

Control Processes Before and After Passing a Developmental Deadline: Activation and Deactivation of Intimate Relationship Goals

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This study addressed activation and deactivation of partnership goals in a sample of 116 recently separated or committed individuals in young adulthood and late midlife. Across adulthood, the opportunities for forming a partnership decrease dramatically. The authors argue that such deteriorating opportunity structures (developmental deadlines) call for a shift from goal realization efforts to goal disengagement. The findings showed that younger as compared with older separated persons more frequently reported partnership goals, expressed greater control striving for partnership realization, and responded more to positive than to negative information about partnerships. Separated persons in late midlife disengaged from partnership goals and redirected their resources to other social domains. A longitudinal follow-up at 15 months showed that age differences in control processes were related to improvement in emotional well-being of separated individuals.

This study examined activation and deactivation of relationship goals as a function of life-course-related differences in opportunity structures for the formation of an intimate partnership. A model of action phases involved in developmental regulation (J. Heckhausen, 1999; Wrosch & Heckhausen, in press) was applied to the partnership domain, and hypotheses about the activation and deactivation of partnership goals around a developmental deadline were put to an empirical test. Considering decreasing opportunities for partnership formation across the life span (e.g., Braun & Proebsting, 1986; Chase-Lansdale & Hetherington, 1990), adaptive control processes are proposed for separated individuals in early adulthood and late midlife. In the case of separation in early adulthood, individuals face a favorable opportunity structure for the formation of a partnership. Separated individuals in late midlife, by contrast, confront a sharply reduced “marriage market.” Therefore, we expected that individuals in early adulthood would strive to realize a new partnership, whereas individuals in late midlife would disengage from partnership goals. In addition, we examined whether age-adjusted control processes are related to improvement of psychological well-being in separated individuals over time.

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Developmental Deadlines

Individuals are active agents in their own development (Lerner & Busch-Rossnagel, 1981). They select goals, strive for their attainment, and cope with the negative consequences resulting from failure and loss. Across the human life course, the individual negotiates an age-graded sequence of developmental tasks (Erikson, 1968; Havighurst, 1953). These developmental tasks often have normative age ranges for their realization. We propose that the normative age ranges for developmental tasks have more or less strict upper boundaries, which we refer to as “developmental deadlines” (J. Heckhausen, 1999; Wrosch, 1999). As a general rule, passing a developmental deadline implies diminishing opportunity structures for goal attainment. Thus, the opportunities for realizing a specific goal or developmental task are radically reduced. A prototypical deadline is the running down of the “biological clock,” restricting the life span timing for childbearing. By their mid to late 40s, women’s fertility decreases so that bearing a child becomes almost impossible without extensive medical intervention. Other deadline phenomena may relate to family (marriage), career (final promotion), or property (buying a home; e.g., Settersten & Hagestad, 1996).

In a given historical context, biological, sociostructural, and age-normative factors together determine age-graded constraints in opportunity structures (Baltes, 1987; Hagestad, 1990; Neugarten, 1969). Developmental deadlines for different goals vary with respect to age as well as to the severity and irrevocability of age-related declines in opportunity structures (Freund, 1997; Wrosch & Heckhausen, in press). For some goals (e.g., childbearing and retirement), the changes in opportunities occur within a narrow age range; for other goals (e.g., marriage prospects), however, changes in opportunity structures are more gradual and encompass longer life segments. In addition, cultural and historical changes (Elder & Caspi, 1990), such as the restructuring of the family cycle (Held, 1986), might lead to changes in the specific age timing for developmental deadlines as well as to experiencing nonnormative events with age-differential opportunity structures

(e.g., divorce). In either case, developmental deadlines involve a substantial shift from a favorable developmental ecology (more opportunities and fewer constraints) to an unfavorable developmental ecology (fewer opportunities and more constraints) with regard to the realization of a specific goal.

Adaptive Control Processes Around Developmental Deadlines

The life span theory of control (J. Heckhausen & Schulz, 1995; Schulz & Heckhausen, 1996) provides a theoretical framework for conceptualizing control processes involved in goal striving and goal disengagement. The model proposes two basic control processes: primary control and secondary control (Rothbaum, Weisz, & Snyder, 1982). *Primary control* striving refers to individuals' attempts to change the external world so that it fits with their needs and desires. *Secondary control* is targeted toward the inner world and addresses individuals' efforts to influence their own motivation, emotion, and mental representation. Specifically, four control processes are identified (J. Heckhausen & Schulz, 1993). *Selective primary control* strategies are described as the investment of internal resources (e.g., effort and time) to realize a chosen goal. *Selective secondary control* strategies are used to strengthen motivational commitment to developmental goals. This can be done, for instance, by boosting the perceived value of the goal or enhancing the perception of one's own control for goal attainment. Selective secondary control strategies enhance the likelihood of persistence and thereby work hand in hand with selective primary control strategies. *Compensatory primary control* strategies, such as seeking other people's help or using technical aids, are needed when internal resources are insufficient and external assistance is needed. *Compensatory secondary control* strategies serve to protect the motivational and emotional resources of the individual after experiences of failure and loss. Examples include goal disengagement, downward comparisons, and attributional biases.

To study individuals' control processes before and after passing a deadline, we used a model of developmental regulation around deadlines that is an extension of the Rubicon model of action phases (H. Heckhausen, 1991). The Rubicon model identifies a shift from a deliberative mind-set (e.g., deliberating the pros and cons of possible goals) before an action decision is made to an implemental mind-set (focus on action initiation and implementation) after the decision. Research related to the Rubicon model shows that individuals adapt their motivational processes to the requirements of decision making and goal attainment (Gollwitzer, Heckhausen, & Steller, 1990; H. Heckhausen & Gollwitzer, 1987). Processes of goal disengagement, by contrast, have been largely neglected in research (but see Klinger, 1975; Little, 1983). Analogously to the Rubicon model, the deadline model permits predictions about when individuals will shift from goal engagement to goal disengagement.

As shown in Figure 1, predeadline and postdeadline control processes serve opposing functions. Before passing the deadline, individuals have enough time and favorable opportunities to attain a goal. Therefore, adaptive control processes are those directed at goal attainment (i.e., selective primary and selective secondary control). Moreover, compensatory primary control may be required if internal resources prove insufficient to overcome obstacles. After passing a deadline without goal attainment, individuals

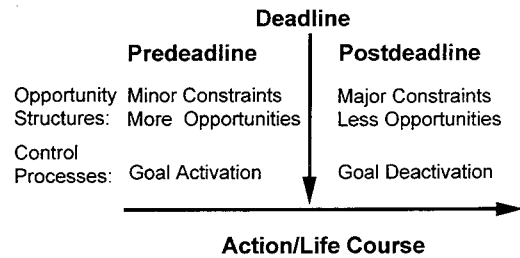


Figure 1. Adaptive control processes before and after passing of developmental deadlines.

are confronted with a low probability of attaining that goal at all. They should therefore shift from striving for goal attainment to activating compensatory secondary control striving. The adaptive role of compensatory secondary control after failing to meet a deadline can be described as twofold (Wrosch, 1999). Motivational and emotional resources can be directly protected by using self-enhancing strategies (e.g., downward comparisons and attributional biases). Moreover, goal disengagement may help in redirecting these internal resources to other life domains with more favorable opportunity structures.

Empirical and theoretical evidence for opportunity-related shifts in individuals' control processes have been shown with respect to health and childbearing. In two studies, with the "biological clock" providing the developmental deadline, J. Heckhausen and colleagues (J. Heckhausen, 1998; J. Heckhausen, Wrosch, & Fleeson, 1998) showed that women who have not yet passed the childbearing deadline (27–33 years of age) reported more goals with respect to childbearing than women who were supposed to have passed the deadline (40–45 years of age). Moreover, the authors showed that younger as compared with older women expressed higher agreement with using control strategies directed at goal attainment and lower levels of compensatory secondary control. Schulz, Wrosch, Yee, Heckhausen, and Whitmer (1998) examined the impact of health-specific control strategies on depression in older individuals who faced acute versus chronic health stress. Compensatory secondary control was related to lower levels of depression if older individuals faced chronic diseases (with few opportunities for health improvement). In contrast, control strategies involved in goal striving were related to reduced depression in individuals who were confronted with acute health problems (e.g., pain). Similarly, Scheier and Carver (in press) have argued that patients in early stages of disease (e.g., cancer) should remain optimistic to manage and overcome the consequences of the disease. In later and irreversible stages of disease, it might be more important to substitute goals and to find purpose in life elsewhere.

