach is sensitive to cultural contexts (i.e., cross-national differences; Margolis & Myrskyla, 2013), and social gerontologists have found that midlife is a particularly critical life stage (Schafer, Mustillo, & Ferraro, 2013). However, these recent studies are admittedly exploratory and echo earlier researchers' calls to conceptually link the life course with a domains-of-life approach.[2]

3. Conceptual development

3.1. Toward linking the life course with a domains-of-life approach

Among the life course perspective's central contributions are its specified age-graded structure of life events and transitions and its recognition of stability and change in long-term patterns of life course trajectories (George, 1993; Kohli, 2007; Mayer, 2009). While there is certainly disagreement surrounding the structuring of the life course and its underlying mechanisms (see Mills, 2009; Silverstein, 2012), the insights that this perspective provides regarding the ebb and flow of life remain invaluable (Dannefer & Patterson, 2007). One such insight is the normal expectable life course, which recognizes the dynamic nature of life course patterns, but it also stresses the importance of timing in life events and transitions (Hagestad & Neugarten, 1985).

This emphasis on timing is evidenced by the concept of "cultural age deadlines," which collectively represent a shared timetable for when life events and transitions are expected to occur within a given society. Cultural age deadlines, also referred to as social age deadlines (see Billari et al., 2011), reflect *expectations* for how one's life path should be carved out (Settersten & Hagestad, 1996a; Settersten, 2003). This framework becomes especially salient for understanding the relationship between SWB and age, given that such judgments reflect the gap between one's *expectations* and his or her *achievements* (see Kahneman, 1999; Rojas & Veenhoven, 2013). For example, if social age deadlines represent a timetable for life transitions, then off-time transitions should have a negative effect on SWB, given that *expectations* were not met. Such linkages, while not yet explicitly developed, are evident in recent life course studies.

For example, women's increasing educational and job opportunities have partially contributed to, and resulted from, evolving social age deadlines (i.e., age-graded expectations)—such as those related to employment and motherhood (see Morgan & King, 2001). In turn, recent research has shown that women who become mothers at a younger age are less happy than their older counterparts (e.g., Myrskyla & Margolis, 2014). This emerging body of research that points to the important role of age-graded socio-structural mechanisms in shaping SWB has thus far focused on non-normative (e.g., off-time) events and transitions (e.g., Balbo & Arpino 2016; Pollmann-Schult, 2014; Sobotka & Beaujouan, 2014). However, this accumulating evidence implicitly suggests that the normative structure of the life course itself can be used to understand a given society's gross age pattern in happiness.

3.2. Life course model for a domains-of-life approach to happiness

In sum, happiness can be understood as a function of satisfaction with specific areas of life that are pertinent to the way people evaluate their lives (Cummins, 1996; Rojas, 2007). Satisfaction with specific domains tends to increase and/or decrease with age (e.g., levels). For example, satisfaction with health (Ferraro, 2006) and satisfaction with place of residence (Pinquart & Burmedi, 2003) generally decreases and

[2] "Our efforts to understand the shifting contexts of life satisfaction, as with all exploratory studies, are a tradeoff of strengths and weaknesses. No specific hypotheses were tested because we had insufficient a priori knowledge to construct a series of testable propositions; clarifying a set of patterns for future research, however, is more a necessary first scientific step than an actual limitation" (Schafer et al., 2013, p. 577).

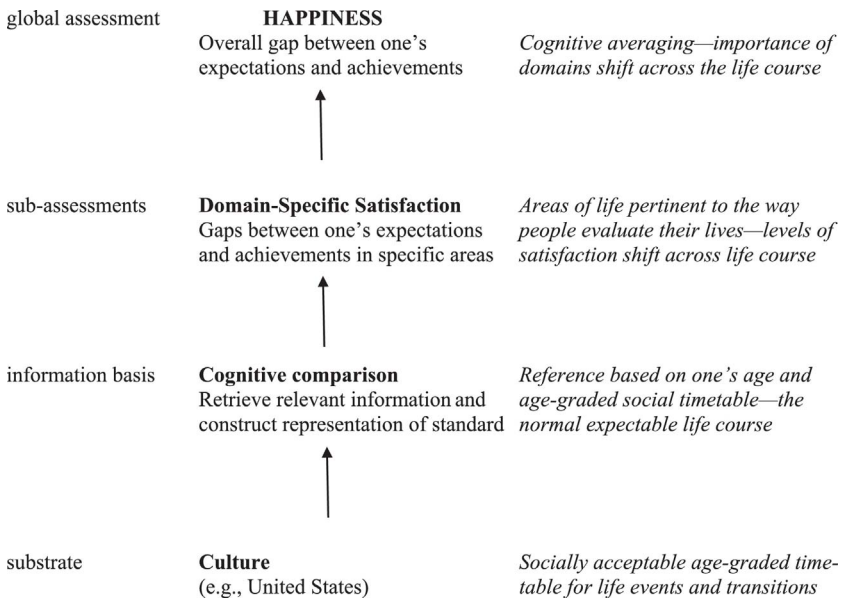

Fig. 1. A life course model for a domains-of-life approach to happiness.

increases, respectively, across the life course. At the same time, certain domains become more or less important for happiness (Hsieh, 2005). For example, young adults generally take good health for granted, but health becomes more important for happiness in later life (Bowling, 2004). Insights from the normal expectable life course suggest that levels, and importance, of domain-specific satisfaction are systematically patterned across the life course in relation to its normative structure (see Easterlin, 2006).

This model for understanding gross age patterns in happiness is depicted in Fig. 1, which builds on subjective well-being's cognitive theories by incorporating a domains-of-life approach (e.g., Rojas, 2007) from a life course perspective. Subjective well-being's cognitive perspective views happiness as a culturally variable concept, and as a product of human thinking rather than human nature (e.g., affective theories of happiness) (see Rojas & Veenhoven, 2013). Therefore, happiness assessments begin at the cultural (e.g., societal) level. At this same level, social age deadlines are established through both formal (e.g., laws and policies) and informal (e.g., common notions about proper timing) mechanisms (Settersten, 2003). These social age deadlines collectively form the *normal expectable life course* (Hagestad & Neugarten, 1985), which acts as a standard of comparison for domain-specific satisfaction assessments (see Schwarz & Strack, 1999) and their importance for overall happiness (see Hsieh, 2004).

The present study tests this life course model of happiness by examining whether levels of domain-specific satisfaction and their importance are systematically patterned across age in congruence with the normal expectable life course, and in such a way that explains the gross age pattern in happiness. Thus, two research questions are addressed: The first question focuses on life course patterns in satisfaction with specific areas of life (i.e., levels of domain-specific satisfaction across age), and the second focuses on life course patterns in the importance of satisfaction with specific areas of life for happiness (i.e., effects of domain-specific satisfaction on happiness across age). Each research question is addressed with a set of hypotheses, which specifically link the normal expectable life course with a domains-of-life approach.

4. Research questions, cultural context, and hypotheses

4.1. Research questions

First, in regard to life course patterns in *levels* of domain-specific satisfaction: The normal expectable life course posits that social age deadlines collectively form a timetable for when life events and transitions are expected to occur (Hagestad & Neugarten, 1985; Settersten & Hagestad, 1996a; Settersten, 2003). In line with the cognitive perspective, subjective well-being judgments reflect the gap between individual expectations and accomplishments (see Kahneman, 1999; Rojas & Veenhoven, 2013). Thus, it is assumed that satisfaction with specific areas of life will follow this "timetable," which acts as frame of reference for SWB evaluations through cognitive comparisons.

R1: What do normal expectable life course patterns in domain-specific satisfaction look like?

Second, in regard to life course patterns in the *effects* of domain-specific satisfaction on happiness (e.g., importance): The domains-of-life approach posits that happiness is a function of satisfaction with specific areas of life that are pertinent to the way in which a person evaluates his or her own life (see Cummins, 1996; Rojas, 2007). At the same time, the life course perspective suggests that the relative importance of each domain differs across age (Hsieh, 2005; Schafer et al., 2013).

R2: How does the normal expectable life course shape the contribution of domain-specific satisfaction to happiness across age?

4.2. The normal expectable life course: cultural context

Before specific hypotheses are addressed, the "timetable" that acts as a frame of reference for SWB evaluations (i.e., the normal expectable life course), must be established. The normal expectable life course is not an explicit feature of American society, but rather it is embedded in social policies and cultural milieu that are apparent through social expectations (see Settersten, 2009). For example, the U.S. is particularly unique among Western nations, in that its policies and social welfare system highlight the cultural prominence placed on individual responsibility and the nuclear family, and it has some of the highest rates of marriage and fertility in the Western world. Moreover, there is a great deal of consensus across sociodemographic divides (e.g., age, race, sex, education, marital status) surrounding the timing of independence and the formation of the nuclear family. Specifically, Americans generally hold that one should leave his or her parental home by age twenty-one, marry by age twenty-six, and have a child shortly thereafter (Smith, 2004). Within this context, the life course, and especially early adulthood, is centered around both independence and the nuclear family.

