

Psychological Consequences of Longevity

The Increasing Importance of Self-Regulation in Old Age

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Key Words

Life course · Longevity · Positive aging · Self-regulation

Abstract

How do changes in life expectancy and longevity affect life-span development? This paper argues that historical increases in life expectancy primarily have an impact on the later and less on the earlier parts of the life span. Increased life expectancy is both a challenge and an opportunity for positive development. A perspective is outlined according to which self-regulation is a key factor for successful aging. Assuming a compensatory relationship of social norms/expectations and self-regulation for developmental regulation, processes such as setting, pursuing, and disengaging from personal goals should be particularly important in old age, a life phase that is characterized by being less normatively structured than younger phases. This argument is elaborated in the domains of social relations, leisure, and work.

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Today, more people grow old than at any point in historical time. According to the World Population Report of the United Nations [UN, 2002], for most nations, the group of old adults aged 80 years or more is the fastest growing segment of their population. Moreover, this trend is projected to continue for the foreseeable future. These dramatic demographic changes have led to a lively debate among economists concerning the consequences of the aging of our societies. There exists comparatively little theorizing of the possible *psychological* consequences of increased longevity.

In this paper, we will take a life-span/life-course perspective, positing that development is not only the result of a person's history but also of the anticipated future. More specifically, we argue that the extension of future time perspective plays an important psychological role for developmental regulation. We propose a model according to which behavior, emotion, and motivation are regulated by an interplay

of external control (i.e., social norms and expectations) on the one hand, and self-control on the other. We posit that the increase in life expectancy affects both external and internal developmental regulation. The relative importance of external control, however, should be greater in early and middle adulthood, whereas self-regulation should become particularly important in the post-retirement years, at least until severe losses in physical or cognitive functioning impede self-regulatory processes. We elaborate on the implications of changes in developmental regulation in the three central life domains dominating everyday life across adulthood: work, social relations/family, and leisure [e.g., Nurmi, 1992; Roberts & Robins, 2000]. It is beyond the scope of this paper to also discuss the consequences of increased longevity on functional domains such as health or cognition (for the development of various functional domains in old and very old age see [Baltes & Smith, 2003]).

Unlimitedly Increasing Longevity?

The maximum human life span is currently approximately 120 years, but human life expectancy is continuously increasing. In fact, when considering only the country with the highest life expectancy at each year, Oeppen and Vaupel [2002] found a surprisingly constant increase of 3 months per year for the past 160 years. However, some demographers have claimed that there has to be an upper limit to this trend. According to Kirkwood [2005], aging is not the result of any kind of active gene programming, but instead is a byproduct of limited optimization of genes past the reproductive years. Arguably, selection pressure leading to the optimization of genes decreases after the reproductive years because it is no longer relevant for producing new offspring and thereby transmitting one's genes. As a consequence, limitations in somatic maintenance (such as repair mechanisms) evolve that result in progressive physical damage. The length of the life span, then, can only be altered by extraneous factors such as diet or lifestyle, which can partly compensate for limitations in somatic maintenance. Others have argued that the increase in life expectancy is due to a decrease in premature mortality among children and young adults [Fries, 1980; Olshansky, Carnes, & Cassel, 1990]. Accordingly, it is not the life span that is generally getting longer, but there are fewer prematurely short lives. Based on these or similar arguments, several maximum life expectancies have been suggested [e.g., Dublin, 1928; Olshansky et al., 1990; Olshansky, Carnes, & Desesquelles, 2001], only to be exceeded by a female population somewhere in the world (mostly Japan in recent years [Oeppen & Vaupel, 2002]). Nevertheless, human immortality is still out of reach and will very likely remain so in the foreseeable future, although some researchers have claimed that if we continue to extend life expectancy, we can achieve immortality one day [Vaupel, Baudisch, Dölling, Roach, & Gampe, 2004].

Questions that then arise are: if we could, would we want to live forever [Lucke & Hall, 2005] or would we at least want to live longer than we already do? In a non-representative web survey of a convenience sample of 252 adults aged 18–77 years, we asked whether participants wanted to achieve immortality. More precisely, we asked participants to consider whether they would take a hypothetical pill (devoid of any side effects) granting immortality, and to list the reasons for their decision. To our surprise, the vast majority (77 percent) responded that they did not want to live forever. When asking if participants wanted to take the pill in order to prolong their

life for an additional 25 years, only less than half of the sample (47 percent) deemed this scenario desirable – even if taking the pill meant they would remain in fairly good health. In sum, this study revealed a rather weak endorsement of immortality or even of a substantial prolongation of life. Why do people endorse – or rather do *not* endorse – substantial increases in life expectancy? To find out, we asked participants to list their reasons for deciding for or against measures to achieve immortality or a longer life. Among those who responded that they would not take the pill, some voiced moral or religious reasons (e.g., not wanting to interfere with nature or God’s will), some expressed their negative image of old age (e.g., loneliness), while others felt that one does not need to prolong life in order to do everything one needs to do during a single lifetime. Among those who responded that they would take the life-prolonging pill, several expressed their interest in or curiosity about future global developments; some stated that the pill would give them the opportunity to engage in many more plans and projects, and some referred to their pleasure in and enjoyment of life.

One of the main reasons why a longer than normal lifetime might be attractive at all, then, is that the additional years can be used as a resource for pursuing and accomplishing personal goals [see also Brandtstädter & Rothermund, 2003]. Those participants who did not want to prolong their lives perceived the additional time as more of a burden or even questioned if the pursuit of goals beyond the years naturally allotted to a person is not superfluous. As one of the participants stated, life’s limitedness increases its value: ‘Eighty years of intense life are enough. Knowing about the general limitedness of life helps me to ask myself from time to time if I’m actually using my time the way I would like to use it instead of postponing everything to some day in the future.’ In the next section, we will take a closer look at the notion of lifetime as a resource for pursuing goals.

Lifetime as a Resource for Pursuing and Achieving Personal Goals

In his treatise on the shortness of life (*De Brevitate Vitae*), Seneca warned his readers not to waste precious time on meaningless pursuits. Instead, because life is short, Seneca held that we should focus on the important things in life (see also the notion of the necessity of selection of goals on which to focus due to the limitation of time [Freund, Li, & Baltes, 1999]). People born in industrialized nations in the 20th or 21st centuries can expect to live about twice as long as those born in Seneca’s times, giving them much more time to pursue their goals. As shown in figure 1, life expectancy has been increasing since 1835. Moreover, people do not only live longer, but they also live healthier lives [e.g., Fries, 1980]. What do people do with the additional time they have at their disposal? Or, more generally, what are the psychological consequences of having a longer life expectancy?

To address these questions, we first consider the role that the extension of future time perspective plays upon emotions, motivation, and actions. We then examine whether people use the time gained through longer life expectancy to regulate their development by setting and pursuing *personal* goals. To this end, we adopt a simplified model of developmental regulation stating that development can either be under external control (e.g., controlled by social norms and expectations) or under self-control. We argue that an increase in life expectancy does not affect early and middle

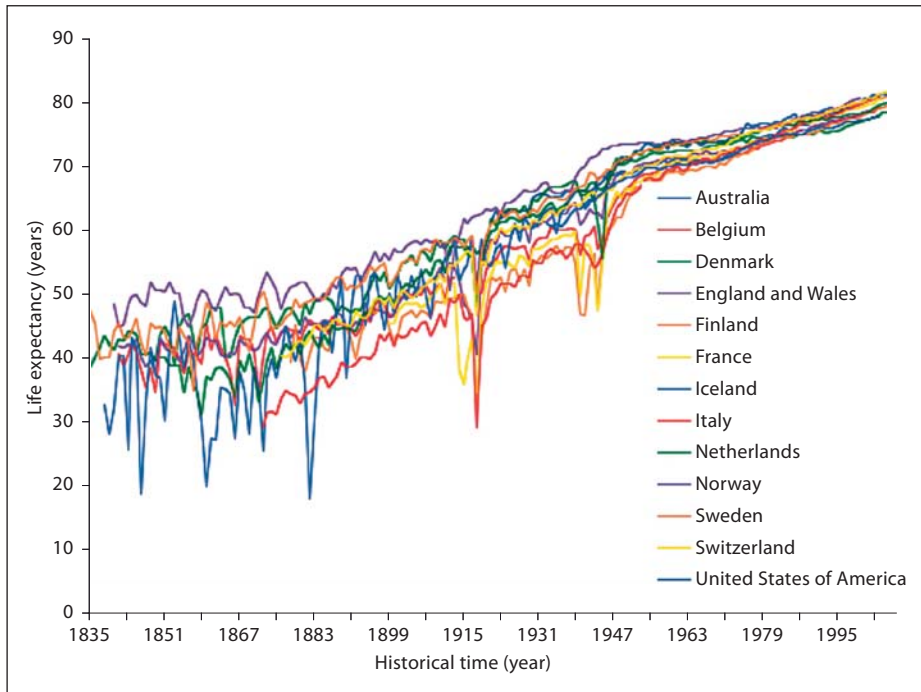


Fig. 1. Average life expectancy at birth in 13 high-income countries [Human Mortality Database, 2007].

adulthood, when many social norms and expectations exist, but rather it affects the retirement years, when very few social norms and expectations exist. Therefore, in our opinion, self-regulatory processes, such as selection, optimization, and compensation (SOC) [Baltes & Baltes, 1990], are of great importance for successful aging. In sum, we posit that increased life expectancy provides the opportunity for freedom from social prescriptions, which can be seen as a chance for successful development and leading a meaningful life according to one's personal goals and values.

Time Perspective

Time is a fundamental dimension of human experience: memories, future aspirations, and worries are prototypical examples. In fact, as Frank [1939] and Lewin [1948] stated, past- or future-oriented cognitions often have a greater impact on our current emotions and behavior than do present-oriented cognitions. Time is not merely the dimension or medium in which mental objects unfold, but it qualifies the motivational and emotional objects. Time references have proven to have a great impact on judgments and evaluations [Ainslie, Haslam, Loewenstein, & Elster, 1992; Loewenstein, Read, & Baumeister, 2003] and delay of gratification [Metcalf & Mischel, 1999]. The temporal grading of events affects the way they are represented in terms of ab-

stractness and valence. For instance, according to the construal level theory of Trope and Liberman [2003], goals concerning the far future are represented in a holistic and abstract manner, which also determines their overall valence: your favorite aunt's month-long visit seems like a wonderful idea a year before it takes place. However, as the visit draws nearer, its representation becomes much more concrete and details come into focus. By the time your aunt's visit is only a week away, all the possible conflicts with duties and routines of everyday life come to mind, and the necessity of giving the house a thorough cleaning and going grocery shopping for all of the meals she will want to have during the week, etc., might result in your evaluating her visit less favorably. Thus, time perspective has a powerful influence on the representation of goals and events, and might even result in a reversal of its perceived valence.

Time perception extends into the past and into the future. With respect to longevity, the longer we live, the longer the past we have to look back on. However, future time perspective has a much greater influence on the motivation of behavior. Therefore, in this paper, we will focus on future time perspective. Nuttin [1964] identified the prospect of the future as the predominant motivational dimension. The existence of motivational objects such as goals and personal projects is an important determinant of structure and meaning in the individual life course, which, in turn, is strongly connected with well-being and satisfaction with life [Brunstein, Schultheiss, & Maier, 1999]. Thus, as will be elaborated in more detail below, the way we perceive our own future is of great importance to our current emotions and actions, the plans and identity projects we develop [Zimbardo & Boyd, 1999], and the goals we select [Lang & Carstensen, 2002]. Taken together, such aspects of future time perspective can be considered highly relevant for developmental regulation.

Consequences of Increased Life Expectancy on the Normativity of Life Course

While the term *life span* refers to the time between a person's birth and death, the sociological concept of the *life course* denotes the pattern of social roles and norms regarding the timing and sequence of important life transitions, like when individuals should start and finish formal education, start their careers, be able to support themselves financially, start a family, and retire [Wrosch & Freund, 2001]. Age-graded social norms and expectations shape individual development through positive and negative sanctions (e.g., favorable or less favorable institutional opportunity structures, social approval or disapproval). As Neugarten [1968] elaborated in her social clock theory, for certain *developmental transitions*, societies provide age-graded opportunity structures that support adherence to (being on time) and penalize deviation from (being off time) socially structured timetables. For instance, many modern, industrialized societies offer pension plans that encourage people to stay in the workforce until a certain age and make retirement financially attractive after that. Such age-related deadlines are often prescribed by law or institutions. For instance, in some countries (e.g., Germany), there is a mandatory retirement age, which makes it illegal to employ a person beyond a certain age. In addition to age-graded institutional opportunity structures, there are also social expectations about age-appropriate *behavior*. Most people hold expectations about the appropriate timing of life transitions [e.g., Settersten & Hagestad, 1996a, 1996b], what personality traits to have at what age [Heckhausen, Dixon, & Baltes, 1989], and what activities to engage in at what age

[Neugarten, Moore, & Lowe, 1965]. Deviations from these social scripts about age-appropriate behavior are often associated with social approval or disapproval [Freund, 1997; Heckhausen, 1999]. As Neugarten [1968] suggested, people use general age-related social expectations to evaluate others' behavior [Krueger, Heckhausen, & Hundertmark, 1995] as well as their own [Heckhausen & Krueger, 1993]. Another way societies direct life course patterns is by providing role models with 'ideal' or 'normal' biographies associated with success and prestige. Such models are likely to provide examples for certain life patterns that are adopted by younger generations.

Attesting to the power of age-related expectations in an even more direct way than through the reinforcement of norm-congruent behavior or social comparison, some research suggests that even the non-conscious activation of age concepts triggers corresponding age-appropriate behavior. In a seminal study by Bargh, Chen, and Burrows [1996], young participants walked down a hall more slowly after being primed with the concept of old age, a time in life associated with walking slowly. Similarly, implicitly priming young adults with the concept of old age resulted in slower reaction times on simple choice tasks [Kawakami, Young, & Dovidio, 2002] and poorer performance on memory tasks [Dijksterhuis & Corneille, unpublished article]. These findings suggest that information about a person's age activates age-related expectations (e.g., older people walk slowly, react slowly, and show poor memory performance), which are then translated directly into behavior (called the 'perception-action link'). This research suggests that age-related expectations may not only guide the selection and timing of personal goals, but may also directly influence behavior that requires little or no self-regulation.