Age-Graded Opportunity Structures for the Formation of a Partnership

This study addressed individuals' developmental regulation with respect to the task of intimate partnership formation. Typically, partnerships are formed in young adulthood (Cantor, 1994). However, the increases in divorce and separation rates in the last three decades (e.g., Cherlin, 1981) force more and more individuals in late midlife and old age (Lloyd & Zick, 1986) to cope with the negative emotional consequences of separation (Chase-

Lansdale & Hetherington, 1990; Weiss, 1976), to attend to their prospective partnership-related needs, and to implement a new lifestyle (Spanier & Casto, 1979). With respect to this historically relatively new phenomenon, a considerable number of studies have observed an age-graded decline in opportunity structures for the formation of a new partnership (e.g., Braun & Proebsting, 1986; Teachman & Heckert, 1985). For instance, objective remarriage expectancies after divorce have been investigated in Germany. The probability of remarriage for a divorced young adult (age 30) is above 80%, whereas an older person (age 60) has a probability of less than 20% (Braun & Proebsting, 1986).

Klein (1990) has argued that the decreased prospects for partnership formation in late midlife are primarily caused by a smaller "marriage market." The structure of modern societies, age-normative conceptions about the timing of marriage, and generativity intentions contribute to a situation in which, by late midlife, most people are involved in long-term relationships and therefore are not available for starting a new intimate partnership. Moreover, negative age stereotypes, such as a perceived decrease in sexual activities and interests, may lead to a lower societal acceptance of a new partnership in later life and thus could undermine individuals' intention to form a new intimate relationship. Beyond age, there are other factors contributing to individual differences in opportunity structures for the formation of a partnership. Being female and having more than one child have been shown to result in lower remarriage expectancies (Cherlin, 1981; Spanier & Glick, 1980). Moreover, indicators of socioeconomic status (SES) have different effects for men and women (Glick, 1984; Heekerens, 1985). Whereas the remarriage expectancy increases in men of high SES, the opposite seems to be true for women. The impacts of these factors are certainly relevant contributors but do not match the role of age in defining opportunity structures for the formation of a partnership. Although divorced women as compared with divorced men show a steeper age-related decrease in remarriage prospects, the relation between age and remarriage expectancy can be described as a linear decrease for both men and women (Braun & Proebsting, 1986). Overall, the reported studies support the assumption of sharply reduced opportunities for partnership formation in late midlife irrespective of other personal characteristics, such as status or gender.

Predictions About Age Differences in Developmental Regulation After Separation

The present study examined individuals in young adulthood and late midlife who were either recently separated from or committed to a partner. By combining the phenomena of engagement in and separation from a partnership with the proposed theoretical model, we formulated three sets of hypotheses. First, we expected a deadline-related shift in control orientation (goals, control strategies, and information processing) between separated individuals in young adulthood and those in late midlife. Although there is not a radical shift in terms of opportunity structures for the formation of a partnership at one particular age, we assumed that, by late midlife, the opportunities have become unfavorable enough that it may be adaptive to deactivate partnership goals. Younger separated individuals, in contrast, should show striving for the attainment of a new intimate relationship. These alternative reactions to separation should be reflected in the age-related processes of

developmental regulation used. Younger separated individuals, in comparison with older separated persons, should have a greater tendency to nominate goals directed at intimate partnerships (Hypothesis 1a), a greater level of control striving directed at realizing partnership goals (Hypothesis 1b), and enhanced information processing for positive as compared with negative aspects of partnerships (Hypothesis 1c). In contrast, separated individuals in late midlife should show enhanced compensatory secondary control striving (Hypothesis 1d) and should report more non-partnership-related social goals (e.g., friendship) to redirect their resources to life domains with more favorable opportunity structures (Hypothesis 1e).

We also examined recently committed individuals in two comparable age groups as comparison groups for the separated adults. This sample composition allowed us to disentangle age-graded effects on developmental regulation of separation from normative age transitions. On the basis of the assumption that individuals who are engaged in new partnerships have to fulfill a number of tasks (e.g., maintaining couple motivation and allocating responsibilities; Duvall, 1977), recently committed persons of both age groups should activate partnership goals, similarly to younger separated adults. With respect to compensatory secondary control, we proposed that, independent of age, recently committed persons use less compensatory secondary control than separated persons, because this type of strategy should be activated only to protect the individuals' resources against the negative effects of separation (Hypothesis 2).

The third set of hypotheses related to longitudinal change in psychological well-being of separated individuals. Research has shown that separated persons usually improve their well-being over time (e.g., Booth & Amato, 1991). In keeping with these results, we expected separated as compared with committed persons to report lower levels of well-being in the cross-sectional part of the study but to enhance their well-being over time (Hypothesis 3a). In addition, we proposed that age-adjusted control processes would be related to longitudinal improvement of psychological well-being in separated individuals (Hypothesis 3b). Specifically, activation of partnership goals was expected to be related to improvement of psychological well-being in younger separated persons. Separated individuals in late midlife, in contrast, should improve their well-being by deactivating partnership goals.

Method

Participants

The study participants ($N = 116$) were volunteers, partly recruited by a mailing procedure from the city of Berlin's official records department to a representative sample of 600 residents, who were either divorced or married within the previous year and in the young or advanced middle-age range. Participants were also recruited via radio and newspaper advertisements, and all were paid 40 DM (\$25) for a 1.5-h session. We were able to recruit 74 participants who were either married (young adulthood, $n = 22$; late midlife, $n = 13$) or separated from marriage (young adulthood, $n = 14$; late midlife, $n = 25$). Because we were mainly interested in examining the phenomena of commitment to and separation from an intimate partnership, we also recruited participants who were recently engaged in a

close intimate relationship but not married and participants who were not divorced but recently separated from a close intimate relationship.¹

All participants were screened on the phone to ensure that they met several criteria. Separated participants were separated from an intimate partnership and had not engaged in a new partnership since separation. Committed participants were engaged in a new intimate partnership. Of the sample, 31 were classified as young adults committed to a new partnership (age range = 21–34 years, $M = 29.61$, $SD = 3.07$), 28 were classified as separated young adults (age range = 23–35 years, $M = 30.18$, $SD = 3.61$), 30 were classified as committed persons in late midlife (age range = 49–59 years, $M = 53.57$, $SD = 2.81$), and 27 were classified as separated persons in late midlife (age range = 49–59 years, $M = 52.96$, $SD = 2.79$).

The interval from the critical life event (commitment or separation) to the interview was different with respect to participants' age group, $F(1, 101) = 12.52$, $p < .01$, indicating that the critical life event had occurred farther in the past for older ($M = 3.0$ years, $SD = 1.9$) than younger ($M = 1.9$ years, $SD = 1.3$) participants.² No main effect involving partnership status or the interaction of age group and partnership status was obtained for the time interval since the critical life event. More of the older participants (46 of 57) than the younger participants (23 of 59) had children, $\chi^2(1) = 20.94$, $p < .01$. Across all four groups, the majority of participants were employed (93 of 116). There were no differences between young and older separated persons in terms of who initiated the separation. To control for factors that might influence the partnership-related opportunities beyond age, we balanced the four groups across gender and educational background (used as an indicator of socioeconomic status), resulting in a design involving 16 cells. Each of the cells contained 6 to 8 participants, except for the cell of recently separated late-midlife men with higher education levels ($n = 3$). To avoid problems with overly low cell frequencies, we did not consider any four-way interactions in the analyses.

A brief questionnaire was mailed to the participants 15 months ($M = 14.74$, $SD = 1.03$) after the initial interview. Seventy-three percent of participants ($n = 85$) took part in the longitudinal follow-up. Of the 85 participants, 19 were committed younger adults, 25 were committed older adults, 19 were separated younger adults, and 22 were separated older adults. We found comparable ratings between participants who did and did not take part in the follow-up study with respect to age, gender, educational level, time interval since critical life event, subjective opportunity structures for attaining a partnership, duration of former partnership, and initiator status of separation.³ Fifteen separated participants reported having established a new partnership, a finding statistically unrelated to education and age. Men reported more frequently the attainment of a new partnership than women, $\chi^2(1) = 4.73$, $p < .05$. Of the 15 participants who reported having established a new partnership, 12 did not live with their new partners, and none were married. Therefore, this variable might not represent formation of an intimate partnership comparable to the prior one.