Midlife is viewed as "the time when people are enacting a full set of social and personal responsibilities" (Moen & Wethington, 1999, pp. 4), and balance between life domains is particularly critical (Schafer et al.,

2013). During this life stage Americans tend to emphasize individual success (e.g., the American dream (see Hanson & Zogby, 2010)), which is evidenced by establishing one's place of residence as a marker of economic independence and in support of the nuclear family (e.g., intergenerational households are uncommon). For example, satisfaction with work and satisfaction with place of residence are sometimes viewed as interchangeable domains, as Americans generally see work as a means to obtain their material standing (e.g., individual success) in society (see Easterlin, 2006). Whereas Europeans tend to seek satisfaction from the process of work itself, and place more emphasis on the contribution of leisure/hobbies to happiness (see Okulicz-Kozaryn, 2011). Midlife is also a time associated with empty nesting, which likely begins around one's late-forties to early-fifties, as parenthood typically occurs around one's late-twenties to early-thirties, and children are expected to leave their parental home around age twenty-one (Smith, 2004).

In turn, old age is often marked by retirement, and while the U.S. does not have a mandatory retirement age for most professions, the usual age of eligibility for Federal retirement benefits (i.e., Social Security) is sixty-five—which is also the same age eligibility requirement for the national health insurance program (i.e., Medicare). In light of the American emphasis on independence, there is a strong preference to remain in one's own home in later life (Pinquart & Burmedi, 2003). This typically means living on one's own (e.g., with one's spouse, but not adult children), but with frequent contact with adult children (see Mancini & Blieszner, 1989). Furthermore, the costs associated with residential facilities (e.g., assisted living) and nursing homes are not covered by Medicare, and only about five-percent of those sixty-five-years and older reside in an assisted living or nursing facility (Ribbe et al., 1997). These cultural contexts, along with insights from the successful aging paradigm, are used to inform detailed hypotheses.

4.3. Hypotheses

Hypotheses 1. Life course patterns in levels of domain-specific satisfaction

Levels of domain-specific satisfaction are expected to follow a normative timetable for life events and transitions, and Table 1 serves as a visual reference for this hypothesized timetable. The current empirical analyses treat age as a continuous measure, but age was divided into life stages in this hypothesized timetable for ease of reference. Life stages (i.e., young adulthood, midlife, and later life) were selected to reflect general age patterns, with an emphasis placed on the critical juncture at midlife (see Schafer et al., 2013). The first set of life stages represents the transition from young adulthood to midlife, and the second set represents the transition from midlife to later life. Thus, the "Increase" or "Decrease" denoted in each cell reflects the general pattern that respective levels of domain-specific satisfaction are expected to follow. For example, satisfaction with family is expected to increase from young adulthood to midlife, and decrease thereafter—forming a concave down age pattern.

The gross age pattern in satisfaction with family should increase from about age eighteen to thirty, as individuals start their own families (e.g., marriage and parenthood) during this time (Smith, 2004). However, satisfaction with family is expected to decrease across midlife due to empty nesting and marital dissolution, on average (see Glenn, 2009). This gross decrease is hypothesized to continue at an accelerated rate into, and throughout, later life, as the death of a spouse or adult child is common during this life stage and has lasting negative psychological impacts (Lucas, 2007).

Satisfaction with place of residence is expected to increase from young adulthood to midlife, as individuals, on average, move out of their parental homes and begin to establish their independence. Satisfaction in this domain is hypothesized to increase throughout midlife, as people, on average, accumulate the economic resources required to shape their own place of living to their liking. In later life, satisfaction with place of residence is expected to increase, as continued residence in the community is generally preferred (see Pinquart & Burmedi, 2003).

Satisfaction with hobbies is likely to increase from young adulthood to midlife, as individuals gain their independence and pursue their own interests. However, as people begin to enact a full set of social and personal responsibilities in midlife, satisfaction with leisure is expected to decrease (see Moen & Wethington, 1999). While selective optimization with compensation theory highlights the capacity of individuals to overcome aging-related challenges through innovative/adaptive strategies (Baltes & Baltes, 1990), satisfaction with hobbies is expected to decline from mid to later life in face of health-related issues, on average.

Socioemotional selectivity theory suggests that satisfaction with social relationships should increase with age (Carstensen, 1992). Thus, satisfaction with friends is expected to increase across the life course, as individuals tend to shed toxic relationships as they mature (see Adams & Blieszner, 1995; Fiori, Antonucci, & Cortina, 2006). Satisfaction with health is expected to decrease monotonically with age (see Ferraro, 2006).

Hypotheses 2. Life course patterns in effects of domain-specific satisfaction on happiness

It is expected that the importance of each domain for happiness is relatively equal in young adulthood, given that life expectations are established during this life stage (see Settersten, 2003; Shanahan, 2000). However, the importance of certain domains for happiness is expected to become increasingly disparate across the life course (see O'Rand, 1996), and follow normal expectable life course patterns that are distinct from those observed when only considering domain-specific satisfaction itself (i.e., levels). This distinction reflects the relative importance of specific life domains across age, on average, for happiness assessments (see Hsieh, 2005; Margolis & Myrskyla, 2013). Designed in the same manner as the first set of hypotheses, the hypothesized "timetable" of effects is depicted in Table 2.

The nuclear family is a central component of the American normal expectable life course, and satisfaction with family is expected to be a major contributor to happiness—at least until later life. Entry into adulthood is marked by family formation (see Settersten & Hagestad, 1996b), so the contribution of satisfaction with family is likely to increase from about age eighteen to thirty, as the bulk of young adults marry – and were expected to – by this age (Smith, 2004). In fact, less than ten-percent of American adults over the age of forty-five remained

Table 1
Hypothesized life course patterns in levels of satisfaction.

Satisfaction with…	Young Adulthood to Midlife ~ (18–39 to 40–64)	Midlife to Later Life ~ (40–64 to 65+)
Family	Increase	Decrease
Residence	Increase	Increase
Hobbies	Increase	Decrease
Friends	Increase	Increase
Health	Decrease	Decrease

Table 2
Hypothesized life course patterns in effects of satisfaction on happiness.

Satisfaction with…	Young Adulthood to Midlife ~ (18–39 to 40–64)	Midlife to Later Life ~ (40–64 to 65+)
Family	Increase	Decrease
Residence	Increase	Increase
Hobbies	Decrease	Increase
Friends	Decrease	Increase
Health	Increase	Increase

never married during the period of time the current study covers (Waite et al., 2000). The importance of this domain for happiness is expected to decrease around one's late-forties to early-fifties, when empty nesting begins. The gross age pattern in the contribution from satisfaction with family is expected to decline at an increasing rate throughout later life, as widowhood becomes more common and an increase in family contacts is associated with declining health (see Mancini & Blieszner, 1989).

Independence is an important feature of American society, and leaving the parental home is a key signal for embarking on this path toward individual responsibility (Settersten & Hagestad, 1996a). Therefore, the importance of satisfaction with place of residence for happiness is expected to increase from young adulthood to midlife, as individuals generally establish their own place of residence during this life stage. In midlife, the increased importance of this domain likely reflects individual success and support of the nuclear family (Easterlin, 2006), as individuals typically "trade up" in the housing market during this life stage in response to growing families (see Poterba, Weil, & Shiller, 1991). In later life, the importance of satisfaction with place of residence is tied to the accumulation of memories in one's own home (see Pinquart & Burmedi, 2003).

The importance of satisfaction with hobbies and friends for happiness is likely shaped by the importance Americans place on establishing one's self as an independent adult and the nuclear family, as these domains reflect competing demands (see Sirgy, 2013). Therefore, the contributions from these domains to happiness is expected to decrease from young adulthood to midlife, when they are expected to bottom out—given the full set of social and personal responsibilities that come with this life stage (see Moen & Wethington, 1999). In turn, the contribution from satisfaction with hobbies and friends is expected to increase from mid to later life (Carstensen, 1992; Nimrod & Shrira, 2014). The successful aging paradigm (Rowe & Kahn, 1987), particularly in regard to its Third Age concept (Carr & Komp, 2011), suggests that leisure and friendship play critical roles in quality of life among older adults (Nimrod & Shrira, 2014). Finally, health is often viewed as a necessary component for quality of life, and its importance is expected to increase across age as health problems emerge and good health is no longer taken for granted (see Bowling, 2004).