This is not to say that age-related norms and expectations are the sole or even the main factor influencing individual development. In fact, one of the tenets of life span psychology is that development is influenced by a number of factors including age-graded sociocultural factors as well as age-graded biological factors (e.g., maturation, menopause), historical factors (e.g., wars), and non-normative factors (e.g., early death of parents [Baltes, Reese, & Lipsitt, 1980]). According to Baltes et al. [1980], non-normative factors become more and more important for development over the life span and eventually outweigh age-graded and historical factors. This implies that age-related norms and expectations play a less important role for development in old age, providing more freedom to select the goals one wants to set and pursue. As social expectations and related opportunity structures encourage both the *engagement* in certain goals at a certain age, and the *disengagement* from them when the respective appropriate age has passed or not yet arrived [Heckhausen, 1999], older people might be better informed about the kinds of goals that are *inappropriate* for them (and need to be abandoned), than about the kinds of goals that match their resources and are socially supported.

This view is also consistent with theories by Erikson [1968] and Havighurst [Havighurst & Albrecht, 1953] who proposed psychosocial crises and developmental tasks, respectively, as organizing structures for the life course [Freund & Baltes, 2005]. A focus on the number of developmental tasks or transitions reveals that they are not equally distributed over the life span, but that they abound during adolescence and young adulthood [see also Settersten & Hagestad, 1996a, 1996b]. Again, this suggests that there are fewer age-related tasks specifying which goals should be set and pursued in older adulthood. Disengagement theory claims that the main task in old age is to prepare for death by disengaging from social roles and turning in-

wards instead of interacting with the world [Cummings & Henry, 1961]. Empirical research clearly contradicts disengagement theory by showing that a substantial number of older adults continue to have an active lifestyle that contributes to their well-being [e.g., Lemon, Bengtson, & Peterson, 1972] and that most people hold multiple age-related expectations including both a more active type and, particularly for very old age, a more withdrawn and less engaged type [e.g., Brewer, Dull, & Lui, 1981; Hummert, 1990]. Still, *what* an active elderly person is expected to do remains unclear. This *relative* lack of social expectations for older adults regarding which kinds of goals they are expected to set and pursue might stem from the fact that it takes some time for social norms to develop, just as institutions and societies tend to lag behind in changing their opportunity structures to conform to demographic changes (c.f., the concept of the 'structural lag' by Riley and colleagues [e.g., Riley, Kahn, & Foner, 1994]). Given that, historically, old age is a fairly young phenomenon affecting a large number of people, it might simply take more time for such norms and expectations about age-appropriate tasks and norms to develop.

Action-theoretical approaches to development hold that individuals play an active role in shaping their development [e.g., Baltes & Baltes, 1986; Brandtstädter & Lerner, 1999; Lerner & Busch-Rossnagel, 1981], particularly by setting and pursuing goals [e.g., Freund, 2006]. However, people do not set and pursue goals in a social vacuum. Age-graded opportunity structures constrain the individual's proactive role in directing and shaping his or her development by instrumentally or socially supporting the setting and pursuing of personal goals at a certain age. As Freund [2006] pointed out, these two levels of goal representations as social norms and expectations, on the one hand, and personal goals, on the other hand, interact in complex ways. For instance, age-related social expectations can guide behavior directly through reinforcement (or punishment). Being reinforced for norm-consistent behavior can then contribute to personal beliefs about age-appropriate behavior and influence the selection of personal goals that, in turn, direct future behavior.

As pointed out above, there are fewer age-related norms for and expectations of retirees. If social norms and expectations are important for shaping development (directly through sanctions and indirectly through personal goals), self-directedness and self-regulation may play a more important role for developmental regulation in the retirement years, before health-related constraints pose different kinds of constraints on development gains in the fourth age [e.g., Baltes & Smith, 2003]. As Wrosch and Freund [2001] argued, the fewer normative events people face, the higher the degree of self-regulatory skills necessary for successful development. As there are fewer normative transitions or tasks in old age, individuals may have to play a more important and active role to compensate for a lack of social structuring and normative orientation [see also Freund, 2001].

The importance of self-regulation for describing and predicting behavior and development was first suggested in research by Mischel [1968] and Bandura [1969], vigorously challenging the then-predominant behaviorist model that emphasized the external control of behavior. This research showed convincingly that situational external stimuli are only one factor influencing behavior, and that it is necessary to take sources of behavior regulation that lie within the individual into account. The pursuit of long-term goals requires *persisting* in goal-related actions and shielding against other attractive goals that compete for resources. Numerous factors contribute to persistence of goal pursuit in the face of attractive alternatives such as the

value (importance) of each of the alternative options [Lewin, 1935], the temporal distance of achieving either of the goals (here the ability to delay gratification is very important [Mischel, Shoda, & Rodriguez, 1989]), the perceived likelihood of the realization of each of the goals [Heckhausen, 1989], control beliefs [e.g., Skinner, Chapman & Baltes, 1988], and self-efficacy beliefs [Bandura, 1995]. The basic tenet of the compensatory model of developmental regulation holds that such self-regulatory skills are particularly important when behavior is not under external (stimulus) control. In the next section, we address the question of whether external regulation of the life course weakens over historical time and across the life span, necessitating more self-regulation in the present as compared to previous times, and in late as compared to young or middle adulthood.

Deregulation of the Life Course?

Some researchers consider the entire life course to be subject to deregulation [Riley et al., 1994]: they see normative timetables as having blurred and age-related boundaries and becoming fuzzier and more permeable over the past decades in western societies. ‘Deregulation of the life course’ generally refers to a decay in or a weakening of external structures corresponding to life planning and personal goal pursuit [Wrosch & Freund, 2001]. Note, however, that sociologists have debated whether changes have occurred concerning how strongly social norms script the life course [Brückner & Mayer, 2005; Elchardus & Smits, 2006; Kohli, 2000]. Empirically, it seems safe to assume that age-graded norms have at least weakened [Ravanera, Rajulton, & Burch, 2004; Zepelin, Sills, & Heath, 1986–87], but pervasive deregulation has not occurred [Settersten, 1997].

We differentiate between diachronic and synchronous weakening. *Synchronous weakening* (of regulatory social norms) is characterized by a growing number of alternative opportunities in one life domain at a given point in time (e.g., number of possible professional careers open to individuals after graduating from a university). *Diachronic weakening* (of regulatory social norms) refers to the blurring of normative timetables over the life course and resultant longer time period during which certain goals can be pursued (i.e., the sequencing and timing of goals or transitions). While the increasing number of options in different areas of life (e.g., where to live, with whom to live, what profession to choose, etc.) affects the entire life span, diachronic weakening may be most obvious after retirement. From a historical perspective, due to the current longer life expectancy, older adults have a longer period of time ahead of them, which is relatively unstructured by social norms and expectations. Therefore, we argue that for an increase in options, longer life expectancy might play a particularly important role after retirement. Figure 2 visualizes the main assumptions regarding diachronic and synchronous weakening of regulatory social norms on the timing and segmentation on the life course.

Deregulation and Self-Regulation

We argue that an extended future time perspective due to increased longevity has different effects during early as compared to late adulthood. More specifically,

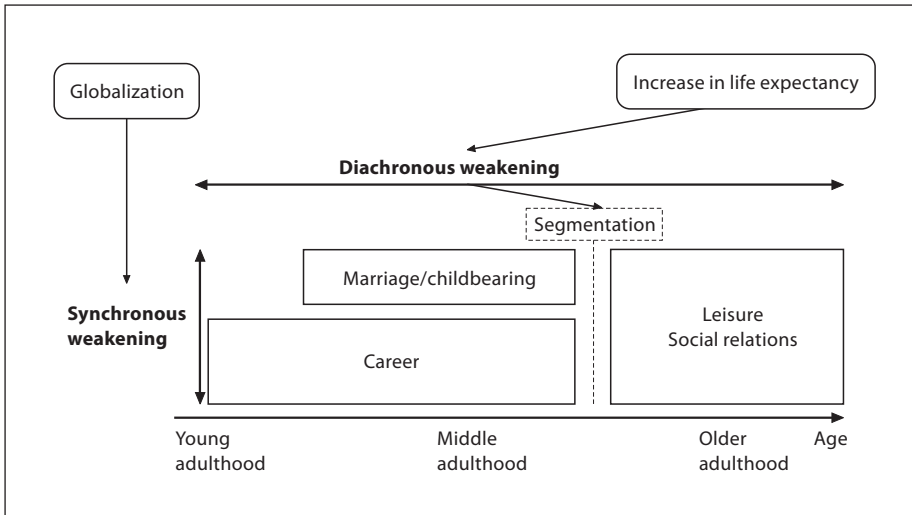


Fig. 2. The influence of globalization on the number of perceived options for career, marriage, and lifestyle is captured by the term ‘synchronous weakening’ and affects primarily young and middle adulthood. We propose that the increase in life expectancy has a weakening effect on social norms regarding the timing and sequencing of major developmental tasks across the entire adult life span (diachronic weakening).

we posit that a longer future time perspective results in the postponement of personal goals in the life domains of leisure and friendship to the post-retirement age, while the timetables for professional and family-related goals might become even stricter in young adulthood. As will be discussed in more detail later, knowing that certain goals *can* be postponed until a later time (e.g., after retirement) might result in the perception that they *should* be postponed. This could result in a concentration on goals that cannot be postponed during young and middle-adulthood such as entering the work force, establishing a career, and starting a family. Thus, social expectations about the kinds of goals young adults should pursue and when they should achieve them might become even stronger due to increased life expectancy.

Assuming a compensatory relationship between external regulation through social norms and expectations (i.e., situational factors and external incentive structures) on the one hand, and self-regulation on the other, self-regulation might be less important for development in young adulthood as social norms and expectations strongly guide and direct the selection and pursuit of goals during this phase. In contrast, after retirement, there is a stronger emphasis on an involvement in rather poorly defined life domains such as leisure or social relations, with few or no social expectations regarding the achievement of particular outcomes. As self-regulation is needed to set and pursue goals in poorly defined life domains with no clear outcomes that can be used to measure success, the phase of life after retirement could be characterized as lacking external control and requiring a greater degree of self-regulation.

In contrast to the position presented by Riley [1998], who argued for an increasingly integrated life course with a simultaneous pursuit of family, leisure, and profes-

sional goals, we posit that the life course becomes increasingly more segmented into phases of pursuing primarily work-related goals in young adulthood, family-related goals (getting married, having children) in early middle adulthood, and leisure time activities and spending time with friends after retirement. Paradoxically, the longer future time perspective of younger adults might result in a compression of timetables for the professional domain during young adulthood. If there is more time for goals in other life domains later, then young adulthood can be primarily used to invest in career-related goals. In fact, time pressure seems to be increasing in the work domain, while family-related transitions (getting married and having one's first child) are being postponed more and more until later years, when certain career-related goals have been achieved. Due to the stricter timetables and relatively strong social expectations, then, younger adults might be under a lot of pressure to pursue and reach certain goals. In contrast, self-regulation should play a much more important role during old age, a time in life when fewer social expectations direct behavior. In the next section, we will elaborate in more detail how people can regulate their development through setting and pursuing goals.

Action-Theoretical Approach to Self-Regulation

So far, we have addressed the social regulation of the life course and argued that as there are fewer normative transitions or tasks in old age, individuals may have to play a more important and active role in shaping their own lives. Following one of the basic tenets of life-span psychology, people not only react to their (physical and social) environment, but development can best be understood as a dynamic process involving the interplay of proactively acting upon and reacting to one's environment [e.g., Baltes, Lindenberger, & Staudinger, 2006; Brandtstädter, 1998; Lerner & Busch-Rossnagel, 1981]. The question of successful development, then, has to address the question concerning how people actively shape their own environment and life course within the given social, cultural, and biological constraints.

Therefore, in the following section, we briefly outline how people regulate their development, placing particular emphasis on personal goals as central organizing structures of self-regulation and development [Freund, 2006]. More specifically, we present an action-theoretical model of the role of goals in developmental regulation, developed by Freund and Baltes [2000, 2007; Freund et al., 1999], the SOC model [Baltes & Baltes, 1990]. We outline both the challenges and the opportunities of longer life expectancy for positive development and aging.

The SOC Model. In the action-theoretical conceptualization of the model of selection, optimization, and compensation (SOC), selection refers to the development, selection, and commitment to goals. In research on judgment and decision making [e.g., Tversky & Kahneman, 1981] as well as in the motivation literature [e.g., Emons, 1996; Higgins, 1997], it has been shown repeatedly that it is important to distinguish between a gain focus and a loss focus when investigating goal-related processes. This fundamental distinction is captured in the SOC model, which distinguishes between two modes of selection: elective and loss-based selection [Freund et al., 1999]. Elective selection denotes the development of and commitment to goals that are aimed at increasing or maintaining the level of functioning. Elective selec-

tion involves the development of and commitment to a subset of goals that take personal needs, motives, and values, as well as the availability of (external and internal) resources into account. One important aspect of elective selection is the development of a goal hierarchy by prioritizing particularly important goals and by relating goals to one another in a non-conflictual and facilitative way [for a more detailed discussion, see Freund, 2008]. In contrast, loss-based selection occurs as a response to losses in previously available goal-relevant resources. It involves focusing and redirecting resources when other means for the maintenance of positive functioning and/or substitution of a loss are either not available or would be invested at the expense of other, more promising goals. Loss-based selection involves changes in goals or the goal system, such as reconstructing one's goal hierarchy, focusing on the most important goal(s), adapting standards, or searching for new goals.

Selection promotes positive development in a number of ways. For instance, to have and feel committed to goals contributes to the feeling that one's life has purpose and meaning [e.g., Klinger, 1977; Little, 1989]. In addition, goals organize behavior into action sequences. They reduce the complexity of a given situation by guiding attention and behavior. Goals can be conceptualized as ever available decision rules for directing attention and behavior and facilitating efficient interactions with the environment.

The translation of goals into actual behavior involves optimization and compensation. *Optimization* refers to the acquisition, refinement, and investment of goal-relevant means in order to achieve desired outcomes in selected domains. *Compensation* refers to processes aimed at maintaining functioning in the face of the losses with which people are inevitably confronted during their lives, and particularly in old age. Whereas loss-based selection refers to restructuring one's goals, compensation refers to the maintenance of goals by alternative means. Typical instances of compensation are the substitution of previously available goal-relevant means by acquiring new or activating unused internal or external resources [Bäckman & Dixon, 1992; Carstensen, Hanson, & Freund, 1995].