Materials

The dependent measures of control processes were participants' developmental goals, partnership-specific control striving, and incidental memory for positive and negative characteristics of partnerships. Developmental goals were assessed with an open response format questionnaire (J. Heckhausen, 1997): Participants were requested to list five personal goals that they wanted to attain within the next 5 to 10 years. The answers were coded into partnership goals and non-partnership-related social goals. Forty-six percent of the reported goals were characterized as partnership goals or non-partnership-related social goals. Moreover, the reported goals were coded into those directed at attaining gains versus those directed at avoiding losses. Reliability analyses indicated high levels of agreement between two independent raters for partnership versus social goals ($\kappa = .83$) and for gain-oriented versus loss-avoidance goals ($\kappa = .73$).

Primary and secondary control striving was assessed with the partnership-specific, work-specific, and domain-general Optimization with Primary and Secondary Control Scales (OPS scales; J. Heckhausen, Schulz, & Wrosch, 1997). Specifically, group differences were hypothesized for partnership-specific control striving. Each subscale of the partnership-specific OPS scales contained eight items and involved a 5-point scale ranging from *almost never true* (1) to *almost always true* (5). Typical subscale examples for partnership-specific control striving are "When I want to attain a partnership goal, I do whatever I can to achieve it" (selective primary control; $\alpha = .83$); "When difficulties in the partnership domain become too great, I ask others for advice" (compensatory primary control; $\alpha = .83$); "When I have decided on a partnership goal, I always keep in mind its benefits" (selective secondary control; $\alpha = .71$); and "When partnership goals do not work out for me, I remind myself that in many ways I am better off than other people" (compensatory secondary control; $\alpha = .75$). The domain-general and the work-specific OPS scales were identical to the partnership OPS scales, except for the respective goals (general and work-specific goals).

Selective information processing was assessed in terms of incidental memory. Participants were asked to rate the statement "Most other people evaluate their partnerships as . . . ?" with respect to 10 positive (e.g., happy and important) and 10 negative (e.g., deceptive and limiting) attributes on a 5-point scale ranging from *almost never true* (1) to *almost always true* (5). After a 5-min distracting activity (questionnaire), participants recalled as many of the positive ($M = 1.74$, $SD = 1.34$) and negative ($M = 1.38$, $SD = 1.26$) attributes as possible. To control for differences in general memory ability, we assessed an explicit memory measure, including the recall of 20 non-partnership-related nouns (e.g., rice or water; $M = 9.48$, $SD = 3.42$).

Sociodemographic characteristics (e.g., age, gender, and presence of children) were assessed, as well as characteristics of the partnership situation (e.g., partnership status, initiator status of separation, time interval since either commitment or separation, duration of former partnership, and perceived effect of age on the formation of a partnership) and indicators of psychological adjustment: self-esteem (Rosenberg, 1965), depression (Radloff, 1977), and partnership-specific emotional well-being. The scales for emotional well-being measured the amount of positive and negative affect experienced with respect to one's partnership-related situation during the previous year (adapted from Watson, Clark, & Tellegen, 1988). In addition, constructs related to developmental regulation were assessed as control variables: accommodation and assimilation (Brandtstädter & Renner, 1990), optimism (Wieland-Eckelmann & Carver, 1990), anxiety (Schwarzer, Hahn, & Jerusalem, 1993), control beliefs (J. Heckhausen, 1999), social support (Schwarzer, Dunkel-Schetter, & Kemeny, 1994), and NEO (Costa & McCrae, 1985).

Procedure

The cross-sectional part of the study was conducted in separate group sessions for women and men. Participants completed four sets of questionnaires. The first set included the material for the incidental memory task, the self-esteem scales, and the depression scales. In the second set, partic-

¹ Previous research has shown that married and nonmarried couples share a number of characteristics, such as living together, having children, and excluding other intimate partners (Brown & Booth, 1996).

² We used the date of separation for separated participants and the duration of the partnership for committed participants to build an index of the time interval from the critical life event to the point of measurement. Following Spanier and Thompson (1984), the decision to separate seems to be more critical than the date of divorce.

³ Tables with means and standard deviations for all variables assessed in this study are available from Carsten Wrosch.

Participants were asked to recall the positive and negative attributes implicitly learned during the first set. In addition, developmental goals, primary and secondary control (domain specific), sociodemographic characteristics, and partnership characteristics were assessed. The third set of questionnaires contained the items for the explicit memory task as well as scales for accommodation, assimilation, optimism, and anxiety. Finally, participants were requested to recall the explicit memory items in the fourth set. Moreover, the final set contained the remaining personality and social support measures. Sessions lasted for approximately 90 min. We mailed a brief questionnaire 15 months after the initial interview to the study participants. To maximize response rates, we included in the questionnaire only constructs that were critical with respect to examining change in psychological adjustment. The questionnaire contained the scales of self-esteem, emotional well-being, and items with regard to stability and change in the partnership-related situation.

Results

Cross-Sectional Analyses

Descriptive analyses of differences between participant groups. The descriptive analyses served two main purposes. First, we investigated whether the study design was successfully realized (in terms of group-specific perceptions of opportunity structures). Second, the typicality of the sample was studied with respect to normative reactions to separation.

We examined whether the participants perceived objective differences in opportunity structures by using a 2 (partnership status) \times 2 (age group) analysis of variance (ANOVA) assessing the degree to which one's age is perceived as a favorable or unfavorable factor in partnership formation (as the dependent variable).⁴ A significant main effect for age group, $F(1, 111) = 9.27, p < .01$, was obtained. Participants in late midlife ($M = 2.93, SD = 0.80$) reported a detrimental effect of their own age for the formation of a new partnership, whereas young adults expected a favorable effect ($M = 3.34, SD = 0.63$). The age group effect remained stable after education, gender, and the time interval since the critical life event had been controlled. Gender, however, showed a significant effect, $F(1, 110) = 5.23, p < .05$, indicating that women ($M = 2.98, SD = 0.67$) reported a more unfavorable effect of their own age than men ($M = 3.31, SD = 0.79$).

A second set of analyses was performed to determine whether the critical life event of separation affected the participants in ways expected on the basis of the literature on the consequences of separation and divorce (i.e., decreases in indicators of psychological well-being). Therefore, separate 2 (partnership status) \times 2 (age group) ANOVAs were performed for participants' self-esteem, depression, positive affect, and negative affect. Significant partnership status main effects were obtained for self-esteem, $F(1, 112) = 10.00$; depression, $F(1, 112) = 7.85$; positive affect, $F(1, 108) = 35.55$; and negative affect, $F(1, 107) = 22.19$; all $ps < .01$. In order, separated persons reported lower self-esteem, higher depression, less positive affect, and more negative affect ($M = 5.39, SD = 0.89$; $M = 1.77, SD = 0.44$; $M = 3.05, SD = 0.81$; and $M = 2.72, SD = 0.73$) than committed participants ($M = 5.86, SD = 0.71$; $M = 1.55, SD = 0.38$; $M = 3.85, SD = 0.64$; and $M = 2.02, SD = 0.81$). No interactions involving partnership status and age group were observed. The effects remained stable after gender, educational level, and the time interval since the critical life event had been controlled. Gender, however, showed a significant effect on self-esteem, $F(1, 111) = 7.78$,

Table 1

Significant Effects of Analyses of Variance Investigating Group Differences in Participants' Nominated Partnership Goals and Social (Non-Partnership-Related) Goals

Significant group effect	$F(1, 100)$	p	η^2
Partnership goals			
Partnership status	99.06	.000	.50
Age group	14.53	.000	.13
Goal orientation ^a	27.78	.000	.22
Goal Orientation \times Partnership Status	5.23	.024	.05
Goal Orientation \times Age Group	22.02	.000	.18
Goal Orientation \times Educational Level	4.05	.047	.04
Goal Orientation \times Partnership Status \times Age Group	6.07	.015	.06
Social goals			
Partnership Status \times Age Group	4.64	.034	.04

^aThe within-subject variable goal orientation contained the distinction between gain-oriented and loss-avoidance goals.

$p < .01$, with higher ratings for women ($M = 5.83, SD = 0.85$) than for men ($M = 5.43, SD = 0.77$). Overall, the descriptive analyses showed that the intended differences in perceived opportunities were realized and that separated participants reported lower well-being than committed persons.