5. Data and methods

The best data to answer these questions would be longitudinal panel data that cover the entire life course and include multiple birth cohorts, but no such data exist. Therefore, the current study makes use of the best available data, which is repeated cross-sectional data sets that cover a relatively long period of time and include a wide age range. Nineteen waves of the General Social Survey (GSS) that span twenty-two years (i.e., 1973–1994) are utilized. These are the only waves that include domain-specific satisfaction measures (e.g., these measures are not included in the GSS after 1994). These repeated cross-section surveys capture representative samples of the non-institutionalized adult population in the contiguous United States through the use of full probability sampling (Davis & Smith, 2005).

The sample sizes range between approximately 1500 and 3000 respondents in each wave. The GSS is the best national source of data on domain-specific satisfaction. For example, the MIDUS is one of the few nationally representative surveys that also includes domain-specific satisfaction, but these data are limited in that they do not include respondents younger than twenty-five or older than seventy-four. Therefore, the broad age range and relatively long period of time that the GSS covers makes it the optimal choice to examine life course patterns in subjective well-being. The black oversamples from the 1982 and 1987 waves were excluded, and missing data (i.e., < than 9% of cases) were list-wise deleted. The analytic sample size is 22,931.

5.1. Dependent variable(s)

The domain-specific satisfaction measures include five areas of life: (1) family, (2) friends, (3) health, (4) hobbies, and (5) place of residence. Each is measured on a seven-point scale that ranges from *none* to *a very great deal*, and is asked by the question "For each area of life I am going to name… tell me the number that shows how much satisfaction you get from that area – the city or place you live in, your non-working activities – hobbies and so on, your family life, your friendships, and your health and physical condition." Higher scores reflect greater levels of satisfaction. A few other studies that utilized the GSS included additional satisfaction measures, such as job satisfaction and financial satisfaction (see Easterlin & Sawangfa, 2009). However, these measures are not included in the present analyses because they are problematic for two reasons: (1) they are measured on a different scale and (2) they exclude large subsamples of respondents.

Happiness is measured by a single item three-option question; "Taken all together, how would you say things are these days—would you say that you are very happy, pretty happy, or not too happy?" Higher scores reflect greater levels of happiness.

5.2. Independent variables

Age is measured chronologically from eighteen to eighty-nine and older. Period measurement is based on single-year waves of the GSS that included the domain-specific satisfaction measures (i.e., 1973, 1974, 1975, 1976, 1977, 1978, 1980, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1993, and 1994). Cohort is measured in approximately five-year groupings based on birth year, yielding eighteen cohorts that range from 1884–1889 to 1969–1976 and are coded one through eighteen. Additionally, sex was initially included as an independent variable, but was later dropped because results differed little between men and women (results available upon request).[3]

5.3. Analytic approach

The use of repeated cross-sectional data is appropriate because this provides an ample number of respondents within each year of age across the life course. However, in light of the dynamic nature of life course patterns (see Kohli, 2007), this approach also poses conceptual and methodological issues (see Bardo et al., 2017; Fukuda, 2013; Glenn, 1977; Yang, 2008). In regard to conceptual issues, it is likely that subjective well-being has shifted across temporal dimensions embedded in these data (e.g., period and cohort) that could obscure true age patterns. For example, in light of evolving social norms (see Marshall & Bengston, 2011), especially those regarding life domains such as family (e.g., Popenoe, 1993), there is good reason to believe that satisfaction with, and/or the importance of, some areas of life has shifted across time.

Such changes in subjective well-being could be the result of embedded period and/or cohort patterns. For example, recent cohorts could be more or less satisfied with certain areas of life than earlier cohorts, and/or satisfaction with certain areas of life could be impacted by macro-economic events (e.g., the 1979 energy crisis). While the period of time covered in the current study (i.e., 1973–1994) has been reported to be relatively stable in terms of happiness (Fukuda, 2013; Yang, 2008), potential period and cohort effects need to be accounted for in statistical models to ensure that true age patterns emerge.

In regard to methodological issues, the embeddedness of respondents within a time period by birth-cohort cross-classified matrix is

[3] Previous analyses designed to identify life course patterns in SWB often include numerous socioeconomic controls (e.g., education, income, marital status, etc.) and generally focus on net (vs. total) effects for the age pattern in subjective well-being. This is problematic because mediators potentially mask the total effects of age (see Glenn, 2009).

taken into account through the use of linear hierarchical age-period-cohort (HAPC) models that estimate fixed effects for age (level-1 [within-cell model]) and random effects for period and cohort (level-2 [between-cell model]) (Raudenbush & Bryk, 2002; Yang & Land, 2006).[4] The level-1 model can be expressed as:

$$y_{ijk} = a_{jk} + \beta_1 A_{ijk} + \beta_2 A_{ijk}^2 + e_{ijk} \quad (1)$$

where y_{ijk} is the SWB score for individual i, within the jth period and the kth cohort. A and A^2 denotes age and the polynomial transformation on age. The intercept, denoted by a_{jk}, reflects the cell mean at mean age within period j and cohort k. The cell residual is denoted by e_{ijk}. The level-2 model can be expressed as:

$$a_{jk} = \pi_0 + t_{0j} + c_{0k} \quad (2)$$

Within the level-2 model, the overall mean varies between each of the nineteen periods (i.e., survey waves) and the eighteen cohorts. In equation 2, a_{jk} is the random intercept and π_0 is the expected mean where all level-1 covariates are at the zero value averaged over all periods and cohorts. t_{0j} is the overall period effect that accounts for the residual random coefficients of period j averaged over all eighteen cohorts, and c_{0k} is the overall cohort effect averaged over all nineteen periods.

Overall, seven linear[5] HAPC models are estimated. Five models are used to examine life course patterns in each of the domain-specific satisfaction items, respectively (i.e., Model 1 through 5), and a separate model is used to estimate life course patterns in happiness (i.e., Model 6). Age is grand mean centered to enable a meaningful interpretation of the intercepts in these first six models. Model 7 examines the effects of domain-specific satisfaction on happiness, which interacts age and age-squared[6] with each of the five domains and allows the intercept for each domain to vary by period and cohort.

6. Results

Results are reported as follows: First, results from robustness checks and sensitivity analyses are reported. Next, life course patterns are presented for each of the five domain-specific satisfaction items (i.e., Model 1 through 5). Thus, Model 1 through 5 address the first research question, which is concerned with normal expectable life course patterns in *levels* of domain-specific satisfaction. Next, life course patterns in happiness are presented (i.e., Model 6), which sets the stage for addressing the second research question that is concerned with life course patterns in the *effects* of domain-specific satisfaction on happiness (i.e., Model 7). Summary statistics are reported in Appendix A.

6.1. Robustness checks and sensitivity analyses

The analytic framework follows an approach proposed by Glenn (2009), who recognized that the inclusion of covariates sensitive to life course timing distorted the underlying age pattern in happiness (see also Blanchflower & Oswald, 2009). For example, holding marital status constant in these regression models produces an age pattern under the assumption that young adults never get married and older adults do not become widowed. This assumption is unnatural, as it obviously violates age-graded patterns in marital status. Auxiliary analyses, which showed the age pattern in happiness and satisfaction with family to invert from their underlying form when marital status was included as a covariate, support this conclusion. Thus, marital status, and other common control variables (e.g., educational attainment, and labor force status) were not included in the current study. Furthermore, the inclusion of other common control variables that are not sensitive to life course timing, such as sex and race, were not found to significantly influence the results.

A linear modeling approach was selected for ease of interpreting the results, but this approach violates the ordinal nature of the domain-specific satisfaction and happiness measures. However, it is common practice to treat ordinal dependent variables with more than three categories as if they were continuous measures (see Van Praag & Ferrer-i-Carbonell, 2008). Indeed, domain-specific satisfaction was measured on a seven-point scale, but the happiness measure includes only three response categories. Previous happiness studies that have examined GSS data with an HAPC model have also used a linear approach (e.g., Twenge, Sherman, & Lyubomirsky, 2016). Sensitivity analyses showed that results from linear HAPC models were qualitatively comparable to those from ordinal logistic models (available upon request).

6.2. Life course patterns in levels of domain-specific satisfaction

Fig. 2 shows the age patterns in levels of domain-specific satisfaction, which, for the most part, follow the theoretically informed timetable (i.e., Table 1). Predicted satisfaction scores are shown on the y-axis. Domain-specific satisfaction is measured on a scale that ranges from one to seven, but the y-axis in Fig. 2 is truncated to more clearly show these age patterns. The x-axis reflects age in single years from eighteen to eighty-nine-years and older. Roman letters are used to represent age patterns in domain-specific satisfaction, which were respectively computed using coefficients from Model 1 through 5 (see Table 3).