There is converging empirical evidence for the role of SOC in successful development. A number of self-report studies [e.g., Freund & Baltes, 1998; Freund & Baltes, 2002; Wiese, Freund, & Baltes, 2000, 2002] have found that adults ranging in age from early to late and very late adulthood who report engaging in SOC also report higher subjective well-being (e.g., frequency of experiencing positive emotions, having a purpose in life, life satisfaction) and cope better with stress or losses in resources [Jopp & Smith, 2006; Lang, Rieckmann, & Baltes, 2002; Young, Baltes, & Pratt, 2007]. However, cross-sectional evidence indicates that there are age-related differences across adulthood, with a peak during middle adulthood, in self-reported frequency of the use of SOC [Freund & Baltes, 2002]. Whereas the overall use of self-reported SOC-related behaviors is less prevalent in old age, elective selection continues to increase.

There are at least three interpretations of this finding. One is that older adults gain motivational competence in one of the central aspects of self-regulation, namely the setting of personal goals [Freund & Riediger, 2006], and might concentrate on setting adequate goals that converge with the context and only need little resource investment on their part (hence the lower scores on optimization and compensation). Another interpretation is that it is particularly the selection of goals that becomes important for developmental regulation when a lack of social norms and ex-

expectations results in more personal freedom with respect to the goals one can select. Finally, one could argue that the decrease in resources results in a heightened need for selectivity in late adulthood, while, at the same time, fewer resources are available that can be invested in goal pursuit (optimization and compensation). Optimization and compensation are effortful, and therefore presumably become more and more taxing with age until they exceed the individual, social, and technical reserve capacities available to individuals in old age. This possibility is especially relevant when people suffer from severe illnesses or enter very old age, the fourth age [Baltes & Smith, 2003]. However, as findings from the Berlin Aging study show, the decrease in self-reported use of SOC does not imply a decrease in the adaptivity of SOC processes. Even in very old age, SOC is related to higher levels of subjective well-being [Freund & Baltes, 1998]. This latter finding implies that setting, pursuing, and maintaining personal goals are central aspects of successful self-regulation well into very late adulthood.

When considering the processes of SOC in more detail than a self-report measure of the use of SOC strategies allows, a more differentiated picture of age-related differences arises. First, it seems that there are age-related increases in the efficiency of selection. Older and younger adults were asked to list their personal goals and then set them in relationship to one another by classifying each: (1) as higher- or lower-order goals (vertical goal relations), and (2) according to level of concreteness (horizontal goal relations). The results showed that, for older as compared to younger adults, there were fewer conflicts between goals, and inter-goal facilitation and congruence were higher [Riediger, Freund, & Baltes, 2005]. This finding has important self-regulatory consequences both in terms of emotion regulation and in guiding actual behavior and goal achievement. Less goal conflict is associated with higher positive and lower negative affect in everyday life, and longitudinally with higher subjective well-being. More congruence between goals is related to goal-relevant behavior as assessed in a diary study. Moreover, in the context of the goal to start regular physical exercise, congruence with other goals predicted actual adherence to an exercise regimen as recorded by the gyms. After a period of 4 months, older adults had achieved their goal of exercising regularly significantly more often than younger adults [Riediger et al., 2005]. This pattern of results suggests that the selection of personal goals that are congruent and do not conflict with one another facilitates goal-relevant behavior in everyday life. The relative freedom from obligatory goals in older adulthood might enable older adults to select converging and non-conflicting goals better than younger adults who might face more constraints and social expectations in their goal selection. These findings also highlight the importance of selection well into old age. Selection might not only increase until old age, but might also be one of the key aspects of self-regulation contributing to successful aging.

From a life span developmental perspective, the maintenance of functioning is as important for successful developmental regulation as achieving higher levels of functioning. This is the case because development can be characterized as comprising both gains and losses throughout the entire life span [Baltes, 1997; Labouvie-Vief, 1981]. With increasing age, the ratio of gains to losses becomes less positive [e.g., Baltes & Smith, 2003]. This implies that with age, there is an increasing need to invest more and more resources into maintenance and resilience of functioning rather than into growth processes [Baltes, 1997; Freund & Ebner, 2005; Staudinger, Marsiske, & Baltes, 1995]. This shift from gains to losses is also very prominent in social expecta-

tions. In a study by Heckhausen et al. [1989], young, middle-aged, and older adults rated the onset and end of positive and negative attributes, skills, and abilities across the life span. There was very high social consensus that gains decrease across adulthood and are clearly outnumbered by losses in old age. If, as suggested by a number of authors [Freund, 2003; Heckhausen, 1999; Neugarten, 1968], people aligned their personal goals with social expectations, we might expect this shift to be reflected in age-related differences in the orientation of personal goals towards gains and losses. In fact, some empirical evidence suggests that, in old as compared to young or middle adulthood, setting and pursuing goals aimed at maintaining functioning or avoiding losses (i.e., compensation goals) are more prominent and more adaptive with respect to subjective well-being and persistence in goal pursuit than goals aimed at gain or growth (i.e., optimization goals; Ebner, Freund, & Baltes [2006]; Freund [2006]; Heckhausen [1997]). Moreover, it seems that the shift in goal orientation during adulthood is one of the processes regulating the shifting balance of gains and losses, thereby contributing to successful development and aging. While goals geared towards optimization appear to be more motivating during young adulthood, goals geared towards compensation increase in importance for older adults.

This set of findings highlights the assumption that social expectations might not only influence the content of personal goals, but also their orientation towards gains versus losses. The shift in goal orientation might be guided by strong age-related stereotypes and social expectations of old age as a time of loss and decline. Such strong stereotypes and expectations might also impact behavior directly [Bargh et al., 1996] and influence goal orientation. Although there are fewer expectations regarding the kinds of goals people set and pursue in old as compared to young adulthood, the *way* goals are pursued might be regulated by social expectations.

In sum, there is empirical evidence supporting the main assumption of the SOC model. Selecting goals and investing in their pursuit and maintenance when faced with losses appear to be important processes of self-regulation contributing to successful development across adulthood and into old age. As the findings regarding age-related differences in selection by Riediger and colleagues [Riediger & Freund, 2006; Riediger et al., 2005] suggest, the *selection* of goals might be of particular importance in old age when goals are less structured by external demands.

As argued above, self-regulation and regulation by external (opportunity) structures might be related in a compensatory way: people might have to rely on self-regulation in cases of a lack of external structuring [see also Ehrenberg, 2004]. We assume that there are two reasons for a historic increase in the need for self-regulation: the first reason is synchronous deregulation due to globalization and the resulting increase in options available to individuals during their life course. For instance, when graduating from college, young adults may choose their career from a large number of different alternatives. Being able to set clear goals regarding the kind of profession one would like to pursue (i.e., elective selection) helps structure the search for information related to different career paths [see also Wiese & Freund, 2008]. Exploration, then, helps to judge whether the means necessary for following a certain path are available or can be acquired (i.e., optimization) as well as to overcome setbacks (i.e., compensation). The second reason for an increase in the need for self-regulation is an increase in the time to live in good functional health after retirement as this life phase is characterized by fewer and unclear social expectations regarding which goals to pursue, and how to go about pursuing them. As argued by the SOC

model, setting and pursuing personal goals might become particularly important for successful aging [Freund & Riediger, 2003].

Let us add three caveats at this point: first, it is important to note that despite age-related trajectories of SOC across the life span, there are, at all ages, interindividual differences in these self-regulatory processes. In fact, as Gestsdóttir and Lerner [2007] have shown, SOC is related to positive developmental outcomes already in childhood. Lerner, Freund, De Stefanis, and Habermas [2001] have argued that these processes can be highly beneficial for successful development in adolescence. There exists some empirical evidence attesting to the positive effects of SOC in young adulthood [e.g., Wiese et al., 2000, 2002], particularly in difficult situations [Young et al., 2007]. This research suggests that self-regulation is important across the life span [see also Heckhausen & Schulz, 1995].

Second, although we assume a compensatory relationship between external structuring and self-regulatory demands for developmental regulation on a general level, we acknowledge that this relationship does not hold true under all circumstances for all individuals. For instance, it requires a substantial degree of self-regulation to set personal goals that differ markedly from a given opportunity structure or from predominant social expectations. In fact, although one could argue that it might be easier to differ from an existing structure which might still serve as an anchor point or standard of reference, going against the current and having to face the negative consequences of not conforming with social norms and expectations might result in higher self-regulatory demands such that the stronger the external structuring, the higher the demands.

Another instance when social norms and expectations might require more self-regulatory skills is when people try to adhere to social expectations that run against their personal goals. In this case, people have to deal with motivational conflicts between what they want and what they ought to do. Riediger and Freund [2008] showed that this kind of conflict does, in fact, impede affective well-being. Moreover, they found that older adults reported this kind of conflict significantly less often than younger and middle-aged adults. This finding could be interpreted as supporting the notion of fewer social norms and expectations in late as compared to early adulthood.

A third caveat concerns the distinction of the third and the fourth age. In the fourth age, i.e., in very old age, the risk of severe losses in resources, primarily due to health-related problems, increases sharply [Baltes & Smith, 2003]. As processes of self-regulation are themselves resource demanding [Freund & Baltes, 1998, 2002], it becomes more and more difficult to implement self-regulatory strategies. However, as pointed out by Brim [1992; see also Baltes & Baltes, 1990], the realm in which one can set and pursue personal goals might become smaller due to decreasing health, but might nevertheless prove highly meaningful. As elaborated by Lawton [1990], even when the radius of possible actions is severely limited as is the case for nursing home patients, choosing, creating, or shaping one's environment increase need fulfillment. In fact, self-regulatory strategies might remain the same, given that the ratio of resources to the action radius might be constant.

Thus far, we have addressed the psychological consequences of extended lifetimes in the realm of developmental regulation processes on a general level. In the following, we take a closer look at the psychological consequences in different life domains (social relationships, work, and leisure). Table 1 summarizes the central

Table 1. Main consequences of synchronic and diachronic weakening for social relations, leisure, and work in young, middle, and older adulthood

Age group	Consequences of synchronous weakening	Consequences of diachronic weakening
Young adults	longer period of indecision regarding work and family ('emerging adulthood'); postponement of marriage and childbearing	emphasis on career and work-related goals
Middle-aged adults	'rush hour' (work-family conflict)	increase in divorce rate; postponement of leisure and friendship goals
Older adults		freedom to engage in social relations and leisure activities

hypothesized consequences of synchronous and diachronic weakening for social relations, leisure, and work across adulthood. These hypotheses will be elaborated in more detail later. We will focus on two intertwined routes by which the extended lifetime might have psychological consequences: personal time perspective and the social structuring of the life course. To gain a better understanding of the psychological consequences of longer life expectancy, we will examine when people actually perceive having more time (i.e., in which life phase), and which tasks or projects they pursue in this time. In other words, how are the expanding temporal resources allocated over the life span and what might be the consequences for successful development and well-being?

Social Relations

Social relations are central to subjective well-being [e.g., Diener & Seligman, 2002]. In fact, feelings of loneliness and not having a confidante are related to an increased risk of mortality [Maier & Smith, 1999], whereas the amount of time spent with friends is related to increased survival [Maier & Klumb, 2005]. Being married is related to better emotional and physical health [Stolzenberg & Waite, 2005]. Successful development and aging clearly encompass close social relations [e.g., Ryff, 1989]. In this section, we first explore how increased longevity might influence one's decision to get married and the maintenance of long-term relationships. We will then turn to other social relations such as friendship.

As argued in previous sections, a longer future time perspective due to increased longevity should primarily influence self-regulation in middle and older adulthood and have less impact on younger age groups. In this section, we discuss how these changes might influence social relationships, especially people's social goals regarding family-related transitions (such as getting/staying married and starting a family), and friendships. We argue that increasing longevity might be related to a historic increase in divorce rates, but does not influence one's decision about whether or at

what age to get married. Similarly, the postponement of childbearing might be more influenced by phenomena like ‘*emerging adulthood*’ [Arnett, 2000], ‘*rush hour*’ [Bittman & Wajcman, 2000], or by opportunity costs of the career-family conflict [Birg, 2001], than by a prolonged life expectancy. In contrast, divorce or separation in middle or later adulthood might be more likely if the perceived amount of time available to find a new partner is still substantial. Finally, involvement in other social relationships such as friendships might be related to increased longevity due to a larger segmentation of the different life domains in different phases of the life span, whereby great emphasis is placed on work in young adulthood, family-related goals in late young and middle-adulthood, and not on leisure and friendships until after retirement.

Relationship with Spouse and Family

In addition to increased longevity, the main macrosocial factors that have influenced spouse and family relationships in recent decades include declines in marriage and fertility rates and an increase in divorce rates [e.g., Goldstein & Kenney, 2001; Trommsdorff & Nauck, 2006]. The *birth rate* has been steadily decreasing in all industrialized countries. For example, in Germany, the birth rate decreased from 2.5 children (per woman) in 1965 to 1.4 children in 2002. During the same time period, the *divorce rate* increased from 12.0 to 52.1 percent [Federal Statistical Office, 2002]. The rates in other countries are comparable. The *decline in the marriage rate* in industrialized countries has been depicted as one of the most prominent social changes in recent times [Lesthaeghe, Mason, & Jensen, 1995]. Beginning in about 1970, aggregate measures of marriage, such as the annual rate of marriage of first women between 18 and 44 years of age, began to drop dramatically in the USA and other western countries [Bumpass, Sweet, & Cherlin, 1991; Goldstein & Kenney, 2001]. In the following sections, we discuss factors that have brought about these changes and whether and how they interact with longevity.

Birth Rates. Birth rates are decreasing in all industrialized countries, although there are differences among countries in the steepness of the decline and its causes. For example, in Germany, the decrease is not based on a trend towards one-child families as was assumed previously, but on an increase in childless families. A large proportion (32.1%) of German women born in 1965 have no children, and among those who are university graduates, this number is even larger [Birg, 2001]. Women who are university graduates have higher financial, as well as career-related opportunity costs if they take time off work or go from full- to part-time positions in order to raise children. Interestingly, there is also a trend, at least in Germany, for people who have any children at all to have more than two, resulting in a substantial percentage of couples with no children and a low percentage of couples with several children [Birg, 2001].