Goal setting. To investigate group differences in reported developmental goals (Hypotheses 1a and 1e), we performed a 2 (goal domain) \times 2 (goal orientation) \times 2 (partnership status) \times 2 (age group) \times 2 (gender) \times 2 (education) ANOVA, including the differentiation between number of partnership goals and partnership-unrelated social goals (goal domain) and between number of gain-oriented and loss-oriented goals (goal orientation) as within-subject variables. The distinction between gain-oriented and loss-oriented goals was included in the analyses because recently committed persons may strive for elaborating (striving for gain) as well as protecting (avoidance of loss) their partnerships, whereas separated persons can only strive for gain-oriented partnership goals. The results revealed significant interactions between the within-subject variables goal orientation and goal domain, as well as a four-way interaction of these variables with partnership status and age groups, $F(1, 100) > 6.58, ps < .05$. As a consequence, we performed separate ANOVAs for partnership goals and social goals.

For number of partnership goals, significant between-subjects main effects for partnership status and age group and a significant within-subject effect of goal orientation (toward gain vs. loss) were obtained (see Table 1). In addition, significant two-way interactions involving goal orientation and partnership status, age group, and educational level, and a three-way Goal Orientation \times Partnership Status \times Age Group interaction, were observed. The latter effect was examined in follow-up analyses because our hypotheses

⁴ Small differences in degrees of freedom were related to participants who did not provide ratings and were excluded from the respective analyses (missing values: goals, $n = 1$; positive affect, $n = 4$; negative affect, $n = 5$). Twelve participants obviously misunderstood the instruction of the incidental memory paradigm. They recalled instead the positive and negative aspects, for instance, the anchor points (almost never true), or wrote confabulated items such as "same sign of the zodiac."

predicted that older separated persons would report fewer goals that aim at new intimate partnerships than younger separated individuals. On the basis of this significant higher order interaction including partnership status and age group, effects that were related only to partnership status or age group were not considered. We performed one-tailed *t* tests for predicted group differences. All other group differences were examined via two-tailed *t* tests.

Figure 2 shows the number of gain-oriented and loss-oriented partnership goals of separated and committed persons in young adulthood and late midlife. As predicted, separated participants in late midlife reported fewer gain-oriented partnership goals than separated younger adults, $t(53) = -3.90, p < .01$. Not surprisingly, partnership goals that were aimed at loss avoidance were almost never reported by separated persons. By contrast, older as compared with younger recently committed individuals reported more loss-avoiding, $t(59) = 2.63, p < .05$, and fewer gain-oriented, $t(59) = -4.45, p < .01$, partnership goals. With respect to the interaction between goal orientation and educational level, follow-up analyses revealed that highly educated participants reported more gain-oriented ($M = 1.28, SD = 0.90$) than loss-avoiding ($M = 0.98, SD = 0.84$) partnership goals, $t(56) = 4.70, p < .01$.

For number of non-partnership-related social goals, a significant interaction effect involving partnership status and age group was obtained (see Table 1). Follow-up analyses indicated that, as expected, separated participants in late midlife reported the largest number of non-partnership-related social goals, whereas older recently committed persons reported the fewest number of social goals, $t(41.07) = 2.68, p = .01$; number of social goals did not differ between committed and separated persons in early adulthood.

Covariance analyses revealed that the predicted effects in goal setting remained stable ($p < .05$) after the time interval since the critical life event, indicators of psychological adjustment, personality constructs, and the presence of children had been controlled. However, the interaction effect of Age Group \times Partnership Status for number of social goals was somewhat reduced ($p < .10$) after agreeableness had been controlled.

Control striving. A 4 (strategy) \times 2 (partnership status) \times 2 (age group) \times 2 (gender) \times 2 (education) ANOVA was performed

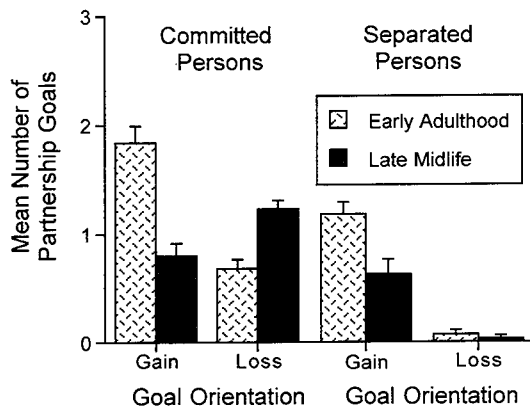


Figure 2. Number of gain-oriented and loss-avoiding partnership goals in recently committed and separated adults in early adulthood and late midlife. The error bars reflect the respective standard error.

Table 2
Significant Effects of an Analysis of Variance Investigating Group Differences in Partnership-Specific Control Striving

Significant group effect	F(1, 101)	p	η^2
Selective primary control			
Partnership status	4.06	.046	.03
Educational level	4.01	.048	.03
Partnership Status \times Age Group	7.04	.005	.05
Selective secondary control			
Partnership status	3.78	.055	.03
Partnership Status \times Age Group	4.42	.038	.04
Compensatory primary control			
Gender	11.95	.001	.08
Age Group \times Educational Level	5.05	.027	.04
Age Group \times Educational Level \times Gender	5.66	.019	.04
Compensatory secondary control			
Partnership status	4.34	.040	.03
Age group	23.49	.000	.13
Partnership Status \times Age Group \times Educational Level	17.03	.000	.10

to investigate group differences in partnership-specific control striving (Hypotheses 1b, 1d, and 2), including the four types of control strategies as dependent variables (the within-subject variable "strategy"). The analysis revealed significant group differences with respect to strategy as well as to interactions involving strategy (partnership status, age group, Age Group \times Gender, and Partnership Status \times Age Group \times Educational Level), $F_s(3, 300) > 3.03, p_s < .05$. As a consequence, we performed separate ANOVAs for each type of control strategy.

For selective primary control, significant effects of partnership status, educational level, and Partnership Status \times Age Group were obtained (see Table 2). Committed participants ($M = 4.00, SD = 0.64$) reported higher ratings in selective primary control striving than separated participants ($M = 3.79, SD = 0.66$). In addition, highly educated ($M = 3.79, SD = 0.66$) persons reported less selective primary control striving than less educated ($M = 4.00, SD = 0.56$) persons. Consistent with our hypotheses, Figure 3 (left) illustrates that separated persons in late midlife reported lower selective primary control striving than younger separated, $t(53) = -2.00, p < .05$, and older committed, $t(55) = -3.04, p < .01$, participants.

Significant effects with respect to selective secondary control striving were obtained for partnership status and the interaction of partnership status and age group (see Table 2). Committed participants ($M = 3.83, SD = 0.55$) reported higher levels of selective secondary control striving than separated individuals ($M = 3.64, SD = 0.62$). Figure 3 (middle) illustrates that, consistent with our hypotheses, separated persons in late midlife reported lower levels of selective secondary control than younger separated participants, $t(53) = -1.70, p < .05$; younger committed participants, $t(56) = -1.66, p = .05$; and older committed participants, $t(55) = -2.52, p < .01$.

For compensatory primary control, we found significant group differences with respect to gender, Age Group \times Education, and Age Group \times Education \times Gender (see Table 2). Women ($M = 3.55, SD = 0.79$) reported greater use of compensatory primary control strategies than men ($M = 3.09, SD = 0.63$). Follow-up analyses concerning the interaction between age group

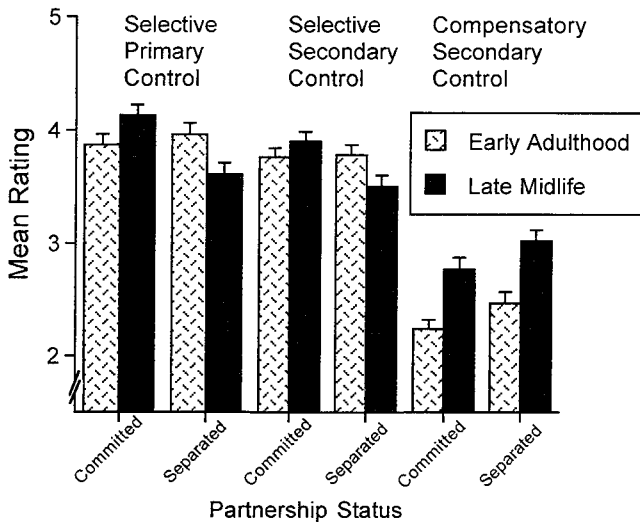


Figure 3. Partnership-specific control striving in recently committed and separated adults in early adulthood and late midlife. The error bars reflect the respective standard error.

and educational level revealed that less educated participants in late midlife ($M = 3.07$, $SD = 0.56$) reported less compensatory primary control striving than less educated persons in young adulthood ($M = 3.52$, $SD = 0.80$), $t(47.20) = -2.33$, $p < .05$, and better educated individuals in late midlife ($M = 3.44$, $SD = 0.79$), $t(55) = -2.09$, $p < .05$. The additional significant interaction with gender was due to the fact that this pattern of results could be identified only in women. For men, no interaction between age group and education was obtained.