As can be seen in Fig. 2, there are two major age patterns in domain-specific satisfaction. First, and probably least surprisingly, satisfaction with health decreases rapidly and monotonically across age. Second, satisfaction with place of residence increases somewhat quadratically with age. Age patterns in the other domains are distinct, but somewhat less pronounced. Satisfaction with family increases slightly until midlife, when it begins to decline at an increasing rate. Satisfaction with friends slightly, but consistently, increases across the life course. Finally, satisfaction with hobbies peaks in midlife and then declines at an increasing rate into later life.

There are only minor period fluctuations in domain-specific satisfaction net of age and cohort, with no apparent long-term trend (see Table 3). That is, satisfaction levels with each respective domain are relatively stable across this twenty-two-year period net of age and cohort. The cohort patterns in domain-specific satisfaction, net of age and period, are remarkably stable Specifically, each of the eighteen birth cohorts report comparable levels of satisfaction with each domain net of age and period, on average.

6.3. Life course patterns in happiness

Fig. 3 shows the age pattern in happiness net of period and cohort, which was computed with coefficients from Model 6. Similar to Fig. 2, the y-axis is truncated to more clearly show the age pattern. In Fig. 3, happiness can be seen to increase with age at a decreasing rate.[7]

[4] Yang and Land & s (2006) HAPC methods have received critical attention, and simulation studies have been used to question some of its underlying assumptions (see Bell & Jones, 2015). However, these critiques have recently been reassessed, and this HAPC approach has been found to be robust—especially with uneven cross-sectional designs such as the GSS (see Reither et al., 2015).

[5] Happiness is measured as an ordinal variable, but the HAPC model assumes a continuous outcome. A relatively large SWB literature has addressed whether linear or logistic regression methods are best suited for modeling SWB (see Fukuda, 2013; Van Praag & Ferrer-i-Carbonell, 2008). The consequence of using a generalized linear modeling strategy is that it implicitly alters the shape of the relationship between age (and period and cohort) and subjective well-being.

[6] Previous SWB research has sometimes found higher-degree polynomial patterns, but only when certain control variables (e.g., marital status) are included (see Fukuda, 2013). However, in modeling gross patterns in SWB, the relationship between SWB and age is generally found to be quadratic (see Glenn, 2009).

[7] The age pattern in Fig. 3 may appear to be practically flat. However, this pattern was estimated with a linear approach, and even small differences are important given that

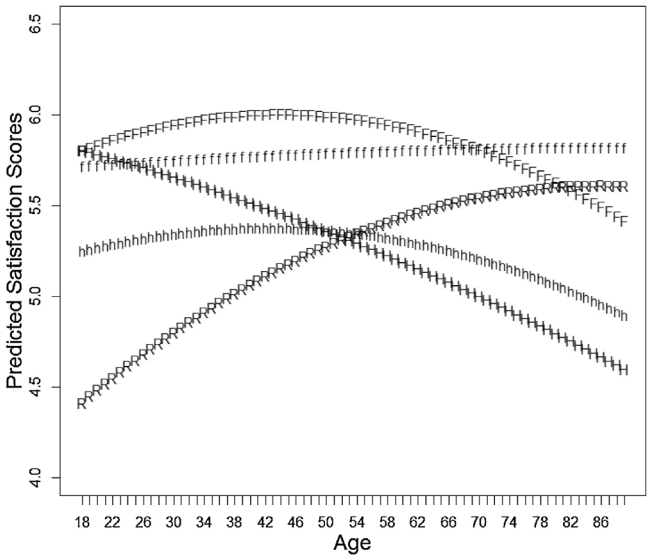

Fig. 2. Age patterns in levels of domain-specific satisfaction net of period and cohort.
Note: F = family, f = friends, H = health, h = hobbies, R = place of residence.

Specifically, happiness increases until about age seventy-nine. Additionally, similar to the period and cohort patterns in domain-specific satisfaction, these temporal patterns in happiness are stable net of other time dimensions, respectively (see Table 3—Model 6).

6.4. Life course patterns in effects of domain-specific satisfaction on happiness

Fig. 4 shows age patterns in the effects of domain-specific satisfaction on happiness, which were computed with coefficients from Model 7 (see Table 4). These patterns reflect the importance of satisfaction in each respective domain for happiness assessments, on average, across the life course, net of period and cohort. The y-axis in this figure corresponds to the units by which happiness changes, on average, with a one-unit change in each respective measure of domain-specific satisfaction—measured on seven-point scales. The degree to which each domain respectively contributes to happiness differs considerably across age, and they follow normal expectable life course patterns (e.g., Table 2). Satisfaction with each respective domain contributes relatively equally to happiness in young adulthood, but this begins to diverge quickly. The two most distinct age patterns are in the contributions from satisfaction with health and family.

Table 3
Linear HAPC models for domain-specific satisfaction and happiness.

Fixed Effects	Model 1 Family	Model 2 Friends	Model 3 Health	Model 4 Hobbies	Model 5 Residence	Model 6 Happiness
Intercept	6.005***	5.781***	5.447***	5.379***	5.173***	2.234***
Age	−0.00037	0.00181**	−0.01558***	−0.00109	0.02138***	0.00194***
Age^2	−0.00029***	−0.00002	−0.00008*	−0.00008***	−0.00026***	−0.00003***
Random Effects						
Period	0.002*	0.004**	0.004*	0.008**	0.007**	0.094**
Cohort	0.000	0.000	0.003	0.002	0.001	0.004
BIC	78817.84	74415.03	82120.87	85421.71	82503.94	136269.7

Note: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (two-tailed tests); standard errors excluded for space; age mean centered at 44.71.

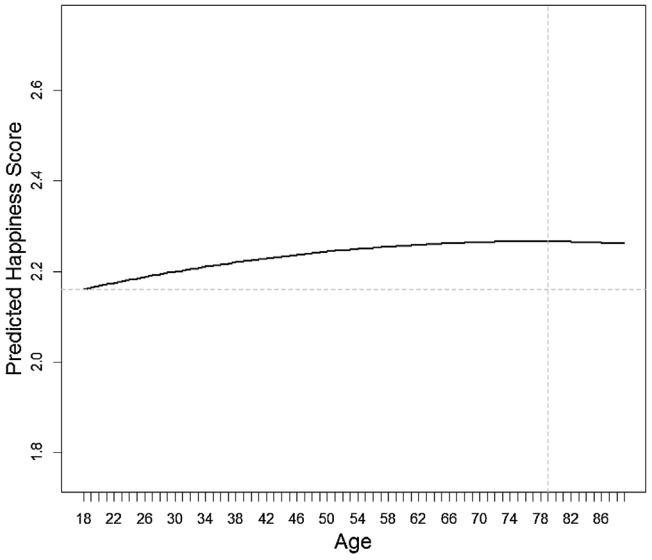

Fig. 3. Age pattern in happiness net of period and cohort.

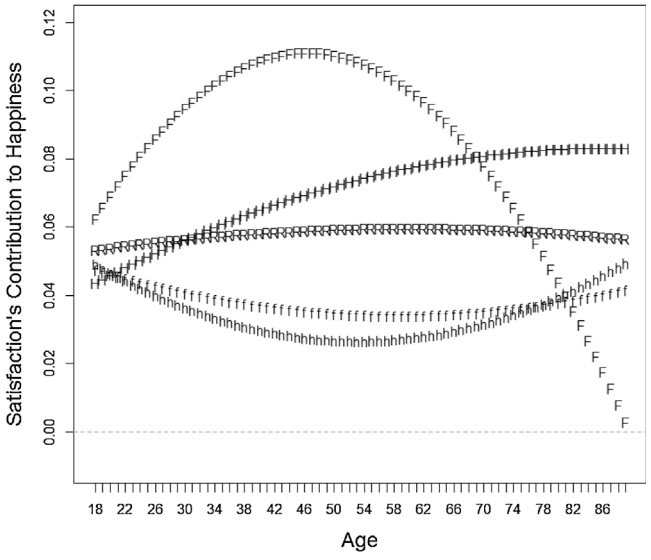

Fig. 4. Age patterns in domain-specific satisfaction importance for happiness net of period and cohort.
Note: F = family, f = friends, H = health, h = hobbies, R = place of residence.