In other European countries, such as Denmark, Finland, or the Netherlands, the trend is not to have fewer or no children, but to *postpone* having children until later [Lesthaeghe, 2000]. This postponement is mostly attributed to an increasing length of education and a related longer period of role exploration, a historically new life phase labeled *emerging adulthood* [Arnett, 2000]. The previously discussed dia-

chronic weakening (of regulatory social norms), resulting in many different options regarding lifestyle, profession, partner, etc., increases the time young adults need to explore those options. As globalization encompasses societies as a whole [Meyer, 2000], this trend affects more and more young adults, not only those with higher education [for the work domain, see Baruch, 2004]. At the same time, however, age-graded social opportunity structures (e.g., age-related access to education and, often unofficial, age limitations for certain career opportunities) as well as biological constraints (e.g., age-related decline in fertility) do not allow one to postpone the main tasks of young adulthood (e.g., finishing education, starting a career, finding a romantic partner, and starting a family) until later in life. Along with the longer phase of emerging adulthood, this results in a *compression* of time available for these important life tasks to a relatively short period between the ages of approximately 27 and 35 years, which has been termed the ‘rush hour’ of life [Bittman & Wajcman, 2000].¹

Another factor influencing the decision of whether and when to have children is assumed work-family conflicts [Rindfuss & Brewster, 1996]. Work-family conflicts were found to be negatively associated with life satisfaction and work satisfaction [Kossek & Ozeki, 1998], satisfaction with partnership and family [Aryee, Fields, & Luk, 1999; Wiese, 2004], health [Grzywacz, 2000; Hammer, Saksvik, Nytroe, Torvatn, & Bayazit, 2004], organizational commitment, absenteeism, and turnover [Allen, Herst, Bruck, & Sutton, 2000]. At the same time, longer maternity leaves (over 1 year) increase the probability and magnitude of negative career consequences [Wiese, 2005]. Thus, synchronizing work and family might be more favorable for one’s own career than its segmentation into different life phases [Wiese, 2007]. Young adults (and especially young women) who are planning to have children must decide between either taking maternity leave and accepting the subsequent costs of having interrupted their career or pursuing their career and taking on the burden of balancing work and family life.

Although longevity does not play an important role in the work-family conflict, it does contribute to the ‘gained years’ phenomenon, especially in the lives of women [Imhof, 1981]. This phenomenon denotes the fact that mothers’ life expectancy for the time after their children have reached adolescence has increased substantially since the 19th century: a mid-19th-century mother had 6 to 8 years to live when her youngest child was 15 years old, while a present-day mother still has more than 35 years to live. This trend may have contributed to women pursuing professional careers after their children have left home. Moreover, the gained years also affect the parents as a couple in that they spend a much longer time together after having raised their children. While raising children used to dominate married life, this aspect is now only a certain phase of it. Thus, middle-aged men and particularly women are now confronted with a longer phase in their lives that is not structured by the social norms and expectations concerning the task of raising children.

¹ The USA is atypical in the sense that it is the country with the weakest postponement syndrome of all western countries [Lesthaeghe, 2000]. However, large differences between women’s parenting are related to their economic resources [Rindfuss & Brewster, 1996]. Women who are economically well-off can more easily finance good childcare arrangements, which makes it easier for them to pursue both career and family at the same time.

As argued above, here, as in all less structured phases of life, self-regulation might play an important role in one's ability to master life's tasks after one's children have left home. One could speculate that people with a high level of self-regulation skills, especially in the realm of selection, set and pursue new individual and partnership-related goals more easily. For those who do not find and maintain alternative goals, the gained years might end in dissatisfaction and marital dissolution.

Marriage. Despite declining marriage rates and increasing divorce rates, the personal value that people ascribe to the institution of marriage appears to remain positive. For instance, nearly 90% of Americans want to marry eventually [Goldstein & Kenney, 2001]. In western European countries, particularly in Scandinavia, where cohabitation has emerged as a substitute for marriage [Hoem & Rennermalm, 1985], binding forms of partnership with a partner living in the same household (i.e., a kind of unofficial marriage) are surprisingly widespread. The shift from marriage to long-term cohabitation in these countries probably does not represent an objection to choosing a partner for life. In fact, the majority of cohabitating couples want to marry later [Klein, Lengerer, & Uzelac, 2002; Kohli, 2003]. As Cherlin [2004] argued, the practical importance of marriage is declining at a time in history when western cultures allow cohabitation without marriage, but its *symbolic value* might be increasing just for that reason. Marriage, viewed as a partnership of high quality, has become an indication of prestige and individual achievement. As Cherlin [2004, p. 857] put it, marriage 'is not just one type of family relationship among many; rather, it is the most prestigious form'. In line with this, higher socioeconomic status and women's economic independence are associated with higher, not lower, rates of marriage [Goldstein & Kenney, 2001]. Thus, the decision for or against marriage seems to be influenced by one's positive evaluation of a given partnership as well as the social *status* of the institution of marriage. From our perspective, longevity is not likely to be involved in this decision: people do not seem to take into account that, given their life expectancy, 'till death do us part' encompasses many more years than it did 150 years ago. As most adults marry when they are still young², they are more likely to conceptualize their lifetime as the time from birth to present rather than the time from present until death [Levinson, 1986]. When the future seems unlimited [Lang & Carstensen, 2002], thoughts about whether this unlimited future will last 30, 40, or 50 years might not enter the decision about whether to marry. It does, however, influence the *challenges* that married life has for a couple. The high divorce rates may be one expression of these challenges. In the next section, we discuss how longevity interacts with factors influencing present-day marital dissolution.

Marital Dissolution. Not only divorce rates, but also *causes* of divorce differ from those in previous times. Coontz [2007] argued that one of the reasons for the fragility of modern marriages is the fact that marriage is overburdened with expectations. According to Coontz [2007], people expect marriage to be the most powerful

² The average age of first marriage in the USA is 27.1 years for men and 25.3 years for women (data for 2003) [US Bureau of the Census, 2003], 31.4 years for men and 29.1 years for women in the United Kingdom (data for 2005) [Office for National Statistics, UK, 2005], and 32.6 years for men and 29.6 years for women in Germany (data for 2006) [Federal Statistical Office, 2007].

commitment in their lives, a commitment that involves a satisfying, intimate, and passionate relationship between two people who are also good friends. Moreover, the ideal marriage is expected to be a relationship in which people not only find the deepest meaning in their lives, but also have the most fun. Coontz [2007] concluded that these expectations result in a widespread belief that a good marriage is central to one's happiness and that, paradoxically, these same expectations – along with the availability of numerous other potential partners and a previously unknown capability of getting along well economically and socially without a marital partner – also render marriages more fragile. If the marriage does not fulfill the various high expectations, there is great pressure to look for a different, better partner. In this context, longevity might actually also play an important role [for a similar view, see Trommsdorff & Nauck, 2006]. Knowing that one still has many years or even decades to live even after entering middle adulthood might tip the balance between the subjective costs and benefits of staying in a long-term relationship that seems sub-optimal and leaving the relationship in favor of finding a new, potentially more satisfying, relationship. Staying in a dissatisfying relationship might be tolerable for a brief spell, but not for an extended period of time. In addition, high divorce rates enlarge the 'marriage market' so that in middle and older adulthood, the likelihood of finding a new partner is increasing. As the availability of alternative marriage partners significantly increases the likelihood of marital dissolution [South & Lloyd, 1995], people's willingness to leave a long-term relationship in middle and older adulthood should increase.

Because of the historically fairly recent dramatic increase in longevity and the change in conceptions and expectations about marital relationships, there is relatively little cultural knowledge about how to maintain a marital relationship that is high on passion, intimacy, and commitment over many decades. Because of the lack of cultural norms or a substantial number of positive models, people have to rely on finding their own strategies for maintaining a good relationship. Again, self-regulation might play an important role in this context. Couples high in self-regulation might be more successful in mastering the challenges of married life. The kind of self-regulation required in such situations probably especially concerns optimization and compensation (here understood as the acquisition and investment of means into building and maintaining a good relationship [Wiese et al., 2002]). One example is dealing with conflict in a constructive manner [Gottman & Levenson, 1992], by trying to ameliorate potential interpersonal problems [Finkel & Campbell, 2001]. Another example of dealing with (potential) partnership conflicts is by overcoming the typical self-serving bias concerning the attribution of positive and negative events by instead acknowledging the partner's role in producing positive outcomes and not blaming him or her for the negative ones [Vohs & Ciarocco, 2004]. Finally, an obvious and important case of self-regulation in most traditional marriages is to control sexual attraction to other people [Miller, 1997]. All of these competencies require a high degree of self-regulation. As self-regulatory skills increase with successful long-term use [Muraven, 1999], older adults might outperform younger adults in this domain. In fact, there is some evidence that older adults in long-term marriages are actually better in relationship-related self-regulation than younger adults. For example, Carstensen, Gottman, and Levenson [1995] found that older couples are more successful in emotion regulation in conflict situations. Similarly, older couples seem to be better than young-

er or middle-aged couples in finding consensus on various matters such as life goals, friends, and decision making [Lauer, Lauer, & Kerr, 1990]. Hiedemann, Suhomlinova, and O'Rand [1998] also found that children's leaving home is less of a divorce risk factor for couples who were highly skilled in marriage crisis management. Thus, although self-regulatory competence is likely to help successful marriages across the entire span of adulthood [Wilson, Charker, Lizzio, Halford, & Kimlin, 2005], they might become more important in later adulthood and old age.

Taken together, the tasks in young adulthood – finishing school, starting and developing one's own career, finding a romantic partner, starting a family, and establishing a satisfying social network – have not changed with changing longevity, fertility, or increased divorce rates. The accomplishment of these tasks might be postponed for the sake of a longer period of exploration. However, the content and sequence of these tasks have remained the same throughout history. The historically new phenomena of prolonged married life and 'gained years' after childrearing are less structured by clear social norms and expectations. Here, self-regulation skills might help people master the new challenges, find their own role and goals, and control their own life.

Friendships. The buzzword 'work-life balance' indicates that many middle-aged adults experience the high demands of their jobs and their families as conflicting because they both draw on the same resource: time [e.g., Wiese, 2007]. When both work and family make substantial demands on one's time, little time is left to maintain friendships. In fact, middle-aged adults report having fewer friends and spending less time socializing than younger adults do [Adams & Blieszner, 1996], although the importance or closeness of friendships is not reduced [Fiebert & Wright, 1989]. Consequently, middle-aged adults might feel they have to postpone spending time with their friends until the children have left home or work demands decrease. This might result in a more segmented life course of largely separate phases during which adults focus on work and family during young and middle adulthood and on friendship and leisure in late middle adulthood or after retirement. This tendency might be even stronger with prolonged life expectancies because there is more and healthier time left after retirement. In fact, older adults emphasize maintaining their social contacts as one of the positive aspects when describing their own aging [Oswald, 1991].

Empirical evidence, however, suggests that time spent socializing with friends and relatives *decreases* between the ages of 20 and 89 years [Verbrugge, Gruber-Baldini, & Fozard, 1996]. More time for socializing after retirement might be something younger adults envision rather than what older people actually do. According to Socioemotional Selectivity Theory [Carstensen, Isaacowitz, & Charles, 1999], the decrease in the size of social networks found in older adults [e.g., Lang & Carstensen, 2002] is due to motivational changes. Socioemotional Selectivity Theory posits that, because of their decreasing future time perspective, older adults are more motivated to select and focus on emotionally meaningful relationships [Carstensen, Fung, & Charles, 2003]. This is also in line with the increase in elective selection reported above. A decrease in the size of social networks of older adults is not associated with less satisfaction with one's own social life or with increased levels of loneliness. In fact, older adults seem to be fairly satisfied with their social lives [Cavallero, Morino-

Abbele, & Bertocci, 2007]. Instead, the quality of social relations seems to become more important with increasing age [Carstensen et al., 1999]. The fact that one has more time at one's disposal to spend with important and close social partners after retirement and during old age might contribute to positive aging and constitute an important advantage of increased longevity.

In sum, we posit that, depending on the life phase, increased longevity has a greater impact on some social relationships (marriage) than on others (friendships). We have argued that the decision to marry or have children is less associated with longevity than the decision to divorce or postpone one's own social life until after retirement. In addition, increased longevity might increase the importance of self-regulation for successfully maintaining long-term marriages. An extended future time perspective due to increased longevity might result in more segmentation regarding work and family during young and middle adulthood and social relations and leisure during older adulthood. Empirical evidence suggests that meaningful social relations are, in fact, very important in old age. Therefore, having time to spend with close friends might be one of the important advantages of increased longevity.

Leisure

Leisure, by definition, is a life domain characterized by a lack of clear normative constraints. Unlike simple free time (i.e., absence of paid work), leisure is time to be spent on activities freely chosen by the individual [Unger & Kernan, 1983]. Not surprisingly, engaging in leisure activities significantly contributes to life satisfaction [Iwasaki & Smale, 1998; Kelly, Steinkamp, & Kelly, 1987]. In the next section, we address two questions: (1) What role does leisure play in the life course of individuals in industrialized countries? (2) How does prolonged longevity influence leisure? As already alluded to in the previous section, we propose that increased longevity results in a stronger segmentation of the life course into a phase of work and family goals, with less of an emphasis on social relations and activities during young and middle adulthood, and a phase of engagement in social activities and leisure after retirement. If we can expect a substantial amount of time of being in good health after retirement, postponing leisure-related goals can look like a solution to the temporal demands of work and family.

Younger and older adults seem to associate retirement with more freedom and self-direction. For instance, Keller, Leventhal, and Larson [1989] asked individuals between 50 and 80 years of age about the subjective meaning of 'old age.' Participants frequently mentioned that old age is a phase of freedom and fewer obligations and offered people a chance to engage in interests and activities of their own choice. In another study, Harris, Begay, and Page [1989] asked older adults between 60 and 92 years of age what advantages they perceived in old age. Again, freedom from work-related obligations, more free time, more autonomy, and the opportunity to participate in relaxing activities were some of the advantages mentioned most frequently. In another study, socializing and having the freedom to shape one's own life were associated with life after retirement [Leventhal, 1984]. Importantly, even young adults expect these advantages when they become retirees. Luszki and Luszki [1985] found in a survey that young adults hope to have fewer demands and responsibilities

in most life domains, fewer worries, more free time, and more freedom in selecting their lifestyle in late adulthood. Thus, there is some empirical support for the assumption that adults associate the time after retirement with the possibility of finally being able to pursue their leisure goals.

According to Robinson and Godbey [1999], contemporary societies view and use leisure primarily as recuperation from work. Following such an instrumental view, leisure should be flexible and adjustable to the circumstances that are constrained by work-related demands. Not surprisingly, many people subjectively suffer from lack of leisure time. In a study of nearly 4,000 working individuals of all income and educational levels, Jäckel and Wollscheid [2007] found that over 66% reported not having enough time for leisure. In addition to this quantitative lack of leisure, there also seems to be a qualitative decrease in leisure time: instead of spending their leisure time actively, by engaging in physical and/or mental activities conducive to subjective well-being and health [Iso-Ahola, 1997], people are more likely to spend their leisure time passively, by consuming media, especially watching television [Robinson & Godbey, 1999], which is not, or even negatively, related to well-being [Frey, Benesch, & Stutzer, 2007].