With respect to compensatory secondary control, we obtained significant effects of partnership status, age group, and Partnership Status \times Age Group \times Education (see Table 2). The main effects of age group and partnership status are also illustrated in Figure 3 (right). Separated participants ($M = 2.74$, $SD = 0.69$) gave higher ratings for compensatory secondary control strategies than committed persons ($M = 2.50$, $SD = 0.67$). In addition, older ($M = 2.89$, $SD = 0.67$) as compared with younger ($M = 2.35$, $SD = 0.60$) participants showed higher compensatory secondary control striving. Follow-up analyses revealed that, consistent with our expectations, older separated participants reported higher ratings for compensatory secondary control than younger separated participants, $t(53) = 3.19$, $p < .01$, and younger committed participants, $t(56) = 5.06$, $p < .01$. To obtain more specific information for interpreting the predicted age effect in compensatory secondary control striving in separated individuals, we performed second-order partial correlations (controlling for gender and education) between the two modes of compensatory secondary control (self-protection vs. goal disengagement) and participants' age. For separated persons, we obtained highly significant correlations ($p < .01$) between age and goal disengagement strategies (disengagement: $r = .42$; engagement with other goals: $r = .30$), a smaller age effect for social comparisons ($r = .27$, $p < .05$), and no significant age effect for self-protective attributions.

With regard to the additional interaction involving educational background, analyses revealed that the age-related increase (young

vs. old) of compensatory secondary control in separated persons was more pronounced in less educated participants ($M = 2.22$, $SD = 0.56$ vs. $M = 3.13$, $SD = 0.62$), $t(28) = 4.17$, $p < .01$, than in more educated participants ($M = 2.71$, $SD = 0.66$ vs. $M = 2.85$, $SD = 0.62$; $p > .05$). The age-related increase (young vs. old) in committed participants was more related to higher educated participants ($M = 2.04$, $SD = 0.40$ vs. $M = 2.99$, $SD = 0.52$), $t(30) = 5.80$, $p < .01$, than to less educated participants ($M = 2.45$, $SD = 0.61$ vs. $M = 2.51$, $SD = 0.80$; $p > .05$).

The predicted effects in control striving were controlled in separate ANOVAs for the time interval since the critical life event, work-related and dispositional control striving, indicators of psychological adjustment, personality constructs, and the presence of children. Although most of the control variables were not correlated with the reported Partnership Status \times Age Group interactions in control striving ($p < .05$), some of the control variables reduced the significant interaction in selective primary (positive affect) and in selective secondary control striving (work-related control striving and beliefs, assimilation, anxiety, and neuroticism) to marginal significance ($p < .10$). Moreover, positive affect, internal work-related causality beliefs, and dispositional control striving showed a significant impact on age differences in partnership-specific selective secondary control striving. The main effect of partnership status on compensatory secondary control striving, by contrast, was correlated with individual differences in a considerable number of psychological constructs. Separated as compared with committed participants reported not only higher ratings in compensatory secondary control striving but concurrently higher depression, less positive affect, more negative affect, higher neuroticism ratings, less optimism, more anxiety, more family-related causality beliefs with respect to the causal factor "luck," and less social support.

Incidental recall of positive and negative characteristics of partnerships. To investigate group differences in cognitive information processing (Hypothesis 1c), we conducted a 2 (valence) \times 2 (partnership status) \times 2 (age group) \times 2 (gender) \times 2 (education) ANOVA. The dependent variables (the within-subject variable "valence") were the number of recalled positive and negative characteristics of partnerships, statistically controlled for participants' explicit memory performance (residualized in a regression approach). A significant effect was obtained for the interaction among the within-subject variable valence, partnership status, and age group, $F(1, 88) = 4.70$, $p < .05$, $\eta^2 = .05$. Figure 4 displays the difference scores (mathematically identical to the within-subject variable) of recalled positive versus negative partnership attributes. Consistent with our hypotheses, older separated participants focused more on negative than on positive characteristics of partnerships relative to younger separated participants, $t(50) = 2.11$, $p < .05$, and older committed persons, $t(46) = 2.07$, $p < .05$. Analyses of covariance showed that the interaction effect remained significant ($p < .05$) when indicators of psychological adjustment, the time interval since the critical life event, personality constructs, and the presence of children were included in the analyses. However, the significant interaction effect was somewhat reduced ($p < .10$) after assimilation and agreeableness had been controlled.

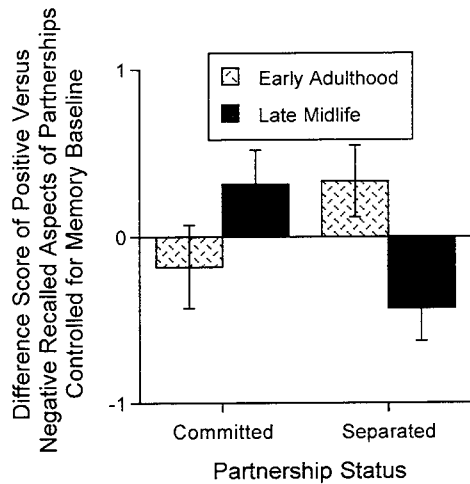


Figure 4. Recall of positive versus negative partnership aspects in recently committed and separated adults in early adulthood and late midlife. The error bars reflect the respective standard error.

Longitudinal Analyses

Improvement of psychological well-being in separated adults. To examine our hypotheses concerning psychological adjustment in separated individuals, we conducted separate 2 (time) × 2 (partnership status) × 2 (age group) × 2 (gender) × 2 (education) ANOVAs for participants' positive affect, negative affect, and self-esteem. The dependent variables were participants' indicators of psychological well-being in the initial study and in the follow-up study (the within-subject variable "time"). The results revealed significant interaction effects between partnership status and time for participants' positive affect, $F(1, 67) = 7.47, p < .01, \eta^2 = .10$, and negative affect, $F(1, 66) = 12.43, p < .01, \eta^2 = .16$. No significant effects were obtained for changes in participants' self-esteem. Participants' age, gender, and educational level did not affect the results. Figure 5 illustrates the change in emotional adjustment of separated and committed participants

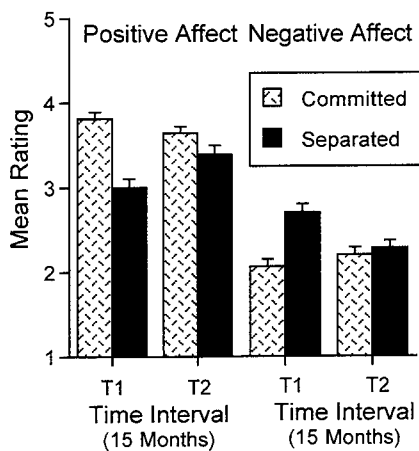


Figure 5. Positive and negative affect in separated and committed adults across 15 months. T1 = Time 1; T2 = Time 2. The error bars reflect the respective standard error.

across the 15-month period. Follow-up analyses revealed that separated individuals reported improvement of positive affect, $t(39) = 2.52, p < .05$, and reduction of negative affect, $t(39) = -3.53, p < .01$, over time. No significant differences were found for recently committed participants. Improvement of positive affect was not significantly correlated with reduction of negative affect in separated persons ($r = .01$).

Predictors of improvement of emotional well-being in separated adults. On the basis of the finding that separated individuals improved their emotional well-being over time, we performed regression analyses predicting change in emotional well-being of separated participants. Emotional adjustment was operationalized by residualizing the amount of reported affect (follow-up study) for the affect participants reported in the initial study. First, we tested the main effects (two-tailed) of sociodemographic characteristics, reported control processes (initial study), and change in partnership status. We then examined the hypothesized interactions of control processes with participants' age (one-tailed). Because of the small sample size, we excluded all variables that were not significant from the regression equation.