As expected, satisfaction with health is increasingly important for happiness across the life course, as health moves from the least important domain in young adulthood to the most important domain in later life. Specifically, one unit in satisfaction with health contributes about 0.04 units of happiness in young adulthood, but this doubles to about 0.08 in later life. The strongest contributor to happiness across

(*footnote continued*)
happiness is measured on a three-point scale. For example, sensitivity analyses that used an ordinal logistic approach showed a qualitatively comparable age pattern, with a ten-percentage point difference in the predicted probability of being very happy from young adulthood to later life (results available upon request).

Table 4
Linear HAPC models for happiness regressed on domain-specific satisfaction.

Fixed Effects	Model 7		Fixed Effects	Model 7 (continued)	
	Estimate	(SE)		Estimate	(SE)
Intercept	1.1889***	(0.166)	Health	0.02001	(0.021)
Age	−0.02827***	(0.007)	HealthAge	0.00147	(0.001)
Age^2	0.00029***	(0.000)	$HealthAge^2$	0.00001	(0.000)
Family	−0.01858	(0.022)	Hobbies	0.07790***	(0.019)
FamilyAge	0.00558***	(0.001)	HobbiesAge	−0.00192*	(0.001)
$FamilyAge^2$	−0.00006***	(0.000)	$HobbiesAge^2$	0.00002*	(0.000)
Friends	0.06206*	(0.026)	Residence	0.04674*	(0.020)
FriendsAge	−0.00096	(0.001)	ResidenceAge	0.00043	(0.001)
$FriendsAge^2$	0.00001	(0.000)	$ResidenceAge^2$	−0.00000	(0.000)
Random Effects			Random Effects (continued)		
Period	0.000	(0.000)	Cohort	0.000	(0.000)
Family	0.000	(0.000)	Family	0.000	(0.000)
Friends	0.000	(0.000)	Friends	0.000	(0.000)
Health	0.000	(0.000)	Health	0.000	(0.000)
Hobbies	0.000	(0.000)	Hobbies	0.000	(0.000)
Residence	0.000	(0.000)	Residence	0.000	(0.000)
BIC	39637.65				

Note: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ (two-tailed tests).

the life course, until about age seventy, is satisfaction with family, which increases at a decreasing rate until midlife, then begins to decline. In terms of other domains, the contribution from satisfaction with friends and hobbies decreases from young adulthood throughout midlife, but then increases from midlife to later life. Additionally, the contribution from satisfaction with place of residence increases slightly with age. Period and cohort patterns in the contribution of domain-specific satisfaction to happiness were non-existent or minimal (see Table 4).

It is clear that life course patterns in both levels (i.e., Fig. 2) and effects of domain-specific satisfaction on happiness (i.e., Fig. 4) are distinct from one another. However, they need to be considered in conjunction to assess their net influence on the life course pattern in happiness. There are two important patterns reflected in the domains of health and family. Specifically, satisfaction levels with health decline sharply with age, but this domain's importance for happiness increases at an almost equivalent rate, resulting in decreased happiness. Until later life, however, this is more than offset by small increases in satisfaction with family and large increases in this domain's importance for happiness. After midlife, satisfaction with family declines, but so does its importance for happiness.

Life course patterns in terms of both levels and effects were less pronounced in other domains compared to the health and family domains, but they are nonetheless important to consider. Satisfaction with place of residence increases substantially across the life course, but its contribution to happiness is stable, though relatively strong, across age. Furthermore, satisfaction with friends increases slightly with age, as does its importance for happiness. Satisfaction with hobbies decreases after midlife, but at the same time its contribution to happiness increases. These net normal expectable life course patterns in both levels and effects largely explain the happiness age pattern shown in Fig. 3.

Another way to assess how well the domains-of-life explains the gross age pattern in happiness is to plot the product of the predicted domain-specific satisfaction scores (i.e., coefficients from Model 1 through 5) and their respective effect sizes (i.e., coefficients from Model 7). Fig. 5 shows that satisfaction with family contributes about 0.4 units of happiness around age eighteen, whereas the other four domains contribute about 0.25 units, respectively. Thus, collectively, the domains-of-life contribute about 1.4 units of happiness – measured on a three-point scale – in early adulthood. The degree to which the domains-of-life explains happiness differs across the life course. It peaks in midlife, at around 1.7 units, and bottoms out in later life, at around 1.2 units. The general pattern is that the domains-of-life contribute an

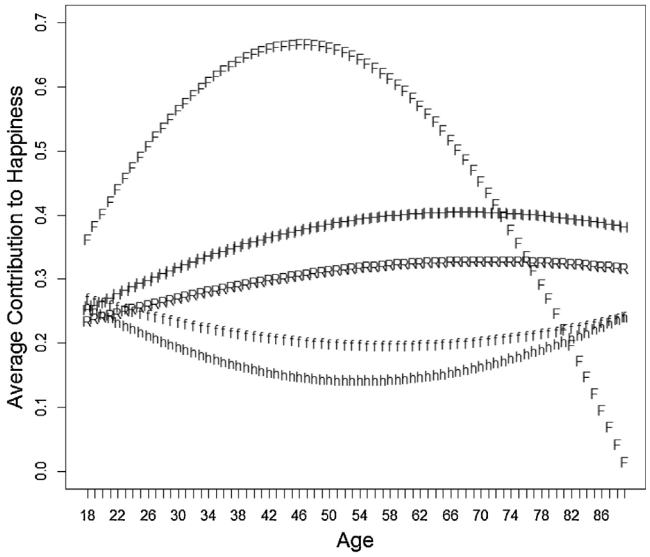

Fig. 5. Age patterns in the average contribution of domain-specific satisfaction to happiness.
Note: F = family, f = friends, H = health, h = hobbies, R = place of residence.

increasing amount of happiness from early adulthood up until later life, when their contribution to happiness begins to decline, on average. Thus, forming a quadratic age pattern in happiness.

7. Discussion

The aim of this study was twofold: (a) establish conceptual linkages between life course and subjective well-being theories, and (b) examine whether these linkages contribute to the current understanding of SWB and age. The normal expectable life course (Hagestad & Neugarten, 1985; Settersten & Hagestad, 1996a) in conjunction with a domains-of-life approach (see Rojas, 2007) proved useful for developing hypothesized "timetables" for age patterns in levels of domain-specific satisfaction and its importance for happiness. Gross age patterns in domain-specific satisfaction and their contributions to happiness were found to follow these timetables. In sum, this largely explains the slightly increasing quadratic age pattern in happiness consistently observed among American adults (i.e., Fukuda, 2013; Glenn, 2009; Yang, 2008).

So, why do Americans generally become happier with age? On average, aging-related declines in physical health take a toll on happiness, but these deficits are more than offset by life course patterns in levels of satisfaction with other domains and their importance for happiness assessments, at least until ones mid-to-late-sixties. This suggests that improvements in a single domain could lead to gains in overall well-being (e.g., happiness), which has broad implications for developing initiatives aimed at improving quality of life and future well-being research. However, no single domain stands out as the key to happiness across age, but three specific domains (i.e., health, family, and place of residence) are identified as being especially important.

First, satisfaction with health declines rapidly with age, but at the same time its importance for happiness increases at a comparable rate. Unfortunately, health and SWB are rarely studied in conjunction. Future life course research needs to examine the intersections of health and well-being more closely to determine whether (or to what degree) health is a necessary component for happiness (see Bowling, 2004). Additionally, current initiatives are certainly aimed at improving health, but more could be done to examine ways in which high levels of SWB can be maintained in face of declining health (e.g., Baltes & Baltes, 1990).

Rather than focus exclusively on the relationship between health and happiness, given that improvements in satisfaction with a single

area of life could have major impacts on overall well-being, researchers should consider the impacts of health on satisfaction with specific areas of life. For example, health-related issues make it particularly difficult to continue beneficial leisure activities (Menec, 2003). Therefore, future initiatives could focus on establishing leisure programs in midlife that are maintainable into old age (see Nimrod & Shrira, 2014). Additionally, the onset of functional limitations is associated with marital dissolution (Caputo & Simon, 2013). Thus, researchers should further examine the impact of long-term care planning and palliative care programs on changes in relationship status and quality.

Second, satisfaction with family is a major ingredient for happiness across the majority of the adult life course, but satisfaction with, and the importance of this domain for happiness, decreases rapidly in later life. While the negative psychological effects of widowhood are unlikely to be directly overcome (Lucas et al., 2003), the integral role of friends versus family for positive mental health outcomes in later life is well documented (see Fiori, Antonucci, & Cortina, 2006). Thus, more emphasis could be placed on maintaining and establishing new and long-lasting social relationships in midlife to buffer age-related declines in the family domain.