Given these quantitative and qualitative deficits, it is not surprising that in industrialized countries people frequently mention leisure-related regrets: Roese and Summerville [2005] found that people reported having more regrets about their education, career, romance, parenting, and self than about leisure, but fewer regrets about their finances, family, health, friends, spirituality, or community. On the one hand, the fact that people report regrets in the leisure domain implies that for many people, leisure does not fulfill their expectations. On the other hand, regrets persist in situations in which there remains an opportunity for (corrective) positive action [Roese & Summerville, 2005]. This speaks for a postponement of desired leisure activities until later in life. As Rojek [2004, p. 61] put it: 'It may be, for many people, that the full fruits of labor are only enjoyed *after* retirement.'

Do retired older adults actually engage more frequently in active leisure than younger or middle-aged adults? Lee, Carpenter, and Meyers [2007] found that the media portray older adults as being healthy, active, and happy, enjoying time with friends and family, and competently dealing with growing old. Of 108 older people in television advertisements coded for such stereotypes, 91 percent were identified as 'golden agers.' There is even a new tourist industry emerging for the golden agers, targeting older adults who want to pursue an active lifestyle by traveling [Ylanne-McEwen, 2000]. The image of older adults in the eye of others is also enhanced by the pursuit of an active lifestyle. In a study by Greenlees, Webb, Hall, and Marnley, 2007, individuals of different ages rated three fictitious older adults (aged 65): an exerciser, a non-exerciser, and a person about whom they received no exercise-related information. The older exerciser received more favorable personality and physical appearance ratings than the non-exerciser or the control did. So, an active lifestyle seems to counteract some of the negative age-stereotypes. Wearing [1995] even argued that leisure offers the opportunity to challenge ageism and under-using physical and mental abilities in old age because leisure emphasizes what a person *can* do (rather than what he or she is no longer capable of doing).

There is also evidence that older adults actually spend more time engaging in leisure activities than younger adults do. Verbrugge et al. [1996] found that leisure activities decrease sharply in middle adulthood and increase again after age 60 years.

The drop is probably associated with work- and family-related obligations in middle adulthood [Bittman & Wajcman, 2000], whereas many individuals gain a substantial amount of free time after retirement [Iwasaki & Smale, 1998].

Does having more free time also mean that people engage in more active leisure? There is some evidence that it does, irrespective of age. Jäckel and Wollscheid [2007] investigated differences in leisure activities between individuals who had a lot of free time and those who did not. The former group used their additional free time for more social activities, hobbies, and games instead of more media consumption (although media consumption constituted the greatest part of free time over the entire sample, which was also found in other time-budget studies [e.g., Robinson & Godbey, 1999]). The latter group spent more than half of their free time consuming media and less than one third socializing. These results indicate that older adults profit from the additional free time they have after retiring, because there is an increased likelihood that they will engage in active leisure, which is known to contribute to subjective well-being [Iso-Ahola, 1997].

In sum, there is evidence that the majority of young and middle-aged adults perceive their leisure time as insufficient. Work- and family-related obligations have priority and free time must be adjusted to it, resulting in a decrease in the quantity and quality of leisure activities and predominantly passive leisure activities. Young and middle-aged adults might ask themselves ‘How much time do I have?’ before asking ‘What would I like to do?’ [Cotte & Ratneshwar, 2001]. The trend to reduce leisure time in favor of work and family obligations is boosted further by the normative pressure to be productive in the ‘*productive age*.’ To have a great amount of free time is not normative in young and middle adulthood [Jäckel & Wollscheid, 2007]. In contrast, to have and use free time is seen as legitimate in the golden agers phase, as suggested by the media’s positive portrayal of active leisure-oriented older adults.

The expectation of having more free time after retirement might lead younger and middle-aged adults to focus on work- and family-related demands and to postpone social and leisure activities. This could reinforce the trend to sequence work and leisure with a greater emphasis on work in early and middle adulthood and a greater emphasis on leisure activities after retirement. The consequence might even be a normative pressure to postpone leisure activities until after retirement, and new normative scripts for retired older adults in the sense of meaningful utilization of the gained years. The end of work-related and family-related obligations would be the beginning of leisure-related obligations. Ironically, younger and middle-aged adults might suffer from increased longevity because they feel there will be time for non-work-related activities after retirement. Consequently, people may not experience the positive effects of engaging in leisure activities until they are older adults. Again, as we argued above regarding social contacts, this might be one of the positive aspects of aging that have arisen due to increasing longevity.

Work

Besides family/partnership, the work domain (occupation and success) is arguably one of the most important goal domains for emerging, young, and middle-aged adults until retirement [Nurmi, 1991, 1992]. Not surprisingly, the importance of the

processes of setting goals (selection), pursuing and achieving goals (optimization), as well as maintenance when facing setbacks or decline (compensation) have been studied extensively in the context of work [Abraham & Hansson, 1995; Baltes & Dickson, 2001; Locke & Latham, 2002; Wiese & Freund, 2005; Wiese et al., 2000, 2002; Young et al., 2007]. Does increased longevity affect the interplay of social regulation and self-regulation? How does the extension of life expectancy affect work lives and career paths? In exploring the changes in the work domain that might be associated with an increasing life expectancy, we will not address sociological questions concerning the impact of micro- and macro-economical changes on the structure of the work domain as they are beyond the scope of this paper. Moreover, as we can regard longevity as an enduring process, it poses a long-term challenge to societies and individuals.

The Regulative Function of Work

Career steps and work-related tasks are among the most central structuring forces of modern life. The detrimental consequences of unemployment on various indicators of mental health such as depression, anxiety, low self-esteem, and life satisfaction can be partly attributed to a lack of the structural function of work [Paul & Moser, 2007]. In addition to earning one's living, work provides structure by dividing the day, week, and year into patterns of work and leisure time [Jahoda, 1983, 1995] and by laying out a sequence of career steps and goals from entering an occupation to retirement [Warr, 1987, 2007]. Therefore, according to Fryer [1986; Fryer & Payne, 1986], one of the main problems caused by unemployment is the lack of temporal structure. Without the temporal structure provided by work, the setting of goals and future life planning is impeded to a point at which the proactive shaping of one's future might threaten to collapse. The lack of material and social resources associated with unemployment intensify these detrimental effects [Fryer & Payne, 1984].

Following this perspective, unemployment pares down the scope of an individual's action. The consequences associated with the exclusion from work can be used to infer the structural function of work in western societies. The external structure for individual development provided by the work domain encompasses not only long-term and short-term goals (e.g., career steps and objectives), but also a number of means to attain them (e.g., education, training) and strategies to cope with setbacks and failure (e.g., retraining), which map onto the processes of SOC. Following a certain timeline and sequence of career steps is positively valued and reinforced (e.g., by increased salary or promotions), serving to externally regulate an individual's setting and pursuit of goals. Moreover, organizations and societies offer people the chance to attain goal-relevant means and thereby, again, help them to pursue and attain work-related goals via external regulation.

The Pace of Work Life

The fact that life expectancy is constantly increasing seems to carry the promise of additional time. At first glance, one might assume that the prospect of a higher lifetime budget might ease people's career schedules; in other words, that it might have

a relaxing effect on people's time management in their work lives and career planning. Seneca's argument that the ultimate shortness of our lifetime, i.e., the scarcity of lifetime as a resource, would urge us to carefully and thoughtfully invest our time appears less urgent in the face of longer life expectancy. Do people actually perceive their (life) time budgets to be high enough to allow them to freely spend their time as they wish, as compared to the obligation of permanently using it purposefully [Brannen, 2005]? The opposite seems to be true. A general acceleration has been seen in the work domain as in most other life domains [Borscheid, 2004; Gleick, 1999]. In fact, continuous acceleration is already regarded as a constitutive trait of modernity [Rosa, 2003]. Acceleration is commonly attributed to industrialization, globalization, and technological progress, which are assumed to condense change dynamics [e.g., Borscheid, 2004] and are accompanied by a decrease in traditional social rhythms and shared practices [Perrons, Fagan, McDowell, Ray, & Ward, 2005].

Economic growth and welfare in capitalistic societies are often seen as being associated with this acceleration [Levine & Norenzayan, 1999]. In the social sciences, cultural acceleration is associated with the concept of 'pace of life' – a rather fuzzy construct, defined as the 'relative rapidity or density of experiences, meanings, perceptions and activities' [Werner, Altman, & Oxley, 1985, p. 14]. Empirical assessment of pace of life ranges from walking speed of pedestrians, speed by which a local post clerk performs a standard request, or accuracy of public clocks, although economic productivity emerges as the strongest predictor of pace of life in intercultural comparisons [Levine & Norenzayan, 1999]. Levine and Norenzayan [1999] claimed that the relationship between pace of life and economic productivity is mutually reinforcing: faster places have higher productivity, which raises the value of time and thereby even further increases the pace of life. The consequences of this self-reinforcing circle are mixed. On the one hand, faster places with higher productivity also deliver higher economic rewards in income and are associated with higher subjective well-being. On the other hand, faster pace also results in more stress and higher death rates due to coronary heart disease [Levine & Norenzayan, 1999]. In fact, higher individual pace in the work domain predicts mortality: people whose work life is faster die earlier [Pavalko, Elder, & Clipp, 1993].

Taken together, there are two somewhat opposed phenomena: an extended life expectancy (i.e., increasing lifetime budget and compression of life phases in young and middle adulthood) and an acceleration in (work) life and time pressure. An extended lifetime obviously does not serve as a time buffer. How can this be explained?

One argument is that globalization causes acceleration because people are exposed to ever-increasing competition in finding a job and building a career, which results in time pressure and makes time (i.e., age) a selection criterion. Careers have to be established faster; younger age is seen as an advantage. This could be the case because salaries are lower for younger employees and they have more potential for further upward movement in their careers because their time until retirement is longer and, due to cognitive development in adulthood [e.g., Li et al., 2004], they can acquire new knowledge and skills faster than older adults. Younger people are generally viewed more favorably than older adults [Tuckman & Lorge, 1952], making them, again, more desirable as employees. Being younger, therefore, holds a number of (perceived) advantages, rendering a person more desirable and competitive on the job market. One consequence of this is that the work life becomes more rushed in young adulthood, most likely increasing the pace of work for everyone. Although,

historically, as for standard contracted work, the total amount of hours dedicated to work per year has followed a negative trend [Ausubel & Grübler, 1995], the economic structural change confronts more and more people with increased personal responsibilities concerning their economic value, forcing them to invest more and more time in fulfilling work-related demands, ultimately leading to work permeating into all other life domains (de-bordering) [Hoff, Grote, Dettmer, Hohner, & Olos, 2005]. Increased life expectancy could foster this acceleration because of the prospect of an extended postretirement phase, which allows one to postpone the pursuit of alternative goals in other life domains such as leisure and social relations. In contrast to the view put forth by Riley and Riley [1994, 2000], this development predicts that longer life expectancy will result in greater fragmentation of the life course and in a faster pace in the work domain.

Allocation of Lifetime Budget

Where does the new time go in the realm of work and career? Generally speaking, lifetime budgets have to be allocated to the phases of education, work, and retirement. This allocation takes place as a result of the interplay between personal decisions and social opportunity structures. Western societies generally regulate this allocation via laws such as mandatory schooling for children and adolescents, policies such as offering higher education free of tuition fees at community colleges or universities (as was the case until very recently in Germany), and social expectations (e.g., entering the work force as a young adult [Settersten & Hagestad, 1996b]). Also, labor market demands and the state of the economy often dictate individual work-related decisions [Stier & Lewin-Epstein, 2003].

After analyzing long-term trends in the change of working hours in Great Britain, Ausubel and Grübler [1995] concluded that the total years an average male works in his entire life is much the same nowadays as it was 150 years ago – after increasing from 47 to 52 years of work from the mid-19th century to 1930, it then decreased again to 47 years. In Great Britain in 1856, boys started working at around 10 years of age, with education not being mandatory at that time, and typically did not quit working until they died, usually before 60 years of age. In 1981, years in the labor force were again at 47, while life expectancy had increased to 70 years, leaving around 10 additional years in reasonable health after retirement. Obviously, the initial trend of allocating the gained years to prolonged work lives stopped and even reversed. The additional time gained through longer life expectancy is not used for prolonging the years spent on the labor force: the effective retirement age has declined over the last 25 years [OECD, 2005]. Only recently, demographic developments have triggered a discussion about increasing the mandatory retirement age [see also Kohli, 2000]. At present, the extra time appears to have been added mainly to the retirement phase.

Taken together, it appears that people today spend (relative to their total life time) less time in the work force, but experience pressure to compress more professional achievements into fewer years in early adulthood. In order to achieve their professional goals, people seem to be willing to postpone potentially meaningful personal goals in the social and leisure domains to the retirement years. As life expectancy increases, this implies an extension of the retirement years, a phase in life characterized by only few external regulations regarding the content of goals and the

ways to pursue them. Thus, the retirement phase offers a plethora of possibilities for self-directed engagement, but also places higher demands on self-regulation. The prospect of such an unstructured 'free' life phase after retirement might sustain the compliance to accept workloads that exceed personal preferences [Landers, Rebitzer, & Taylor, 1996].

One could speculate that the compression of work life in the earlier phases of adulthood is related in yet another way to the expanding amount of unstructured time later: the prospect of a long future after retirement that lacks well-defined tasks and occupations might result in uncertainty in younger adults that fosters a preference for highly instrumental goals (such as career goals) that are associated with multipurpose means (such as money). From this perspective, people regard the extended lifetime not only as an opportunity to pursue previously postponed goals, but also as a challenge arising from the lack of clear expectations. This challenge cannot be met by acquiring highly specific resources because one does not yet know what goals one will want to pursue in the future. Instead, to counteract uncertainty, people can best prepare by accumulating resources that can potentially be used for a variety of different goals. Thus, an extended retirement phase might result in an increase in the importance of career goals in younger adulthood. At this point, this is a highly speculative assumption that awaits empirical testing. As Ekerdt [2004] stated, the topic of retirement is already being urged upon young adults more and more, e.g., by pointing to the necessity of financial planning. In analyzing advertisements for financial retirement planning, Ekerdt and Clark [2001] found that retirement is depicted as a very active phase without a clear role definition but characterized by freedom and fun. In order to reach and enjoy this phase, according to the advertisements, people have to work harder and be more disciplined when they are younger. This transmits the image of clearly separated segments: hard work first and self-indulgence later. These advertisements try to sell their products by appealing to the insecurity among young people concerning the preparation for a prosperous retirement. Whether this mechanism is only assumed by the advertisement agencies or actually exists will be determined by the success of the campaigns.