The significant effects for predicting change in emotional well-being in separated individuals are reported in Table 3. With respect to predicting change in positive affect, we obtained significant main effects for selective primary control and change in partnership status. Participants who reported having established a new partnership and individuals who reported higher levels of selective primary control in the initial study improved their positive affect over time. As predicted, we obtained a significant interaction between compensatory secondary control and participants' age. Figure 6 shows that compensatory secondary control was negatively related to improvement of positive affect in younger separated adults but positively related in older separated individuals. To obtain more specific information for interpreting the significant interaction effect, we computed second-order partial correlations between improvement of positive affect and compensatory secondary control related to goal disengagement (disengagement and engagement with other goals) and self-protection (social comparisons and attributions), controlling simultaneously for the main effects of the regression analysis. The detrimental effect of compensatory secondary control in younger individuals was significantly related to disengagement from partnership goals ($r = -.60, p < .05$). Older separated participants, by contrast, enhanced their

Table 3
Significant Predictors of Adjustment of Positive Affect and Negative Affect in Separated Adults

Significant predictor	R ²	β
Enhancement of positive affect		
Change in partnership status	.13*	.36*
Selective primary control	.11*	.33*
Compensatory secondary control	.00	.03
Age	.00	.08
Compensatory Secondary Control × Age	.06*	
Entire model	.32*	
Reduction of negative affect		
Non-partnership-related social goals	.13*	.37*
Entire model	.13*	

* $p < .05$.

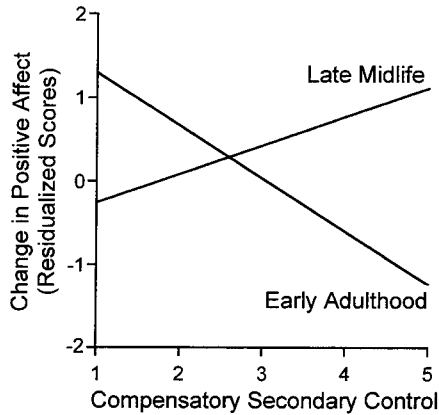


Figure 6. Compensatory secondary control as a predictor of adjustment of positive affect in separated individuals in early adulthood and late midlife.

positive affect particularly through self-protective social comparisons ($r = .40, p < .05$). Self-protective attributions and engagement with other goals were not significantly correlated with change in positive affect.

Adjustment of negative affect was not associated with the same predictors as adjustment of positive affect (see Table 3). Neither partnership status nor reported control striving was related to reduction of negative affect in separated participants. With respect to processes of developmental regulation (initial study), only the number of reported non-partnership-related social goals predicted significant change in negative affect. Pursuing non-partnership-related social goals was positively related to reduction of negative affect in separated persons.

Discussion

This study examined whether individuals' control processes are functionally tailored to age-related opportunity structures before and after passing of a developmental deadline. Specifically, we expected that older separated individuals who face a radically reduced "partnership market" disengage from partnership goals and redirect their internal resources to other life domains with more favorable opportunity structures. By contrast, younger separated individuals with favorable opportunities to attain this goal should strive for the formation of a new partnership. In addition, we proposed that an age-adapted usage of control processes is related to improvement of psychological well-being over time.

Age Differences in Developmental Regulation After Separation and Commitment

The study's findings strongly support our hypotheses of age differences in processes of developmental regulation in separated individuals. Younger separated persons differed from older persons with regard to three indicators of developmental regulation: Separated individuals in early adulthood reported more gain-oriented partnership goals (Hypothesis 1a), reported a higher investment of control strategies directed at goal attainment (selective primary and selective secondary control; Hypothesis 1b⁵), and selectively processed positive as compared with negative charac-

teristics of partnerships (Hypothesis 1c). In addition, separated individuals in late midlife reported higher levels of compensatory secondary control than younger separated persons (Hypothesis 1d), as well as the largest number of social goals that were not related to the partnership domain (Hypothesis 1e). Moreover, the results confirmed that the age-graded investment in compensatory secondary control in separated individuals was mostly due to an enhanced tendency to disengage from partnership goals. This age-related pattern of control processes confirms our hypothesis that the diminishing opportunities for the formation of an intimate partnership that come with age are related to activation of partnership goals in separated young adults and deactivation of partnership goals in older separated adults. Moreover, older separated persons seem to redirect their resources to other social domains with more favorable opportunity structures. It should be noted, however, that we did not find higher absolute levels of goal deactivation as compared with goal activation in older separated persons. Considering that little is known about the absolute level of control processes needed to successfully attain or deactivate goals, it might be difficult to compare fundamentally different control processes directly. We argue, however, that particular opportunity-related age differences in strategy use as well as their predictive relations to psychological adjustment over time lend support to our predictions of deadline-related shifts in control processes.

Individuals who had recently formed an intimate relationship showed patterns of results different from those of separated participants. We found that younger and older separated individuals reported higher levels of compensatory secondary control than recently committed persons. This finding supports our expectation that compensatory secondary control is a personal strategy used particularly to cope with the negative emotional and motivational consequences of critical life events, such as separation (Hypothesis 2; see also Furstenberg, 1987; Weingarten, 1988). In addition, we obtained age differences in committed persons that were non-complementary to separated participants. Thus, the study's findings cannot be interpreted purely as age effects. Committed individuals in early adulthood reported more partnership goals that were aimed at gain orientation (e.g., extension or improvement of partnership), whereas older committed persons reported more partnership goals related to loss avoidance (e.g., protection of partnership against separation). Although this finding was not predicted, it is conceptually meaningful. Committed individuals in late midlife have formed an intimate partnership despite serious constraints. Therefore, it might be that they are especially motivated to protect a new partnership against the possibility of loss and separation. The more pronounced gain orientation of committed individuals in early adulthood might be due to the age-sequential structure of the life course that has a set of gain-oriented developmental tasks in stock (e.g., family planning and child rearing; Duvall, 1977; Havighurst, 1953).

The reported control analyses showed a high stability for age differences found in participants' control processes. The statistical independence from relevant intervening variables leads to the

⁵ Compensatory primary control could not be shown as a strategy that is selectively used to activate partnership goals. It might be that this type of strategy is used more in situations concerning partnership crises than in circumstances in which the goal is the formation of a new partnership.

conclusion that individuals adjust their control processes to the specific developmental ecology of the respective life domain. Considering that opportunity structures for various developmental goals change differently across the life span, a domain-specific adjustment of control processes should be highly adaptive. With respect to the generally enhanced compensatory secondary control striving of separated relative to committed individuals, the control analyses showed this strategy to be correlated with various psychological constructs, such as well-being, optimism, and neuroticism. This finding might be related to the multifactorial consequences (e.g., emotional and physical; Chase-Lansdale & Hetherington, 1990) of separation. It is not surprising that enhanced compensatory secondary control striving of separated relative to committed individuals is simultaneously related to individual differences in psychological constructs that are expected to be affected by separation. An alternative interpretation would be that maladaptive personality structures (e.g., low self-esteem) might have caused the separation (e.g., Bloom, Asher, & White, 1978). In contrast to that position, Mastekaasa (1994) found a number of empirical studies showing evidence for a causal effect of separation on indicators of psychological adjustment (e.g., Booth & Amato, 1991). Our longitudinal findings showed comparable evidence with respect to emotional well-being. Thus, we assume that it is very unlikely that the separated participants consisted of individuals with generally maladaptive qualities.

Emotional Adjustment of Separated Individuals

The longitudinal results of the study partly confirmed our prediction of improvement of psychological well-being in separated individuals (Hypothesis 3a). Consistent with previous studies (e.g., Booth & Amato, 1991), both younger and older separated participants improved in emotional well-being over time. We obtained no enhancement of self-esteem in separated persons over time. It might be that the adaptive regulation of self-esteem requires a longer period of time. Alternatively, partnership-specific emotional adjustment might not be sufficient to compensate for the multifactorial negative consequences of separation.

Although separated participants improved in regard to both positive and negative affect, change in positive affect was not correlated with change in negative affect. A large body of research has demonstrated that positive and negative affect are more or less independent from each other (e.g., Diener & Emmons, 1985) and might be differentially related to pleasant events (positive affect) and undesirable events (negative affect; Warr, Barter, & Brownbridge, 1983; Watson et al., 1988). In keeping with these findings, it might be that the negative affect of separated persons is driven more by the dissolution of the former partnership, whereas positive affect is related to the prospects of intimate relationships. One empirical indication for this interpretation is that participants who reported establishing a new partnership improved their positive affect but did not reduce their negative affect. In addition, this differentiation would be consistent with Spanier and Casto's (1979) argument that separation involves finding a solution for two different tasks: adapting to the dissolution of the partnership and establishing a new identity.