Moreover, researchers should also pay close attention to the impact of demographic trends on family composition and their potential impact on quality of life. For example, increasing life expectancy, decreasing fertility and delayed childbearing, and increasing reliance on informal community-based supports, could have major impacts on time use among Boomers and subsequent cohorts that may be expected to care for aging family members (see Grundy & Henretta, 2006). Indeed, midlife is a critical life stage (Schafer et al., 2013), and preparation for these expected shifts should occur earlier in the life course rather than later.

Third, satisfaction with place of residence increases with age at almost the same rate by which satisfaction with health decreases. This has been consistently documented, but scholars were unsure whether this phenomenon was an artifact of period and/or cohort effects (see Pinquart & Burmedi, 2003). The current study provides strong evidence that satisfaction with place of residence indeed increases with age, net of period and cohort. Furthermore, this domain is a consistently strong contributor to happiness across the life course. It seems somewhat obvious that one's immediate living conditions have a major impact on his or her quality of life, but previous studies that also utilized a domains-of-life approach were either unable to include this domain (e.g., Margolis & Myrskyla, 2013; Schafer et al., 2013), or purposely excluded it (e.g., Easterlin, 2006).

Findings from the current study clearly show that place of residence has a major influence on happiness across the life course, and especially so in later life. I speculated that satisfaction with place of residence increases from young adulthood to midlife, on average, due to normative life course transitions associated with leaving the parental home and establishing one's own—and from midlife to later life, due to the accumulation of memories tied to one's place of residence (see Pinquart & Burmedi, 2003). These speculations require future inquiry. However, given that the GSS only includes the community dwelling population, it is particularly important to consider the role of maintained independence in later life. Therefore, the differential impact of institutionalized long-term care versus home and community-based services and supports on subjective well-being needs serious consideration.

7.1. Limitations and conclusions

This study was unable to include more recent waves of data, because domain-specific satisfaction measures were not included in the GSS after 1994. This likely influenced the absence of period and cohort patterns. For example, recent happiness studies have identified small period, and unique cohort, patterns (Fukuda, 2013; Yang, 2008). In terms of period patterns, the only major pattern in American's happiness from 1972 to 2014 appears to be associated with the recent Great Recession (Bardo et al., 2017). In terms of cohort patterns, American Boomers have been consistently shown to be less happy than other cohorts. This is commonly understood to be due to this cohort's relatively large size and the related increased competition for socio-economic resources (e.g., education, and jobs), which presumably leads to unmet expectations (see Easterlin, 1987). This is arguably why the Boomer cohort pattern emerges in more recent data (i.e., when Boomers have reached midlife).

The role of macro social and economic events (i.e., period effects) in influencing perceptions of quality of life is relatively unknown. Recent studies have shown that the Great Recession is one of the only macro-level events to have a major impact on happiness in Western countries (i.e., in both the United States and Europe (see Bell & Blanchflower, 2011)). Period effects are generally recognized to impact all age groups, but growing evidence suggests that the duration of this impact may differ by life stage (see Bardo et al., 2017; Twenge et al., 2016). Therefore, future studies should examine interactions between age and period to determine whether certain macro-level phenomenon simply represent period fluctuations, or if they emerge as long-term cohort patterns.

Macro-level phenomena are recognized to set the foundation for cohort patterns in subjective well-being. In fact, Elder & s (1974) seminal work on the children of the Great Depression set the stage for exploring cohort patterns in subjective well-being, but the current study found no such evidence related to this unique cohort—or any others. At the same time, previous studies have found evidence for unique cohort patterns in Boomer's happiness (Fukuda, 2013; Yang, 2008), and the current study raises new questions surrounding the Boomer-happiness puzzle. For example: Are Boomers less happy with life overall, or are they less satisfied with certain domains in which they "underachieved?" Is Boomer's unhappiness actually due to gaps between expectations and achievements? It is quite possible that the rise in chronic conditions has led to Boomer's relatively lower happiness levels. If so, this pattern may emerge as a period trend, as more recent cohorts age – unhealthily – into midlife and beyond.

Can one expect the current study's major findings to hold in more recent years? A recent study reported that the age pattern in happiness has remained remarkably stable over the past four decades (Bardo et al., 2017). Yet, it is possible that this stability is due to shifting age patterns in domain-specific satisfaction that generate comparable age patterns in happiness—given that happiness is a function of domain-specific satisfaction. However, in light of the consistency in levels of domain-specific satisfaction and their importance for happiness observed in the present study across time and cohorts, this scenario is unlikely. These findings are further supported by another study that showed overall domain satisfaction (i.e., the arithmetic sum of domain-specific satisfaction) to be a psychometrically comparable measure across cohorts (Bardo & Yamashita, 2013). Therefore, a more interesting question is whether people born during different time periods think of these domains (i.e., family, friends, health, hobbies, and place of residence) in a similar way at comparable ages?

In the same vein, subjective well-being's cognitive perspective recognizes that happiness is a culturally variable concept (see Rojas & Veenhoven, 2013), and the normal expectable life course differs across societies (Hagestad & Neugarten, 1985). Thus, the current study's findings are specific to the U.S. context, and given its sole focus on the United States, it was limited in terms of providing in-depth "cultural" explanations. For example, the U.S. has very different demographic patterns in, and policies toward, marriage, fertility, housing, and health, compared to many European countries. Moreover, it is widely recognized that the underlying age pattern in happiness differs between the U.S. and Europe. Some scholars suggest that this may be due to different trends in marriage (see Blanchflower & Oswald, 2009). Indeed, family formation appears to be a major factor that drives young and middle-aged American's happiness upward. However, "family" can take

on many forms, and to suggest that other types of family formation are not conducive for happiness would be misguided—especially in certain countries where there is more political and social support, compared to the U.S., for a variety of family structures.

Future cross-cultural studies are certainly needed. Some other cross-cultural differences researchers should consider include those related to future expectations, and issues surrounding retirement. For example, the "American dream" is pervasive, as most American's believe that their hard work will lead to happiness (Hanson & Zogby, 2010). At the same time college and career opportunities are largely viewed as individual responsibilities, with little to no support from the American government. In contrast, many European countries offer a considerable amount of support for such opportunities. Yet, relatively stronger class boundaries (e.g., such as those in the U.K.) and other social structures (e.g., the Gymnasium in Germany) may influence future expectations, and/or related achievements may not hold as much weight for happiness when they are less closely tied to one's individual responsibility (see Okulicz-Kozaryn, 2011). Additionally, given that happiness increases during later life in Europe, but decreases during this life stage in the U.S., researchers should consider the impact that mandatory retirement and social pensions have on happiness. Subjective well-being's cognitive perspective views happiness as a culturally variable concept (see Rojas & Veenhoven, 2013), but the cultural aspects relevant for understanding SWB judgments are not well understood (see Zevnik, 2014). Thus, the current study simply represents an initial push toward a culturally sensitive understanding of SWB, which unquestionably should be closely linked with the life course perspective in future cross-cultural analyses.

Finally, the broad conceptualization of domain-specific satisfaction is both a strength and limitation of the current study. On the one hand, this is a strength because domains were not so narrowly defined as to exclude certain subpopulations (e.g., satisfaction with family versus satisfaction with marriage; satisfaction with place of residence versus satisfaction with house; etc.). On the other hand, this is a limitation because it is relatively unclear as to what certain domains constitute (e.g., Does family include non-immediate kin? How close does someone have to be to be considered a friend, and does it matter if the friendship is reciprocal? Is place of residence a dwelling, neighborhood, or city? Is watching TV considered a hobby?). Insights into these questions would shed greater light on why Americans become happier with age, but unfortunately the data required to answer them do not exist. For example, longitudinal panel, rather than cross-sectional, data would provide more insights into the underlying mechanisms that shape life course patterns in SWB. Specifically, growth curve techniques could be used to model SWB trajectories for specific sociodemographic subgroups, which could help reveal unique patterns related to life course timing and duration in such events and transitions as divorce, remarriage, widowhood, first and subsequent births, housing transitions, leisure time use, development of health conditions, and dynamic friendship networks.

In conclusion, gerontological pioneers (e.g., Cutler, 1979; Neugarten et al., 1961) carved a path toward understanding age and happiness in the infancy of subjective well-being scholarship when data and methodological approaches were relatively limited (see Andrews & Withey, 1976; Campbell, Converse, & Rodgers, 1976), and the current study has continued to lay this groundwork. Indeed, several recent studies established that age patterns in domain-specific satisfaction are crucial for understanding the age pattern in happiness (e.g., Easterlin, 2006; Margolis & Myrskyla, 2013; Schafer et al., 2013). The current study enhanced this work by conceptually linking life course and subjective well-being theories, utilizing more comprehensive and inclusive domains, examining the entire adult age range, simultaneously considering other temporal dimensions potentially embedded with age, and estimating total versus net age patterns. This study, in building on this previous research, made a significant contribution to the current understanding of SWB and age by highlighting the importance of age-graded socio-structural mechanisms in shaping SWB across the life course. In sum, normal expectable life course patterns in levels of domain-specific satisfaction and their importance for happiness largely explain why Americans, on average, become happier with age.