In our view, the extension of life expectancy might only indirectly influence the work domain by offering the prospect of a lot of free time that can be spent pursuing meaningful social and leisure goals. Longer life expectancy increases the post-retirement phase, so a historically relatively new phase emerges in which older adults are relatively healthy and have a lot of unstructured time that is free of work-related obligations. The active role of the individual in shaping his or her development should be particularly important during this phase of the life course. Here, not external structures or constraints, but mainly people themselves guide the selection of their personal goals, decide how to pursue them (optimization), and determine which goals to maintain in the event of setbacks or losses (compensation) or give up in favor of alternative goals (loss-based selection).

Conclusion

Increased life expectancy is likely to have important demographic and economic consequences that are repeatedly highlighted in public discussion stressing the future burden of the 'graying of the population' (i.e., the increasingly larger segment

of older adults relative to younger age groups) in terms of costs to the health care system and retirement funds. Far less prominent is the question concerning how changes in life expectancy and longevity affect life-span development. In this paper, we argued that historical increases in life expectancy primarily have an impact on the later, and less on the earlier, parts of the life span. In our view, increased life expectancy (i.e., living longer and in relatively good health after retirement) is a challenge as well as an opportunity for the positive development of every individual. Most people do not just want to add more years to life, but to add life to those added years.

We have outlined a perspective according to which self-regulation is a key factor for adding life to the additional years in old and very old age. More specifically, we posit that, compared to earlier phases of the life span, the post-retirement years are characterized by fewer social norms and expectations guiding the setting, pursuing, and maintaining of goals, as well as the disengagement from them. We assume that development is regulated by a compensatory relationship of social norms and expectations, on the one hand, and self-regulation, on the other. Older people thus need to structure a life phase that has few constraints due to social norms and expectations themselves. A key component of self-regulation is the selection of personal goals [e.g., Freund et al., 1999]. Other components include optimization (i.e., the acquisition and investment of goal-relevant means) and compensation (i.e., the acquisition and investment of means in the service of maintaining personal goals in the face of loss and decline). Therefore, positive aging relies heavily on these self-regulatory competencies. In our opinion, these competencies should be even more important in old age as compared to younger ages because children and young and middle-aged adults are confronted with much tighter external regulation through social norms and expectations.

On the one hand, older adults have more freedom to set and pursue their personal goals, which represents an opportunity for self-determination, in other words, to live one's life according to one's individual values and interests. This seems to be particularly true in the domain of social relations and leisure. As we have shown in this paper, although these are already important sources of well-being in younger age groups, extensive engagement in leisure activities or friendships is often postponed to post-retirement years due to relatively strict social expectations to pursue goals in the work and family domain. This means that the added years of life expectancy are used to pursue goals conducive to higher levels of subjective and physical well-being, satisfaction with life, and seeing a purpose in life [e.g., Lane, 1994]. In this sense, having a higher life expectancy provides us with an opportunity to live additional years that are fulfilling.

On the other hand, the relative dearth of social norms and expectations results in higher demands on self-regulation by individuals themselves. The strong focus on work and professional goals in early and middle adulthood might be stressful at times. However, as we have shown previously, it also provides structure and guidance. For the individual, having to provide a daily structure of what (and what not) to do and which goals to pursue (and which to abandon) is no easy feat. There are large interindividual differences in how well people can proactively set, pursue, and maintain personal goals. These individual differences are related to indicators of successful development and aging [e.g., Brandtstädter, 2006; Freund & Baltes, 1998, 2002; Gestsdóttir & Lerner, 2007; Rothermund & Brandtstädter, 2003].

Interestingly, there is evidence supporting the view that older adults become more skilled in the development and formulation of personal goals in that they concentrate on goals related to life domains highly important to them and they select goals that are less conflicting and more converging than younger adults do [Freund & Riediger, 2006; Riediger et al., 2005]. This means that older adults might develop skills in self-regulation that are particularly important for positive aging. To our knowledge, there is currently no evidence available that indicates whether this trend continues into very old age. Clearly, further research needs to address the question about whether the fourth age might represent a life phase in which the strong increase in resource losses also limits the possibilities for self-regulation [e.g., Baltes & Smith, 2003]. Ironically, however, the stronger constraints might also relieve older adults of some of the burden of self-regulation. Here, processes of disengagement from unavailable goals might become more and more important for successfully coping with increasing losses [e.g., Brandtstädter, 2006; Heckhausen, 1999].

In this paper, we have put forth a theoretical framework that is supported by empirical evidence, but has not yet been tested directly. The central hypothesis is that self-regulation becomes a more potent predictor of development in later as compared to earlier phases of adulthood. An ideal study to address this question would use a cross-sequential design spanning several decades, allowing researchers to disentangle the effects of age and historical time/cohort and encompassing different life domains. Such studies, however, are not easily feasible as they are very resource demanding. Their high scientific value, however, is exemplified in the very few cross-sequential studies such as the Seattle Longitudinal Study focusing on cognitive development [e.g., Schaie, 2005]. Another possibility to investigate age-differential effects of self-regulation on successful development would be an intervention study training young, middle-aged, and older adults in self-regulatory skills. If our hypothesis is correct, we would expect all age groups to profit from such an intervention, but the older adults should benefit even more than the younger age groups. Furthermore, it would be of great interest to study the assumed mediating processes. For instance: how does the increasing life expectancy impact future time perspective in the different age groups? Are younger persons more likely to postpone certain personal goals, when they are aware of a prolonged retirement phase? In part, such questions could be investigated experimentally. For example, adults of different ages could receive information about different prognoses for life expectancy which should affect future time perspective and the planned timing of personal goals. Such an approach would also complement research on the limitation of future time perspective [e.g., Lang & Carstensen, 2002; Solomon, Greenberg, & Pyszczynski, 1991].

The answer to the question concerning how increased life expectancy affects individual development and positive aging is rather complex. As the demographic changes do not only affect individuals but also the societies in which they live, it is very likely that the aging of the population will also have social consequences. For instance, it might very well be that the retirement age will be postponed, a trend that is already starting in some European countries such as Germany. This would allow healthy older adults to put their professional expertise to use, which might be beneficial both at the individual and the societal levels. Should older adults continue to retire at an age where they can still expect good physical and cognitive functioning, social expectations might arise that they contribute to the common good through active involvement in volunteer work or helping to raise their grandchildren. Inter-

estingly, such a strengthening of the social expectations would lead to a reregulation of the life course in older adulthood, decreasing the importance of self-regulation for this phase of the life span.

Adding years to life is a challenge for successful development because these added years also require higher self-regulation competencies. However, the additional years also provide a chance to pursue goals of high personal importance that were postponed at earlier ages. At least for the healthy years of old age, having the freedom to socialize with friends and to engage in leisure activities that are personally meaningful appears to be something most of us are looking forward to.

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References

- Abraham, J.D., & Hansson, R.O. (1995). Successful aging at work: An applied study of selection, organization, optimization, and compensation through impression management. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences*, 2, 94–103.
- Adams, R.G., & Blieszner, R. (1996). Midlife friendship patterns. In N. Vanzetti, & S. Duck (Eds.), *A lifetime of relationships* (pp. 336–363). Belmont, CA: Thomson Brooks/Cole.
- Ainslie, C., Haslam, N., Loewenstein, G., & Elster, J. (1992). Self-control. In G. Loewenstein, & J. Elster (Eds.), *Choice over time* (pp. 177–209). New York: Russell Sage.
- Allen, T.D., Herst, D.E., Bruck, C.S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology*, 5, 278–308.
- Arnett, J.J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469–480.
- Aryee, S., Fields, D., & Luk, V. (1999). A cross-cultural test of a model of the work-family interface. *Journal of Management*, 25, 491–511.
- Ausubel, J., & Grübler, A. (1995). Working less and living longer: Long-term trends in working time and time budgets. *Technological Forecasting and Social Change*, 50, 195–213.
- Bäckman, L., & Dixon, R.A. (1992). Psychological compensation: A theoretical framework. *Psychological Bulletin*, 112, 1–25.
- Baltes, B.B., & Dickson, M.W. (2001). Using life-span models in industrial-organizational psychology: The theory of selective optimization with compensation. *Applied Developmental Science*, 5, 51–62.
- Baltes, M.M., & Baltes, P.B. (1986). *The psychology of control and aging*. Hillsdale, NJ: Erlbaum.
- Baltes, P.B. (1997). On the incomplete architecture of human ontogeny: Selection, optimization, and compensation as foundation of developmental theory. *American Psychologist*, 52, 366–380.
- 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). New York: Cambridge University Press.
- Baltes, P.B., Lindenberger, U., & Staudinger, U.M. (2006). *Life span theory in developmental psychology*. Hoboken, NJ: Wiley.
- Baltes, P.B., Reese, H.W., & Lipsitt, L.P. (1980). Life-span developmental psychology. *Annual Review of Psychology*, 31, 65–110.
- Baltes, P.B., & Smith, J. (2003). New frontiers in the future of aging: From successful aging of the young old to the dilemmas of the fourth age. *Gerontology*, 49, 123–135.
- Bandura, A. (1969). *Principles of behavior modification*. New York: Holt, Rinehart and Winston.
- Bandura, A. (1995). *Self-efficacy in a changing society*. New York: Cambridge University Press.
- Bargh, J.A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype activation on action. *Journal of Personality and Social Psychology*, 71, 230–244.

- Baruch, Y. (2004). Transforming careers: From linear to multidirectional career paths. *Career Development International*, 9, 58–73.
- Birg, H. (2001). *Die demographische Zeitenwende: Der Bevölkerungsrückgang in Deutschland und Europa* (The demographic turning point: The population decline in Germany and Europe). München, Germany: Beck.
- Bittman, M., & Wajcman, J. (2000). The rush hour: The character of leisure time and gender equity. *Social Forces*, 79, 165–189.
- Borscheid, P. (2004). *Das Tempo-Virus. Eine Kulturgeschichte der Beschleunigung* (The speed virus: A cultural history of speeding up). Frankfurt, Germany: Campus.
- Brandtstädter, J. (1998). Action theory in developmental psychology. In R.M. Lerner (Ed.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (pp. 807–866). New York: Wiley.
- Brandtstädter, J. (2006). Adaptive resources in later life: Tenacious goal pursuit and flexible goal adjustment. In M. Csikszentmihalyi, & I.S. Csikszentmihalyi (Eds.), *A life worth living: Contributions to positive psychology* (pp. 143–164). New York: Oxford University Press.
- Brandtstädter, J., & Lerner, R.M. (1999). *Action and self development: Theory and research through the life span*. Thousand Oaks, CA: Sage.
- Brandtstädter, J., & Rothermund, K. (2003). Intentionality and time in human development and aging: Compensation and goal adjustment in changing developmental contexts. In U.M. Staudinger, & U. Lindenberger (Eds.), *Understanding human development. Dialogues with lifespan psychology* (pp. 105–125). Norwell, MA: Kluwer.
- Brannen, J. (2005). Time and the negotiation of work-family boundaries: Autonomy or illusion? *Time & Society*, 14, 113–131.
- Brewer, M.B., Dull, V., & Lui, L. (1981). Perceptions of the elderly: Stereotypes as prototypes. *Journal of Personality and Social Psychology*, 41, 656–670.
- Brim, O.G., Jr. (1992). *Ambition: How we manage success and failure throughout our lives*. New York: Basic Books.
- Brückner, H., & Mayer, K.U. (2005). De-standardization of the life course: What it might mean? And if it means anything, whether it actually took place? *Advances in Life Course Research*, 9, 27–53.
- Brunstein, J.C., Schultheiss, O.C., & Maier, G.W. (1999). The pursuit of personal goals: A motivational approach to well-being and life adjustment. In J. Brandtstädter, & R.M. Lerner (Eds.), *Action and self-development: Theory and research through the life span* (pp. 169–196). Thousand Oaks, CA: Sage.
- Bumpass, L.L., Sweet, J.A., & Cherlin, A. (1991). The role of cohabitation in declining rates of marriage. *Journal of Marriage and the Family*, 53, 913–927.
- Carstensen, L.L., Fung, H.H., & Charles, S.T. (2003). Socioemotional selectivity theory and the regulation of emotion in the second half of life. *Motivation and Emotion*, 27, 103–123.
- Carstensen, L.L., Gottman, J.M., & Levenson, R.W. (1995). Emotional behavior in long-term marriage. *Psychology and Aging*, 10, 140–149.
- Carstensen, L.L., Hanson, K.A., & Freund, A.M. (1995). Selection and compensation in adulthood. In R.A. Dixon & L. Bäckman (Eds.), *Compensating for psychological deficits and declines: Managing losses and promoting gains* (pp. 107–126). Mahwah, NJ: Erlbaum.
- Carstensen, L.L., Isaacowitz, D.M., & Charles, S.T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist*, 54, 165–181.
- Cavallero, P., Morino-Abbele, F., & Bertocci, B. (2007). The social relations of the elderly. *Archives of Gerontology and Geriatrics*, 44, 97–100.
- Cherlin, A.J. (2004). The deinstitutionalization of American marriage. *Journal of Marriage and Family*, 66, 848–861.
- Coontz, S. (2007). The origins of modern divorce. *Family Process*, 46, 7–16.
- Cotte, J., & Ratneshwar, S. (2001). Timestyle and leisure decisions. *Journal of Leisure Research*, 33, 396–409.
- Cummings, E., & Henry, W.E. (1961). *Growing old: The process of disengagement*. New York: Basic Books.
- Diener, E., & Seligman, M.E.P. (2002). Very happy people. *Psychological Science*, 13, 81–84.
- Dublin, L.I. (1928). *Health and wealth: A survey of the economics of world health*. New York: Harper.
- Ebner, N.C., Freund, A.M., & Baltes, P.B. (2006). Developmental changes in personal goal orientation from young to late adulthood: From striving for gains to maintenance and prevention of losses. *Psychology and Aging*, 21, 664–678.
- Ehrenberg, A. (2004). *Das erschöpfte Selbst: Depression und Gesellschaft in der Gegenwart* (The exhausted self: Depression and society in the present). Frankfurt am Main, Germany: Campus.
- Ekerdt, D.J. (2004). Born to retire: The foreshortened life course. *The Gerontologist*, 44, 3–9.
- Ekerdt, D.J., & Clark, E. (2001). Selling retirement in financial planning advertisements. *Journal of Aging Studies*, 15, 55–68.