The longitudinal results partly confirmed our prediction that age-adjusted patterns of control processes are related to improvement of psychological well-being in separated persons (Hypothe-

sis 3b). Enhancement of positive affect (over time) was positively related to compensatory secondary control striving in older separated adults. In contrast, younger separated individuals suffered a decline in positive affect when using compensatory secondary control. Further analyses demonstrated that this interaction effect was mostly related to goal disengagement in younger adults and self-protective social comparisons in older persons. Our interpretation of these findings is that younger separated individuals who disengaged from partnership goals experienced less pleasant partnership-related events and subsequently less positive affect. For older separated adults, with their reduced opportunities for forming an intimate relationship, self-protective social comparisons might be an adequate and adaptive strategy for enhancing positive affect.

In addition, we found significant main effects for both change in partnership status and selective primary control on enhancement of positive affect in separated persons. We assume that partnership-related events improved the positive affect of those participants who reported having established a new partnership. With respect to selective primary control, we had predicted that the investment of internal resources is particularly adaptive for younger separated persons with favorable opportunities to form new intimate partnerships. However, we do not know whether we would have found the same pattern of results for long-term adaptation. It might be that the investment of internal resources in partnership goals produces positive affect in the short run but is not necessarily related to long-term goal attainment.

The findings pertaining to reduction of negative affect and enhancement of positive affect were noncomplementary. Neither change in partnership status nor reported control striving predicted change in negative affect of separated persons. We found that separated participants who reported more social goals reduced their negative affect over time. It might be that participants' negative affect was driven more by thoughts on the dissolution of the former partnership than by plans concerning future opportunities for intimate relationships. Although a beneficial main effect of the reported number of social goals was not predicted, the data showed that the role of alternative goals for adjustment after separation might be interesting. It may be that pursuing non-partnership-related social goals is related to reduced engagement with thoughts about the failed partnership. This interpretation would be consistent with Scheier and Carver's (in press) argument that people who have no goals to pursue and stay committed to unattainable goals experience distress.

Limitations

Although the descriptive analyses confirmed a successfully realized study design and the typicality of the sample (e.g., perceived opportunities, psychological adjustment, and presence of children), there are limitations of the study that should be addressed. One concern that could lead to alternative interpretations is that the former partnerships of older ($M = 17.9$ years) as compared with younger ($M = 4.1$ years) separated participants had lasted longer. It might be that older participants were thus more affected (e.g., via depression) by the dissolution of their partnership and, accordingly, less able to pursue the attainment of a new relationship. Because it seemed artificial to control for this age-normative confound statistically, we observed the influence of psychological

adjustment on the results. Moreover, we examined the relation between partnership duration and control processes within older separated persons. First, the age differences in separated individuals' control processes showed a high stability when indicators of psychological adjustment were controlled. We found no age effects in indicators of psychological well-being in separated participants. Second, additional analyses revealed that the correlations between indicators of developmental regulation and the duration of the former partnership in older separated participants were neither significant nor uniformly directed. Thus, a potential confound of duration of former partnership with participants' age might not invalidate the differences found for predeadline and postdeadline participants.

In addition, it could be argued that the age differences found in separated participants were due to the higher proportion of younger separated persons who were not married. Although this might well reflect historical change, it could be, for instance, that younger individuals who were never married might intend to have serial relationships and thus show higher levels of partnership goals. Additional analyses showed that separated young adults who had never been married did not report higher levels of activating partnership goals than divorced young adults. Instead, divorced as compared with never-married (separated) young adults reported higher levels of selective primary and selective secondary control ($ps < .05$). We conclude that the age differences found in separated persons were not related to younger separated persons who had never been married. It should be noted, however, that there might be other cohort effects that cannot be controlled in cross-sectional research.

Finally, relevant limitations of the study are related to personality and gender differences. Individual differences in personality might be due to inhibiting or facilitating processes of goal activation before, and goal deactivation after, passing of a developmental deadline. For instance, fearful or avoidant attachment styles (Hazan & Shaver, 1987) might support deactivation of partnership goals in older separated individuals but inhibit engagement with partnership goals in separated young adults. Similar relations might be identifiable with respect to other personality constructs, such as optimism or anxiety (e.g., Carver & Scheier, 1990). Thus, it could compromise our findings if participants of different age groups vary systematically in personality constructs related to persistence in and interruption of goal striving. We found that age differences in control processes of separated individuals are statistically independent from personality constructs, such as anxiety or optimism. In addition, attachment styles have been shown to be related to distinct levels of psychological adjustment (e.g., Bartholomew & Horowitz, 1991). By showing that the results of the current study were statistically independent from participants' psychological well-being, we would argue that systematic biases in personality constructs between younger and older separated participants are not very likely.

A final concern that should be addressed is related to gender differences in separated individuals. Although older women as compared with older men have fewer opportunity structures for forming a new intimate partnership, we did not find much support for gender differences in control behavior. However, it might be that our sample size was too small to allow identification of reliable gender differences. Alternatively, it should be noted that little is known about the degree of opportunity decline that

prompts goal disengagement. Thus, comparable levels of disengagement from partnership goals might be related to the possibility that both older separated men and women have already passed this threshold.

Summary and Conclusions

The reported study confirmed our hypothesis that individuals adjust their control processes to age-related declines in opportunity structures for goal attainment. Individuals shift from goal realization efforts before to goal disengagement after passing a developmental deadline. This pattern of results was shown with regard to three different indicators of control processes in a comparison of separated individuals in early adulthood and late midlife. Whereas younger separated individuals continued to strive for the formation of a new partnership, older separated persons disengaged from partnership goals and redirected their resources to other social domains. Moreover, age-adjusted control processes were shown to be related to improvement of psychological well-being over time. Older separated individuals enhanced their positive affect through the use of compensatory secondary control, whereas younger separated persons suffered a decline in positive affect when deactivating partnership goals.

Future research might help to contribute to a more profound understanding of the specific processes involved in goal disengagement. Our study offered some evidence that goal disengagement depends on opportunity structures for goal attainment but did not include a fine-grained analysis of the degree of both objective and perceived opportunity decline that prompts goal disengagement. To study the processes involved in successful goal deactivation, it might be useful to consider the degree of reciprocity among control processes, personality, and psychological adjustment step by step in longitudinal analyses. This might illuminate the complex process of goal disengagement and could also be expected to contribute to further insights in successful development throughout life.

References

- Baltes, P. B. (1987). Theoretical propositions of life-span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology, 23*, 611–626.
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226–244.
- Bloom, B. L., Asher, S. J., & White, S. W. (1978). Marital disruption as a stressor: A review and analysis. *Psychological Bulletin, 85*, 867–894.
- Booth, A., & Amato, P. (1991). Divorce and psychological stress. *Journal of Health and Social Behavior, 32*, 396–407.
- Brandstädter, J., & Renner, G. (1990). Tenacious goal pursuit and flexible goal adjustment: Explication and age-related analysis of assimilative and accommodative strategies of coping. *Psychology and Aging, 5*, 58–67.
- Braun, W., & Proebsting, H. (1986). Heiratstafeln verwitweter Deutscher 1979/82 und geschiedener Deutscher 1980/83 [Marriage tables of widowed, 1979/82, and divorced, 1980/83, Germans]. *Wirtschaft und Statistik, 107*–112.
- Brown, S. L., & Booth, A. (1996). Cohabitation versus marriage: A comparison of relationship quality. *Journal of Marriage and the Family, 58*, 668–678.
- Cantor, N. (1994). Life task problem solving: Situational affordances and