Funding

This research was supported by NIAT32AG000139.

Acknowledgments

Thanks to Scott Lynch, Linda George, Scott Brown, and Ken Land for their guidance and feedback on earlier drafts of this manuscript.

Appendix A

See Table A1.

Table A1
Summary Statistics: General Social Survey 1973-1994 (N = 22,931).

Dependent Variables	Description and Coding	Mean	SD	Min	Max
Domain-Specific	level of satisfaction in each domain				
Family	1 = none, 2 = a little,	5.92	1.35	1	7
Friends	3 = some, 4 = a fair amount,	5.77	1.23	1	7
Health	5 = quite a bit, 6 = a great deal,	5.43	1.48	1	7
Hobbies	7 = a very great deal.	5.31	1.56	1	7
Residence		5.09	1.50	1	7
Happiness	1 = not too happy, 2 = pretty happy, 3 = very happy	2.22	0.64	1	3
Independent Variables					
Age	respondent's age at survey	44.71	17.58	18	89
Period	survey year			1973	1994
Cohort	five-year grouped birth cohorts			1	18

References

Adams, R. G., & Blieszner, R. (1995). Aging well with friends and family. *American Behavioral Scientist*, *39*(2), 209–224.

Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: Americans' perceptions of life quality*. New York: Plenum Press.

Argyle, M. (2001). *The psychology of happiness*. London: Routledge.

Balbo, N., & Arpino, B. (2016). The role of family orientations in shaping the effect of fertility on subjective well-being: A propensity score matching approach. *Demography*, *53*(4), 955–978.

Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes, & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral sciences* (pp. 1–34). Cambridge, UK: Cambridge University Press.

Bardo, A. R., & Yamashita, T. (2013). Validity of domain satisfaction across cohorts in the US. *Social Indicators Research*, *117*, 367–385.

Bardo, A. R., Lynch, S. M., & Land, K. C. (2017). The importance of the baby boom cohort and the great recession in understanding age, period, and cohort patterns in happiness. *Social Psychological and Personality Science*, *8*(3), 341–350.

Bell, D. N., & Blanchflower, D. G. (2011). Young people and the great recession. *Oxford Review of Economic Policy*, *27*(2), 241–267.

Bell, A., & Jones, K. (2015). Should age-period-cohort anlysis accept innovation without scrutiny? A response to Reither, Masters, Yang, Powers, Zheng and Land. *Social Science & Medicine*, *128*, 331–333.

Billari, F. C., Goisis, A., Liefbroer, A. C., Settersten, R. A., Aassve, A., Hagestad, G., et al. (2011). Social age deadlines for the childbearing of women and men. *Human Reproduction*, *26*(3), 616–622.

Blanchflower, D. G., & Oswald, A. J. (2009). The U-shape without controls: A response to Glenn. *Social Science & Medicine*, *69*, 486–488.

Bowling, A. (2004). *Measuring health: A review of quality of life measurement scales*. Buckingham, UK: Open University Press.

Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The quality of american life: Perceptions, evaluations, and satisfactions*. New York: Russell Sage Foundation.

Caputo, J., & Simon, R. W. (2013). Physical limitations and emotional well-being gender and marital status variations. *Journal of Health and Social Behavior*, *54*(2), 241–257.

Carr, D. C., & Komp, K. S. (2011). *Gerontology in the era of the third age: Implications and next steps*. New York: Springer.

Carstensen, L. L. (1992). Social and emotional patterns in adulthood: Support for socioemotional selectivity theory. *Psychology and Aging*, *7*(3), 331–338.

Cummins, R. A. (1996). The domains of life satisfaction: An attempt to order chaos. *Social Indicators Research*, *38*(3), 303–328.

Cutler, N. E. (1979). Age variations in the dimensionality of life satisfaction. *Journal of Gerontology*, *34*(4), 573–578.

Dannefer, D., & Patterson, R. S. (2007). The second demographic transition, aging families, and the aging of the institutionalized life course. In K. Warner Schaie, & P. Uhlenberg (Eds.), *Social structures: Demographic changes and the well-Being of older persons* (pp. 212–229). New York, NY: Springer.

Davis, J. A., & Smith, T. W. (2005). *General social survey, 1972–2004*. Chicago: National Opinion Research Center.

Diener, E., Scollon, C. N., & Lucas, R. E. (2003). The evolving concept of subjective well-being: The multifaceted nature of happiness. *Advances in Cell Aging and Gerontology*, *15*, 187–219.

Easterlin, R. A., & Sawangfa, O. (2009). Happiness and domain satisfaction: New directions for the economics of happiness. In A. K. Dutt, & B. Radcliff (Eds.), *Happiness, economics, and politics: Towards a multi-Disciplinary approach* (pp. 70–94). Northhampton: Edward Elgar.

Easterlin, R. A. (1987). *Birth and fortune: The impact of numbers on personal welfare*. Chicago: University of Chicago.

Easterlin, R. A. (2006). Life cycle happiness and its sources: Intersections of psychology, economics, and demography. *Journal of Economic Psychology*, *27*(4), 463–482.

Elder, G. H. (1974). *Children of the great depression: Social change in life experience*. Chicago: The University of Chicago Press.

Ferraro, K. F. (2006). Health and aging. In R. H. Binstock, & L. K. George (Eds.), *Handbook of aging and the social sciences* (pp. 238–256). Burlington, MA: Elsevier.

Fiori, K. L., Antonucci, T. C., & Cortina, K. S. (2006). Social network typologies and mental health among older adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *61*(1), P25–P32.

Franks, P., Gold, M. R., & Fiscella, K. (2003). Sociodemographics, self-rated health, and mortality in the US. *Social Science & Medicine*, *56*(12), 2505–2514.

Fukuda, K. (2013). A happiness study using age-period-Cohort framework. *Journal of Happiness Studies*, *14*(1), 135–153.

Gana, K., Alaphilippe, D., & Bailly, N. (2004). Positive illusions and mental and physical health in later life. *Aging & Mental Health*, *8*(1), 58–64.

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

George, L. K. (2006). Perceived quality of life. In R. H. Binstock, & L. K. George (Eds.), *Handbook of aging and the social sciences* (pp. 320–336). San Diego: Elsevier.

George, L. K. (2010). Still happy after all these years: Research frontiers on subjective well-being in later life. *Journal of Gerontology: Social Sciences*, *65B*, 331–339.

Glenn, N. (1977). *Cohort analysis*. Thousand Oaks, CA: Sage.

Glenn, N. (2009). Is the apparent U-shape of well-being over the life course a result of inappropriate use of control variables? A commentary on Blanchflower and Oswald. *Social Science & Medicine*, *69*(4), 481–485.

Gove, W. R., Ortega, S. T., & Style, C. B. (1989). The maturational and role perspectives on aging and self through the adult years: An empirical evaluation. *American Journal of Sociology*, *94*(5), 1117–1145.

Grundy, E., & Henretta, J. C. (2006). Between elderly parents and adult children: A new look at the intergenerational care provided by the 'sandwich generation'. *Ageing and Society*, *26*(5), 707–722.

Hagestad, G. O., & Neugarten, B. L. (1985). Age and the life course. In V. L. Bengston (Ed.), *Adulthood and aging: Research on continuities and discontinuities, a tribute to bernice neugarten* (pp. 35–61). New York: Springer.

Hanson, S. L., & Zogby, J. (2010). Attitudes about the American dream. *Public Opinion Quarterly*, *74*(3), 570–584.

Headey, B., Veenhoven, R., & Wearing, A. (1991). Top-down versus bottom-up theories of subjective well-being. *Social Indicators Research*, *24*(1), 81–100.

Heckhausen, J., & Brim, O. G. (1997). Perceived problems for self and others: Self- protection by social downgrading throughout adulthood. *Psychology and Aging*, *12*(4), 610–619.

Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A motivational theory of life-span development. *Psychological Review*, *117*(1), 32–60.

Hsieh, C.-M. (2004). To weight or not to weight: The role of domain importance in quality of life measurement. *Social Indicators Research*, *68*(2), 163–174.

Hsieh, C.-M. (2005). Age and relative importance of major life domains. *Journal of Aging Studies*, *19*, 503–512.