- Elchardus, M., & Smits, W. (2006). The persistence of the standardized life cycle. *Time & Society*, 15, 303–326.
- Emmons, R.A. (1996). Striving and feeling: Personal goals and subjective well-being. In P.M. Gollwitzer, & J.A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior* (pp. 313–337). New York: Guilford Press.
- Erikson, E.H. (1968). *Identity: Youth and crisis*. New York: Norton.
- Federal Statistical Office (2007). *Eheschliessungen und Ehescheidungen* (Marriages and divorces). http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/DE/Content/Statistiken/Bevoelkerung/EheschliessungenScheidungen/Tabellen/Content50/Eheschlie_C3_9_FungenScheidungen,templateId=renderPrint.psml (accessed February 11, 2008).
- Fiebert, M.S., & Wright, K.S. (1989). Midlife friendships in an American faculty sample. *Psychological Reports*, 64, 1127–1130.
- Finkel, E.J., & Campbell, W.K. (2001). Self-control and accommodation in close relationships: An interdependence analysis. *Journal of Personality and Social Psychology*, 81, 263–277.
- Frank, L.K. (1939). Time perspectives. *Journal of Social Philosophy*, 4, 293–312.
- Freund, A.M. (1997). Individuating age-salience: A psychological perspective on the salience of age in the life course. *Human Development*, 40, 287–292.
- Freund, A.M. (2001). Developmental psychology of life-management. In N.J. Smelser, & P.B. Baltes (Eds.), *International encyclopedia of the behavioral and social sciences* (Vol. 13, pp. 8827–8832). Oxford: Elsevier Science.
- Freund, A.M. (2003). Die Rolle von Zielen für die Entwicklung (The role of goals for development). *Psychologische Rundschau*, 54, 233–242.
- Freund, A.M. (2006). Age-differential motivational consequences of optimization versus compensation focus in younger and older adults. *Psychology and Aging*, 21, 240–252.
- Freund, A.M. (2008). Successful aging as management of resources: The role of selection, and optimization, and compensation. *Research on Human Development*, 5, 94–106.
- Freund, A.M., & Baltes, P.B. (1998). Selection, optimization, and compensation as strategies of life management: Correlations with subjective indicators of successful aging. *Psychology and Aging*, 13, 531–543.
- Freund, A.M., & Baltes, P.B. (2000). The orchestration of selection, optimization, and compensation: An action-theoretical conceptualization of a theory of developmental regulation. In W.J. Perrig, & A. Grob (Eds.), *Control of human behavior, mental processes and consciousness* (pp. 35–58). Mahwah, NJ: Erlbaum.
- Freund, A.M., & Baltes, P.B. (2002). The adaptiveness of selection, optimization, and compensation as strategies of life management: Evidence from a preference study on proverbs. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences*, 57, 426–434.
- Freund, A.M., & Baltes, P.B. (2005). Entwicklungsaufgaben als Organisationsstrukturen von Entwicklung und Entwicklungsoptimierung (Developmental tasks as organizing structures of development). In S.H. Filipp, & U.M. Staudinger (Eds.), *Enzyklopädie der Psychologie: Entwicklungspsychologie* (Vol. 6, pp. 35–78). Göttingen, Germany: Hogrefe.
- Freund, A.M., & Baltes, P.B. (2007). Toward a theory of successful aging: Selection, optimization, and compensation. In R. Fernandez-Ballesteros (Ed.), *Geropsychology: European perspective for an ageing world* (pp. 239–254). Ashland, OH: Hogrefe.
- Freund, A.M., & Ebner, N.C. (2005). The aging self: Shifting from promoting gains to balancing losses. In W. Greve, K. Rothermund, & D. Wentura (Eds.), *The adaptive self: Personal continuity and intentional self-development* (pp. 185–202). Ashland, OH: Hogrefe.
- Freund, A.M., Li, K.Z.H., & Baltes, P.B. (1999). Successful development and aging: The role of selection, optimization, and compensation. In J. Brandtstädter, & R.M. Lerner (Eds.), *Action and self-development: Theory and research through the life span* (pp. 401–434). Thousand Oaks, CA: Sage.
- Freund, A.M., & Riediger, M. (2003). Successful aging. In R.M. Lerner, A. Easterbrooks, & J. Mistry (Eds.), *Handbook of psychology* (Vol. 6: Developmental psychology, pp. 601–628). New York: Wiley.
- Freund, A.M., & Riediger, M. (2006). Goals as building blocks of personality and development in adulthood. In D. Mroczek, & T.D. Little (Eds.), *Handbook of personality development* (pp. 353–372). Mahwah, NJ: Erlbaum.
- Frey, B.S., Benesch, C., & Stutzer, A. (2007). Does watching TV make us happy? *Journal of Economic Psychology*, 28, 283–313.
- Fries, E.F. (1980). Aging, natural death, and the compression of morbidity. *The New England Journal of Medicine*, 303, 130–135.
- Fryer, D. (1986). Employment deprivation and personal agency during unemployment: A critical discussion of Jahoda's explanation of the psychological effects of unemployment. *Social Behaviour*, 1, 3–23.

- Fryer, D., & Payne, R. (1984). Proactive behaviour in unemployment: Findings and implications. *Leisure Studies*, 3, 273–295.
- Fryer, D., & Payne, R. (1986). Being unemployed: A review of the literature on the psychological experience of unemployment. In C.L. Cooper, & I.T. Robertson (Eds.), *International review of industrial and organizational psychology* (pp. 235–278). Chichester, UK: Wiley.
- Gestsdóttir, S., & Lerner, R.M. (2007). Intentional self-regulation and positive youth development in early adolescence: Findings from the 4-H Study of Positive Youth Development. *Developmental Psychology*, 43, 508–521.
- Gleick, J. (1999). *Faster: The acceleration of just about everything*. London: Little.
- Goldstein, J.R., & Kenney, C.T. (2001). Marriage delayed or marriage forgone? New cohort forecasts of first marriage for US women. *American Sociological Review*, 66, 506–519.
- Gottman, J.M., & Levenson, R.W. (1992). Marital processes predictive of later dissolution: Behavior, physiology, and health. *Journal of Personality and Social Psychology*, 63, 221–233.
- Greenlees, I., Webb, H., Hall, B., & Marnley, A. (2007). Curmudgeon or golden-ager? Reported exercise participation influences the perception of older adults. *Journal of Sport and Exercise Psychology*, 29, 333–347.
- Grzywacz, J.G. (2000). Work-family spillover and health during midlife: Is managing conflict everything? *American Journal of Health Promotion*, 14, 236–243.
- Hammer, T.H., Saksvik, P.O., Nytrøe, K., Torvatn, H., & Bayazit, M. (2004). Expanding the psychosocial work environment: Workplace norms and work-family conflict as correlates of stress and health. *Journal of Occupational Health Psychology*, 9, 83–97.
- Harris, M.B., Begay, C., & Page, P. (1989). Activities, family relationships and feelings about aging in a multicultural elderly sample. *International Journal of Aging and Human Development*, 29, 103–117.
- Havighurst, R.J., & Albrecht, R. (1953). *Older people*. New York: Longmans Green.
- Heckhausen, H. (1989). *Motivation und Handeln* (Motivation and action). Berlin: Springer.
- Heckhausen, J. (1997). Developmental regulation across adulthood: Primary and secondary control of age-related challenges. *Developmental Psychology*, 33, 176–187.
- Heckhausen, J. (1999). *Developmental regulation in adulthood: Age-normative and sociostructural constraints as adaptive challenges*. New York: Cambridge University Press.
- Heckhausen, J., Dixon, R.A., & Baltes, P.B. (1989). Gains and losses in development throughout adulthood as perceived by different adult age groups. *Developmental Psychology*, 25, 109–121.
- Heckhausen, J., & Krueger, J. (1993). Developmental expectations for the self and most other people: Age-grading in three functions of social comparison. *Developmental Psychology*, 29, 539–548.
- Heckhausen, J., & Schulz, R. (1995). A life-span theory of control. *Psychological Review*, 102, 284–304.
- Hiedemann, B., Suhomlinova, O., & O’Rand, A.M. (1998). Economic independence, economic status, and empty nest in midlife marital disruption. *Journal of Marriage and the Family*, 60, 219–231.
- Higgins, E. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280–1300.
- Hoem, J.M., & Rennermalm, B. (1985). Modern family initiation in Sweden: Experience of women born between 1936 and 1960. *European Journal of Population*, 1, 81–112.
- Hoff, E.H., Grote, S., Dettmer, S., Hohner, H.U., & Olos, L. (2005). Work-life balance: Professional and private life arrangement forms of women and men in highly qualified professions. *Zeitschrift für Arbeits- und Organisationspsychologie*, 49, 196–207.
- Human Mortality Database (2007). Mortality reports. <http://www.mortality.org> (accessed January 8, 2007).
- Hummert, M.L. (1990). Multiple stereotypes of elderly and young adults: A comparison of structure and evaluations. *Psychology and Aging*, 5, 182–193.
- Imhof, A.E. (1981). *Die gewonnenen Jahre: von der Zunahme unserer Lebensspanne seit dreihundert Jahren oder von der Notwendigkeit einer neuen Einstellung zu Leben und Sterben* (The won years: About the increase of our life-span for the last three hundred years or the necessity of a new attitude towards life and dying). München, Germany: Beck.
- Iso-Ahola, S.E. (1997). A psychological analysis of leisure and health. In J.T. Haworth (Ed.), *Work, leisure and well-being* (pp. 131–144). London: Routledge.
- Iwasaki, Y., & Smale, B.J.A. (1998). Longitudinal analyses of the relationships among life transitions, chronic health problems, leisure, and psychological well-being. *Leisure Sciences*, 20, 25–52.
- Jäckel, M., & Wollscheid, S. (2007). Time is money and money needs time? A secondary analysis of time-budget data in Germany. *Journal of Leisure Research*, 39, 86–108.
- Jahoda, M. (1983). *Wieviel Arbeit braucht der Mensch? Arbeit und Arbeitslosigkeit im 20. Jahrhundert* (How much work does man need? Work and unemployment in the 20th century). Weinheim, Germany: Beltz.
- Jahoda, M. (1995). Manifest and latent functions of work. In N. Nicholson (Ed.), *Encyclopedic Dictionary of Organisational Behaviour* (pp. 317–318). Oxford: Blackwell.

- Jopp, D., & Smith, J. (2006). Resources and life-management strategies as determinants of successful aging: On the protective effect of selection, optimization, and compensation. *Psychology and Aging, 21*, 253–265.
- Kawakami, K., Young, H., & Dovidio, J.F. (2002). Automatic stereotyping: Category, trait, and behavioral activations. *Personality and Social Psychology Bulletin, 28*, 3–15.
- Keller, M.L., Leventhal, E.A., & Larson, B. (1989). Aging: The lived experience. *International Journal of Aging and Human Development, 29*, 67–82.
- Kelly, J.R., Steinkamp, M.W., & Kelly, J.R. (1987). Later-life satisfaction: Does leisure contribute? *Leisure Sciences, 9*, 189–199.
- Kirkwood, T.B. (2005). Understanding the odd science of aging. *Cell, 120*, 437–447.
- Klein, T., Lengerer, A., & Uzelac, M. (2002). Partnerschaftliche Lebensformen im internationalen Vergleich (Life forms in partnership in international comparison). *Zeitschrift für Bevölkerungswissenschaft, 3*, 359–379.
- Klinger, E. (1977). *Meaning and void: Inner experience and the incentives in people's lives*. Minneapolis, MN: University of Minnesota Press.
- Kohli, M. (2000). Altersgrenzen als gesellschaftliches Regulativ individueller Lebensgestaltung: ein Anachronismus? (Age boundaries as a regulation of individual life courses: An anachronism?). *Zeitschrift für Gerontologie und Geriatrie, 33*, 15–23.
- Kohli, M. (2003). Der institutionalisierte Lebenslauf: ein Blick zurück und nach vorn (The institutionalised life-course: A look behind and forward). In J. Allmendinger (Ed.), *Entstaatlichung und soziale Sicherheit. Verhandlungen des 31. Kongresses der Deutschen Gesellschaft für Soziologie in Leipzig 2002* (pp. 525–545). Opladen, Germany: Leske.
- Kossek, E.E., & Ozeki, C. (1998). Work-family conflict, policies, and the job-life satisfaction relationship: A review and directions for organizational behavior-human resources research. *Journal of Applied Psychology, 83*, 139–149.
- Krueger, J., Heckhausen, J., & Hundertmark, J. (1995). Perceiving middle-aged adults: Effects of stereotype-congruent and incongruent information. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 50*, 82–93.
- Labouvie-Vief, G. (1981). Proactive and reactive aspects of constructivism: Growth and aging in life-span perspective. In R.M. Lerner, & N.A. Busch-Rossnagel (Eds.), *Individuals as producers of their development* (pp. 197–230). New York: Academic Press.
- Landers, R.M., Rebitzer, J.B., & Taylor, L.J. (1996). Rat race redux: Adverse selection in the determination of work hours in law firms. *The American Economic Review, 86*, 329–348.
- Lane, R.E. (1994). The road not taken: Friendship, consumerism, and happiness. *Critical Review, 8*, 521–554.
- Lang, F.R., & Carstensen, L.L. (2002). Time counts: Future time perspective, goals, and social relationships. *Psychology and Aging, 17*, 125–139.
- Lang, F.R., Rieckmann, N., & Baltes, M.M. (2002). Adapting to aging losses: Do resources facilitate strategies of selection, compensation, and optimization in everyday functioning? *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 57*, 501–509.
- Lauer, R.H., Lauer, J.C., & Kerr, S.T. (1990). The long-term marriage: Perceptions of stability and satisfaction. *International Journal of Aging and Human Development, 31*, 189–195.
- Lawton, P.M. (1990). Residential environment and self-directedness among older people. *American Psychologist, 45*, 638–640.
- Lee, M.M., Carpenter, B., & Meyers, L.S. (2007). Representations of older adults in television advertisements. *Journal of Aging Studies, 21*, 23–30.
- Lemon, B.W., Bengtson, V.L., & Peterson, J.A. (1972). An exploration of the activity theory of aging: Activity types and life satisfaction among in-movers to a retirement community. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 27*, 511–523.
- Lerner, R.M., & Busch-Rossnagel, N.A. (1981). Individuals as producers of their development: Conceptual and empirical bases. In R.M. Lerner, & N.A. Busch-Rossnagel (Eds.), *Individuals as producers of their development: A life-span perspective* (pp. 1–36). New York: Academic Press.
- Lerner, R.M., Freund, A.M., De Stefanis, I., & Habermas, T. (2001). Understanding developmental regulation in adolescence: The use of the selection, optimization, and compensation model. *Human Development, 44*, 29–50.
- Lesthaeghe, R. (2000). *Europe's demographic issues: Fertility, household formation and replacement migration: Interface demography*. Vrije Universiteit Brussel, Belgium: Vakgroep Bevolkingswetenschappen, Universiteit Gent.
- Lesthaeghe, R., Mason, K.O., & Jensen, A.M. (1995). *Gender and family change in industrialized countries*. Oxford: Oxford University Press.
- Leventhal, E.A. (1984). Aging and the perception of illness. *Research on Aging, 6*, 119–135.
- Levine, R.V., & Norenzayan, A. (1999). The pace of life in 31 countries. *Journal of Cross-Cultural Psychology, 30*, 178–205.