- personal needs. *Personality and Social Psychology Bulletin*, 20, 235–243.
- Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review*, 97, 19–35.
- Chase-Lansdale, P. L., & Hetherington, E. M. (1990). The impact of divorce in life-span development: Short and long term effects. In P. B. Baltes, D. L. Featherman, & R. M. Lerner (Eds.), *Life-span development and behavior* (Vol. 10, pp. 105–150). Hillsdale, NJ: Erlbaum.
- Cherlin, A. (1981). *Marriage, divorce, remarriage: Changing patterns in the postwar United States*. Cambridge, MA: Harvard University Press.
- Costa, P. T., & McCrae, R. R. (1985). *The NEO Personality Inventory manual*. Odessa, FL: Psychological Assessment Resources.
- Diener, E., & Emmons, R. A. (1985). The independence of positive and negative affect. *Journal of Personality and Social Psychology*, 47, 1105–1117.
- Duvall, E. M. (1977). *Marriage and family development* (5th ed.). New York: Lippincott.
- Elder, G. H., Jr., & Caspi, A. (1990). Studying lives in a changing society: Sociological and personological explorations. In A. Rabin, R. Zucker, R. Emmons, & S. Frank (Eds.), *Studying persons and lives* (pp. 201–247). New York: Springer.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: Norton.
- Freund, A. M. (1997). Individuating age salience: A psychological perspective on the salience of age in the life course. *Human Development*, 40, 287–292.
- Furstenberg, F. F. (1987). Fortsetzungsehen [Conjugal successions]. *Soziale Welt*, 38, 29–39.
- Glick, P. C. (1984). Marriage, divorce and living arrangements. *Journal of Family Issues*, 5, 7–26.
- Gollwitzer, P. M., Heckhausen, H., & Steller, B. (1990). Deliberative and implemental mind-sets: Cognitive tuning toward congruous thoughts and information. *Journal of Personality and Social Psychology*, 59, 1119–1127.
- Hagestad, G. O. (1990). Social perspectives on the life course. In R. Binstock & L. George (Eds.), *Handbook of aging and the social sciences* (3rd ed., pp. 151–168). New York: Academic Press.
- Havighurst, R. J. (1953). *Human development and education*. London: Longmans.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52, 511–524.
- Heckhausen, H. (1991). *Motivation and action*. New York: Springer.
- Heckhausen, H., & Gollwitzer, P. M. (1987). Thought contents and cognitive functioning in motivational vs. volitional states of mind. *Motivation and Emotion*, 11, 101–120.
- Heckhausen, J. (1997). Developmental regulation across adulthood: Primary and secondary control of age-related challenges. *Developmental Psychology*, 33, 176–187.
- Heckhausen, J. (1998, June). *Optimizing own development across the life-span: Adaptive timing and sequencing of control striving for developmental goals*. Paper presented at the XVth Biennial Meeting of the International Society for the Study of Behavioural Development, Bern, Switzerland.
- Heckhausen, J. (1999). *Developmental regulation in adulthood: Age-normative and sociostructural constraints as adaptive challenges*. New York: Cambridge University Press.
- Heckhausen, J., & Schulz, R. (1993). Optimisation by selection and compensation: Balancing primary and secondary control in life-span development. *International Journal of Behavioral Development*, 16, 287–303.
- Heckhausen, J., & Schulz, R. (1995). A life-span theory of control. *Psychological Review*, 102, 284–304.
- Heckhausen, J., Schulz, R., & Wrosch, C. (1997). *Technical report: Optimization in primary and secondary control: OPS scales, a measurement instrument for general and domain specific strategies of control and developmental regulation*. Berlin: Max Planck Institute for Human Development.
- Heckhausen, J., Wrosch, C., & Fleeson, W. (1998). *Developmental regulation before and after passing a developmental deadline: The sample case of "biological clock" for child-bearing*. Manuscript submitted for publication.
- Heckerens, H.-P. (1985). Nach der Scheidung: Wiederheirat [Following divorce: Remarriage]. *Zeitschrift für personenzentrierte Psychologie und Psychotherapie*, 4, 155–191.
- Held, T. (1986). Institutionalization and deinstitutionalization of the life course. *Human Development*, 29, 157–162.
- Klein, T. (1990). Wiederheirat nach Scheidung in der Bundesrepublik: Eine empirische Überprüfung bislang vorliegender Theorieansätze aus der Perspektive des Lebensverlaufs [Remarriage following divorce in Germany: Examination of theoretical approaches from a life-course perspective]. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 42, 60–80.
- Klinger, E. (1975). Consequences of commitment to and disengagement from incentives. *Psychological Review*, 82, 1–25.
- Lerner, R. M., & Busch-Rossnagel, A. (Eds.). (1981). *Individuals as producers of their development: A life-span perspective*. New York: Academic Press.
- Little, B. R. (1983). Personal projects: A rationale and method for investigation. *Environment and Behavior*, 15, 273–309.
- Lloyd, S. A., & Zick, C. D. (1986). Divorce at mid and later life: Does the empirical evidence support the theory? *Journal of Divorce*, 9, 89–102.
- Mastekaasa, A. (1994). Psychological well-being and marital dissolution. *Journal of Family Issues*, 15, 208–228.
- Neugarten, B. L. (1969). Time, age, and the life cycle. *American Journal of Psychiatry*, 136, 887–894.
- Radloff, L. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401.
- Rosenberg, M. (1965). *Society and the adolescent self image*. Princeton, NJ: Princeton University Press.
- Rothbaum, F., Weisz, J. R., & Snyder, S. S. (1982). Changing the world and changing the self: A two process model of perceived control. *Journal of Personality and Social Psychology*, 42, 5–37.
- Scheier, M. F., & Carver, C. S. (in press). Adapting to cancer: The importance of hope and purpose. In A. Baum & B. L. Andersen (Eds.), *Psychosocial interventions for cancer*. Washington, DC: American Psychological Association.
- Schulz, R., & Heckhausen, J. (1996). A life span model of successful aging. *American Psychologist*, 51, 702–714.
- Schulz, R., Wrosch, C., Yee, J. L., Heckhausen, J., & Whitmer, R. (1998, June). *Avoiding depression in late life. Using selective and compensatory control processes to manage physical illness and disability*. Paper presented at the XVth Biennial Meeting of the International Society of the Study of Behavioural Development, Bern, Switzerland.
- Schwarzer, R., Dunkel-Schetter, C., & Kemeny, M. (1994). The multidimensional nature of received social support in gay men at risk of HIV infection and AIDS. *American Journal of Community Psychology*, 22, 319–339.
- Schwarzer, R., Hahn, A., & Jerusalem, M. (1993). Negative affect in East German migrants: Longitudinal effects of unemployment and social support. *Anxiety, Stress, and Coping: An International Journal*, 6, 57–69.
- Settersten, R. A., & Hagestad, G. O. (1996). What's the latest? Cultural age deadlines for family transitions. *Gerontologist*, 36, 178–188.
- Spanier, G. B., & Casto, R. F. (1979). Adjustment to separation and divorce: An analysis of 50 case studies. *Journal of Divorce*, 2, 241–253.
- Spanier, G. B., & Glick, P. C. (1980). Paths to remarriage. *Journal of Divorce*, 3, 283–298.

Spanier, G. B., & Thompson, L. (1984). *Parting: The aftermath of separation and divorce*. Beverly Hills, CA: Sage.

Teachman, J. D., & Heckert, A. (1985). The impact of age and children on remarriage. *Journal of Family Issues*, 6, 185-203.

Warr, P., Barter, J., & Brownbridge, G. (1983). On the independence of positive and negative affect. *Journal of Personality and Social Psychology*, 44, 644-651.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.

Weingarten, H. R. (1988). Late life divorce and the life review. *Journal of Gerontological Social Work*, 12, 83-97.

Weiss, R. S. (1976). The emotional impact of marital separation. *Journal of Social Issues*, 32, 135-145.

Wieland-Eckelmann, R., & Carver, C. S. (1990). Dispositionelle Bewältigungsstile, Optimismus und Bewältigung: Ein interkultureller Vergleich [Dispositional coping styles, optimism, and adjustment: A cross-cultural comparison]. *Zeitschrift für Differentielle und Diagnostische Psychologie*, 2, 163-184.

Wrosch, C. (1999). *Entwicklungsfristen im Partnerschaftsbereich: Bezugssysteme für Prozesse der Aktivierung und Deaktivierung von Entwicklungszielen* [Developmental deadlines in the partnership domain: Reference frame for activation and deactivation of developmental goals]. Münster, Germany: Waxmann.

Wrosch, C., & Heckhausen, J. (in press). Being on-time or off-time: Developmental deadlines for regulating one's own development. In A. N. Perret-Clermont, J. M. Barrelet, A. Flammer, D. Miéville, J. F. Perret, & W. Perrig (Eds.), *Mind and time*. Göttingen, Germany: Hogrefe & Huber.

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