Kahneman, D. (1999). Objective happiness. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-Being: The foundations of hedonic psychology* (pp. 3–27). New York: Russell Sage.

Kohli, M. (2007). The institutionalization of the life course: Looking back to look ahead. *Research in Human Development*, *4*(3–4), 253–271.

Layard, R. (2010). Measuring subjective well-being. *Science*, *327*(5965), 534–535.

Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Reexamining adaptation and the set point model of happiness: Reactions to changes in marital status. *Journal of Personality and Social Psychology*, *84*(3), 527–539.

Lucas, R. E. (2007). Adaptation and the set-point model of subjective well-being: Does happiness change after major life events? *Current Directions in Psychological Science*, *16*(2), 75–79.

Mancini, J. A., & Blieszner, R. (1989). Aging parents and adult children: Research themes in intergenerational relations. *Journal of Marriage and Family*, *51*(2), 275–290.

Margolis, R., & Myrskyla, M. (2013). Family, money, and health: Regional differences in the determinants of life satisfaction over the life course. *Advances in Life Course Research*, *18*(2), 115–126.

Marshall, V. W., & Bengston, V. L. (2011). Theoretical perspectives on the sociology of aging. In R. A. Settersten, & J. L. Angel (Eds.), *Handbook of sociology of aging* (pp. 17–33). New York: Springer.

Martin, P. (2002). Individual and social resources predicting well-being and functioning in the later years: Conceptual models, research and practice. *Ageing International*, *27*(2), 3–29.

Mayer, K. U. (2009). New directions in life course research. *Annual Review of Sociology*, *35*, 413–433.

McAdams, K. K., Lucas, R. E., & Donnellan, M. B. (2012). The role of domain satisfaction in explaining the paradoxical association between life satisfaction and age. *Social Indicators Research*, *109*(2), 295–303.

Menec, V. H. (2003). The relation between everyday activities and successful aging: A 6-year longitudinal study. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *58*(2), S74–S82.

Mills, M. (2009). Individualization and the life course: Toward a theoretical model and empirical evidence. In C. Howard (Ed.), *Contested individualization: Debates about contemporary personhood* (pp. 61–79). New York, NY: Palgrave Macmillan.

Moen, P., & Wethington, E. (1999). Midlife development in a life course context. In S. L. Willis, & J. D. Reid (Eds.), *Psychological and social development in middle age* (pp. 3–23). San Diego, CA: Academic Press.

Morgan, S. P., & King, R. B. (2001). Why have children in the 21 st century? Biological predisposition, social coercion, rational choice. *European Journal of Population/Revue Europeenne De Demographie*, *17*(1), 3–20.

Myrskyla, M., & Margolis, R. (2014). Happiness: Before and after the kids. *Demography*, *51*(5), 1843–1866.

Neubauer, A. B., Schilling, O. K., & Wahl, H.-W. (2015). What do we need at the end of life? Competence, but not autonomy, predicts intraindividual fluctuations in subjective well-being in very old age. *Journals of Gerontology: Psychological Sciences*, 1–11 [Advanced Access].

Neugarten, B. L., Havighurst, R. J., & Tobin, S. S. (1961). The measurement of life satisfaction. *Journal of Gerontology*, *16*, 134–143.

Nimrod, G., & Shrira, A. (2014). The paradox of leisure in later life. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *71*(1), 106–111.

O'Rand, A. M. (1996). The precious and the precocious: Understanding cumulative disadvantage and cumulative advantage over the life course. *The Gerontologist*, *36*(2), 230–238.

Okulicz-Kozaryn, A. (2011). Europeans work to live and Americans live to work (who is happy to work more: Americans or Europeans?). *Journal of Happiness Studies*, *12*, 225–243.

Oswald, A. J., & Wu, S. (2010). Objective confirmation of subjective measures of human well-being: Evidence from the USA. *Science*, *327*(5965), 576–579.

Pedersen, N. L., & Svedberg, P. (2000). Behavioral genetics, health, and aging. *Journal of Adult Development*, *7*(2), 65–71.

Pinquart, M., & Burmedi, D. (2003). Correlates of residential satisfaction in adulthood and old age: A meta-analysis. *Annual Review of Gerontology and Geriatrics*, *23*, 195–222.

Pollmann-Schult, M. (2014). Parenthood and life satisfaction: Why don't children make people happy? *Journal of Marriage and Family*, *76*(2), 319–336.

Popenoe, D. (1993). American family decline, 1960–1990: A review and appraisal. *Journal of Marriage and Family*, *55*(3), 527–542.

Poterba, J. M., Weil, D. N., & Shiller, R. (1991). Home price dynamics: The role of tax policy and demography. *Brookings Papers on Economic Activity*, *2*, 143–203.
Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods*. Sage: Thousand Oaks.
Reither, E. N., Land, K. C., Jeon, S. Y., Powers, D. A., Masters, R. K., Zheng, H., et al. (2015). Clarifying hierarchical age-Period-Cohort models: A rejoinder to Bell and Jones. *Social Science & Medicine*, *145*, 125–128.
Ribbe, M. W., Ljunggren, G., Steel, K., Topinkova, E., Hawes, C., Ikegami, N., et al. (1997). Nursing homes in 10 nations: A comparison between countries and settings. *Age and Ageing*, *26*, 3–12.
Rojas, M., & Veenhoven, R. (2013). Contentment and affect in the estimation of happiness. *Social Indicators Research*, *110*, 415–431.
Rojas, M. (2007). The complexity of well-being: A life-satisfaction conception and a domains-of-life approach. In I. Gough, & J. A. McGregor (Eds.), *Well-Being in developing countries: From theory to research* (pp. 259–280). Cambridge, UK: Cambridge University Press.
Rowe, J. W., & Kahn, R. L. (1987). Human aging: Usual and successful. *Science*, *237*(4811), 143–149.
Schafer, M. H., Mustillo, S. A., & Ferraro, K. F. (2013). Age and the tenses of life satisfaction. *Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *68*(4), 571–579.
Schwarz, N., & Strack, F. (1999). Reports of subjective well-Being: Judgmental processes and their methodological implications. In F. Strack, M. Argyle, & N. Schwarz (Eds.), *Subjective well-Being: An interdisciplinary perspective* (pp. 27–47). New York: Oxford Press.
Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, *55*(1), 5–14.
Settersten, R. A., Jr., & Hagestad, G. O. (1996a). What's the latest? Cultural age deadlines for family transitions. *The Gerontologist*, *36*(2), 178–188.
Settersten, R. A., Jr., & Hagestad, G. O. (1996b). What's the latest? II. Cultural age deadlines for educational and work transitions. *The Gerontologist*, *36*(5), 602–613.
Settersten, R. A., Jr. (2003). Age structuring and the rhythm of the life course. In J. T. Mortimer, & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 81–98). New York: Kluwer Academic.
Settersten, R. A., Jr. (2009). It takes two to tango: The (Un)easy dance between life course sociology and life-span psychology. *Advances in Life Course Research*, *14*, 74–81.
Shanahan, M. J. (2000). Pathways to aduthood in changing societies: Variability and mechanisms in life course perspective. *Annual Review of Sociology*, *26*, 667–692.
Silverstein, M. (2012). (Re)considering the life course as a key concept in social gerontology. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, *67*(2), 205.
Sirgy, M. J. (2013). *The psychology of quality of life: Hedonic well-Being, life satisfaction, and eudemonia*. Dordrecht, Netherlands: Springer.
Sobotka, T., & Beaujouan, E. (2014). Two is best? The persistence of a two-child family ideal in Europe. *Population and Development Review*, *40*(3), 391–419.
Twenge, J. M., Sherman, R. A., & Lyubomirsky, S. (2016). More happiness for young people and less for mature adults: Time period differences in subjective well-being in the United States, 1972–2014. *Social Psychological and Personality Science*, *7*(2), 131–141.
Van Praag, B., & Ferrer-i-Carbonell, A. (2008). *Happiness quantified: A satisfaction calculus approach*. Oxford: Oxford University Press.
The ties that bind: Perspectives on marriage and cohabitation. In L. J. Waite, C. Bachrach, M. Hindin, E. Thomson, & A. Thorton (Eds.), New York: Aldine De Gruyter.
Yang, Y., & Land, K. C. (2006). A mixed models approach to the age-period-cohort analysis of repeated cross-section surveys, with an application to data on trends in verbal test scores. *Sociological Methodology*, *36*(1), 75–97.
Yang, Y. (2008). Social inequalities in happiness in the United States, 1972–2004: an age period-cohort analysis. *American Sociological Review*, *73*(2), 204–226.
Zevnik, L. (2014). *Critical perspectives in happiness research: The birth of modern happiness*. New York: Springer.