- Levinson, D.J. (1986). A conception of adult development. *American Psychologist*, *41*, 3–13.
- Lewin, K. (1935). *A dynamic theory of personality*. New York: McGraw Hill.
- Lewin, K. (1948). Time perspective and morale. In G. Weiss-Lewin (Ed.), *Resolving social conflicts* (pp. 103–124). New York: Harper.
- Li, S.C., Lindenberger, U., Hommel, B., Aschersleben, G., Prinz, W., & Baltes, P.B. (2004). Transformations in the couplings among intellectual abilities and constituent cognitive processes across the life span. *Psychological Science*, *15*, 155–163.
- Little, B. (1989). Personal projects analysis: Trivial pursuits, magnificent obsessions, and the search for coherence. In D.M. Buss, & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions* (pp. 15–31). New York: Springer.
- Locke, E.A., & Latham, G.P. (2002). Building a practically useful theory of goal setting and task motivation. A 35-year odyssey. *The American Psychologist*, *57*, 705–717.
- Loewenstein, G., Read, D., & Baumeister, R. (2003). *Decision and time*. New York: Sage.
- Lucke, J.C., & Hall, W. (2005). Who wants to live forever? *EMBO Reports*, *6*, 98–102.
- Luski, M., & Luski, W. (1985). Advantages of growing older. *Journal of the American Geriatrics Society*, *33*, 216–217.
- Maier, H., & Klumb, P.L. (2005). Social participation and survival at older ages: Is the effect driven by activity content or context? *European Journal of Ageing*, *2*, 31–39.
- Maier, H., & Smith, J. (1999). Psychological predictors of mortality in old age. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences*, *54*, 44–54.
- Metcalf, J., & Mischel, W. (1999). A hot/cool-system analysis of delay of gratification: Dynamics of willpower. *Psychological Review*, *106*, 3–19.
- Meyer, J.W. (2000). Globalization: Sources and effects on national states and societies. *International Sociology*, *15*, 233–248.
- Miller, R.S. (1997). Inattentive and contented: Relationship commitment and attention to alternatives. *Journal of Personality and Social Psychology*, *73*, 758–766.
- Mischel, W. (1968). *Personality and assessment*. New York: Wiley.
- Mischel, W., Shoda, Y., & Rodriguez, M.I. (1989). Delay of gratification in children. *Science*, *244*, 933–938.
- Muraven, M. (1999). Longitudinal improvement of self-regulation through practice: Building self-control strength through repeated exercise. *Journal of Social Psychology*, *139*, 446–457.
- Neugarten, B.L. (1968). Adult personality: Toward a psychology of the life cycle. In B.L. Neugarten (Ed.), *Middle age and aging: A reader in social psychology* (pp. 137–147). Chicago: University of Chicago Press.
- Neugarten, B.L., Moore, J.W., & Lowe, J.C. (1965). Age norms, age constraints, and adult socialization. *American Journal of Sociology*, *70*, 710–717.
- Nurmi, J.E. (1991). *The development of future-orientation in a life-span context*. Helsinki, Finland: University of Helsinki.
- Nurmi, J.E. (1992). Age differences in adult life goals, concerns, and their temporal extension: A life course approach to future-oriented motivation. *International Journal of Behavioral Development*, *15*, 487–508.
- Nuttin, J. (1964). The future time perspective in human motivation and learning. *Acta Psychologica*, *23*, 60–82.
- Oeppen, J., & Vaupel, J.W. (2002). Demography: Broken limits to life expectancy. *Science*, *296*, 1029–1031.
- Office for National Statistics, UK (2005). *First marriages: Age and sex (England and Wales): Population Trends 130*. <http://www.statistics.gov.uk/statbase/ssdataset.asp?vlnk=9554> (accessed February 11, 2008).
- Olshansky, S.J., Carnes, B.A., & Cassel, C. (1990). In search of Methuselah: Estimating the upper limits to human longevity. *Science*, *250*, 634–640.
- Olshansky, S.J., Carnes, B.A., & Desesquelles, A. (2001). Prospects for human longevity. *Science*, *291*, 1491–1492.
- Organization for Economic Cooperation and Development (2005). *Ageing and Employment Policies – Statistics on Average effective age of retirement*. http://www.oecd.org/document/47/0,3343,en_2649_37419_39371887_1_1_1_37419,00.html (accessed October 1, 2008).
- Oswald, F. (1991). Das persönliche Altersbild älterer Menschen (The personal view of aging of elderly people). *Zeitschrift für Gerontologie*, *24*, 276–284.
- Paul, K.I., & Moser, K. (2007). Arbeitslosigkeit (Unemployment). In K. Moser (Ed.), *Wirtschaftspsychologie* (pp. 285–305). Heidelberg, Germany: Springer.
- Pavalko, E.K., Elder G.H., Jr., & Clipp, E.C. (1993). Work lives and longevity: Insights from a life course perspective. *Journal of Health and Social Behavior*, *34*, 363–380.
- Perrons, D., Fagan, C., McDowell, L., Ray, K., & Ward, K. (2005). Work, life and time in the new economy. *Time & Society*, *14*, 51–64.

- Ravanera, Z.R., Rajulton, F., & Burch, T.K. (2004). Patterns of age variability in life course transitions. *Canadian Journal of Sociology, 29*, 527–542.
- Riediger, M., & Freund, A.M. (2006). Focusing and restricting: Two aspects of motivational selectivity in adulthood. *Psychology and Aging, 21*, 173–185.
- Riediger, M., & Freund, A.M. (2008). Me against myself: Motivational conflicts and emotional development in adulthood. *Psychology and Aging, 23*, 479–494.
- Riediger, M., Freund, A.M., & Baltes, P.B. (2005). Managing life through personal goals: Intergoal facilitation and intensity of goal pursuit in younger and older adulthood. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 60*, 84–91.
- Riley, M.W. (1998). *The hidden age revolution: Emergent integration of all ages*. New York: Center for Policy Research, Syracuse University.
- Riley, M.W., Kahn, R.L., & Foner, A. (1994). *Age and structural lag*. New York: Wiley.
- Riley, M.W., & Riley, J.W. (1994). Age integration and the lives of older people. *The Gerontologist, 34*, 110–115.
- Riley, M.W., & Riley, J.W. (2000). Age integration: Conceptual and historical background. *The Gerontologist, 40*, 266–270.
- Rindfuss, R.R., & Brewster, K.L. (1996). Childrearing and fertility. *Population and Development Review, 22*, 258–289.
- Roberts, B.W., & Robins, R.W. (2000). Broad dispositions, broad aspirations: The intersection of personality traits and major life goals. *Personality and Social Psychology Bulletin, 26*, 1284–1296.
- Robinson, J.O., & Godbey, G.C. (1999). *Time for life: The surprising ways Americans use their time (Ed 2)*. University Park, PA: Pennsylvania State University Press.
- Roose, N.J., & Summerville, A. (2005). What we regret most... and why. *Personality and Social Psychology Bulletin, 31*, 1273–1285.
- Rojek, C. (2004). Postmodern work and leisure. In J.T. Haworth, & A.J. Veal (Eds.), *Work and leisure* (pp. 51–66). New York: Routledge.
- Rosa, H. (2003). Social acceleration: Ethical and political consequences of a desynchronized high-speed society. *Constellations, 10*, 3–33.
- Rothermund, K., & Brandtstädter, J. (2003). Depression in later life: Cross-sequential patterns and possible determinants. *Psychology and Aging, 18*, 80–90.
- Ryff, C.D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*, 1069–1081.
- Schaie, K.W. (2005). *Developmental influences on adult intellectual development: The Seattle Longitudinal Study*. New York: Oxford University Press.
- Settersten, R.A. (1997). The salience of age in the life course. *Human Development, 40*, 257–281.
- Settersten, R.A., & Hagestad, G.O. (1996a). What's the latest? Cultural age deadlines for educational and work transitions. *The Gerontologist, 36*, 602–613.
- Settersten, R.A., & Hagestad, G.O. (1996b). What's the latest? Cultural age deadlines for family transitions. *The Gerontologist, 36*, 178–188.
- Skinner, E.A., Chapman, M., & Baltes, P.B. (1988). Children's beliefs about control, means-ends, and agency: Developmental differences during middle childhood. *International Journal of Behavioral Development, 11*, 369–388.
- Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A terror management theory of social behavior: The psychological functions of self-esteem and cultural worldviews. In P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 91–159). San Diego, CA: Academic Press.
- South, S.J., & Lloyd, K.M. (1995). Spousal alternatives and marital dissolution. *American Sociological Review, 60*, 21–35.
- Staudinger, U.M., Marsiske, M., & Baltes, P.B. (1995). Resilience and reserve capacity in later adulthood: Potentials and limits of development across the life span. In D. Cicchetti, & D. Cohen (Eds.), *Developmental psychopathology* (Vol. 2: Risk, disorder, and adaptation, pp. 801–847). New York: Wiley.
- Stier, H., & Lewin-Epstein, N. (2003). Time to work: A comparative analysis of preferences for working hours. *Work and Occupations, 30*, 302–326.
- Stolzenberg, R.M., & Waite, L.J. (2005). Effects of marriage, divorce, and widowhood on health. In S.M. Bianchi, L.M. Casper, & B.R. King (Eds.), *Work, family, health, and well-being* (pp. 361–377). Mahwah, NJ: Erlbaum.
- Trommsdorff, G., & Nauck, B. (2006). Demographic changes and parent-child relationships. *Parenting: Science and Practice, 6*, 343–360.
- Trope, Y., & Liberman, N. (2003). Temporal construal. *Psychological Review, 110*, 403–421.
- Tuckman, J., & Lorge, I. (1952). Attitudes toward older workers. *Journal of Applied Psychology, 36*, 149–153.
- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science, 211*, 453–458.

- Unger, L.S., & Kernan, J.B. (1983). On the meaning of leisure: An investigation of some determinants of the subjective experience. *Journal of Consumer Research*, 9, 381–392.
- United Nations, Population Division, DESA (2002). *World population aging: 1950–2050*. New York: United Nations.
- US Bureau of the Census (2003). *Annual social and economic supplement 2003*. <http://www.census.gov/population/socdemo/hh-fam/tabMS-2.pdf> (accessed February 11, 2008).
- Vaupel, J.W., Baudisch, A., Dölling, M., Roach, D.A., & Gampe, J. (2004). The case for negative senescence. *Theoretical Population Biology*, 65, 339–351.
- Verbrugge, L.M., Gruber-Baldini, A.L., & Fozard, J.L. (1996). Age differences and age changes in activities: Baltimore Longitudinal Study of Aging. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences*, 51, 30–41.
- Vohs, K.D., & Ciarocco, N.J. (2004). Interpersonal functioning requires self-regulation. In R.F. Baumeister, & K.D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 392–407). New York: Guilford.
- Warr, P. (1987). *Work, unemployment, and mental health*. New York: Oxford University Press.
- Warr, P. (2007). *Work, happiness, and unhappiness*. Mahwah, NJ: Erlbaum.
- Wearing, B. (1995). Leisure and resistance in an ageing society. *Leisure Studies*, 14, 263–279.
- Werner, C.M., Altman, I., & Oxley, D. (1985). Temporal aspects of homes: A transactional perspective. *Home Environments*, 8, 1–32.
- Wiese, B.S. (2004). Konflikte zwischen Beruf und Familie im Alltagserleben erwerbstätiger Paare: Querschnittliche und prozessuale Analysen (Work-family conflicts of dual-earner couples: Cross-sectional and process analyses). *Zeitschrift für Sozialpsychologie*, 35, 45–58.
- Wiese, B.S. (2005). Negative career consequences of maternity leaves in public and private companies: Personnel managers' risk estimates. *Zeitschrift für Personalpsychologie*, 4, 116–122.
- Wiese, B.S. (2007). Work-life balance. In K. Moser (Ed.), *Lehrbuch der Wirtschaftspsychologie* (pp. 245–263). Göttingen, Germany: Hogrefe.
- Wiese, B.S., & Freund, A.M. (2005). Goal progress makes one happy, or does it? Longitudinal findings from the work domain. *Journal of Occupational and Organizational Psychology*, 78, 287–304.
- Wiese, B.S., & Freund, A.M. (2008). Vereinbarkeit von Beruf und Familie (combining work and family). In D. Läge & A. Hirschi (Eds.), *Berufliche Übergänge. Grundlagen für die Berufs-, Studien- und Laufbahnberatung* (pp. 191–212). Zürich: LIT.
- Wiese, B.S., Freund, A.M., & Baltes, P.B. (2000). Selection, optimization, and compensation: An action-related approach to work and partnership. *Journal of Vocational Behavior*, 57, 273–300.
- Wiese, B.S., Freund, A.M., & Baltes, P.B. (2002). Subjective career success and emotional well-being: Longitudinal predictive power of selection, optimization and compensation. *Journal of Vocational Behavior*, 60, 321–335.
- Wilson, K.L., Charker, J., Lizzio, A., Halford, K., & Kimlin, S. (2005). Assessing how much couples work at their relationship: The behavioral self-regulation for effective relationships scale. *Journal of Family Psychology*, 91, 385–393.
- Wrosch, C., & Freund, A.M. (2001). Self-regulation of normative and non-normative developmental challenges. *Human Development*, 44, 264–283.
- Ylance-McEwen, Y. (2000). Golden times for golden agers: Selling holidays as lifestyle for the over 50s. *Journal of Communication*, 50, 83–99.
- Young, L.M., Baltes, B.B., & Pratt, A.K. (2007). Using selection, optimization, and compensation to reduce job/family stressors: Effective when it matters. *Journal of Business and Psychology*, 21, 511–539.
- Zepelin, H.R., Sills, A., & Heath, M.W. (1986–87). Is age becoming irrelevant? An exploratory study of perceived age norms. *Journal of Aging and Human Development*, 24, 241–256.
- Zimbardo, P.G., & Boyd, J.N. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77, 1271–1288.