

This article was downloaded by: [Universitaetsbibliothek Potsdam]

On: 23 July 2013, At: 09:27

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## International Journal of Psychology

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/pijp20>

### Subjective well-being in times of social change: Congruence of control strategies and perceived control

Sebastian Grümer<sup>a</sup>, Rainer K. Silbereisen<sup>b</sup> & Jutta Heckhausen<sup>c</sup>

<sup>a</sup> Cognitive Sciences Area of Excellence, University of Potsdam, Potsdam, Germany

<sup>b</sup> Department of Developmental Psychology, Friedrich Schiller University of Jena, Jena, Germany

<sup>c</sup> Department of Psychology and Social Behavior, University of California, Irvine, CA, USA

Published online: 22 Nov 2012.

To cite this article: International Journal of Psychology (2012): Subjective well-being in times of social change: Congruence of control strategies and perceived control, International Journal of Psychology, DOI: 10.1080/00207594.2012.744839

To link to this article: <http://dx.doi.org/10.1080/00207594.2012.744839>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

# Subjective well-being in times of social change: Congruence of control strategies and perceived control

Sebastian Grümer<sup>1</sup>, Rainer K. Silbereisen<sup>2</sup>, and Jutta Heckhausen<sup>3</sup>

<sup>1</sup>Cognitive Sciences Area of Excellence, University of Potsdam, Potsdam, Germany

<sup>2</sup>Department of Developmental Psychology, Friedrich Schiller University of Jena, Jena, Germany

<sup>3</sup>Department of Psychology and Social Behavior, University of California, Irvine, CA, USA

This paper investigates the association between perceptions of broader changes in the social-ecological context and individuals' subjective well-being (SWB). Macro-level societal changes such as globalization or demographic change give rise to new demands for individual functioning at work and/or in the family. Such new demands associated with social change are stressful and likely to be related to lower levels of SWB. Being active agents, individuals attempt to deal with social change and its increasing demands to protect their SWB. The present study investigates which kinds of control strategies are most effective in protecting one's SWB. Specifically, we predicted that control strategies of goal engagement will be most effective under conditions of perceived high control, and control strategies of goal disengagement will be most effective under conditions of perceived low control. In a large sample of 2537 German adults, work- and family-related demands associated with social change were found to be negatively linked to SWB. Moreover and in line with the motivational theory of lifespan development, control strategies of goal engagement and disengagement were beneficial for SWB to the extent that they matched the perceived control of the demands associated with social change.

**Keywords:** Social change; Subjective well-being; Satisfaction; Depressive symptoms; Coping; Control strategies; Perceived control; Buffer effects.

Cette étude explore l'association entre les perceptions de changements généraux dans le contexte social-écologique et le bien-être subjectif des individus. Les changements sociaux au plan macroscopique, comme la globalisation ou l'évolution démographique, suscitent de nouvelles pressions sur le fonctionnement de l'individu au travail et/ou dans la famille. De telles pressions associées au changement social sont stressantes et susceptibles d'être reliées à de faibles niveaux de bien-être. Puisqu'ils sont des agents actifs, les individus essaient de gérer le changement social et ses pressions accrues en vue de protéger leur bien-être. Cette étude cherche à déterminer quelles sont les stratégies de contrôle les plus efficaces pour protéger son propre bien-être. Spécifiquement, l'étude prédit que les stratégies de contrôle axées sur l'engagement envers un but sont plus efficaces dans une condition de perception élevée de contrôle, alors que les stratégies de contrôle de désengagement envers un but sont plus efficaces dans une condition de perception basse de contrôle. Pour un large échantillon de 2,537 d'adultes allemands, il s'avère que les pressions au travail et dans la famille associées au changement social sont reliées négativement au bien-être. De plus, en lien avec la théorie motivationnelle du développement, les stratégies de contrôle axées sur l'engagement et le désengagement sont bénéfiques pour le bien-être dans la mesure où elles correspondent à la perception de contrôle des pressions associées au changement social.

Correspondence should be addressed to Sebastian Grümer, Cognitive Sciences Area of Excellence, University of Potsdam, Karl-Liebknecht-Str. 24–25, D-14476 Potsdam, Germany. (E-mail: sebastian.gruemer@uni-potsdam.de).

This study was supported by a grant from the German Research Council (Project "Psychosocial resources and coping with social change" (PI: Rainer K. Silbereisen)) as part of the Collaborative Research Center SFB 580 "Social developments in post-socialist societies: Discontinuity, tradition, structural transformation" at the universities of Jena and Halle (Germany).

*E*ste artículo investiga la asociación entre las percepciones de cambios más amplios en el contexto socioecológico y el bienestar subjetivo (SWB) de los individuos. Los cambios sociales a nivel macro, tales como la globalización o cambios demográficos dan lugar a nuevas demandas respecto del funcionamiento individual en el trabajo y/o en la familia. Tales nuevas demandas asociadas a cambios sociales son estresantes y probablemente estén relacionados con niveles más bajos de SWB. Al ser agentes activos, los individuos intentan manejar los cambios sociales y sus demandas crecientes para proteger su SWB. El presente estudio investiga qué tipo de estrategias de control son más eficaces para proteger el SWB. Específicamente, se predijo que las estrategias de control que involucran metas serán de mayor eficacia bajo condiciones de elevado control percibido, y las estrategias de control desconectadas de las metas serán más eficaces bajo condiciones de bajo control percibido. En una muestra grande, que consistió en 2 537 adultos alemanes, las demandas laborales y familiares asociadas a los cambios sociales estuvieron ligadas de manera negativa con la SWB. Asimismo, y de conformidad con la teoría motivacional del ciclo vital del desarrollo, las estrategias de control que involucran o están desconectadas de metas fueron beneficiosas para el SWB, al punto que igualaron el control percibido de las demandas asociadas al cambio social.

In the past two decades, more behavioral and social scientists have become attracted to the field of subjective well-being (SWB) (see Diener, Suh, Lucas, & Smith, 1999, for an overview). According to set-point theory, which for many years dominated the field (see Diener, Lucas, & Scollon, 2006, for a review), people's SWB does not change much, because positive and negative experiences merely lead to short-term changes in SWB and then degrade in their effect. The level of an individual set-point is proposed to be (at least partly) heritable. Several researchers concluded that long-term changes to SWB cannot happen and that people have the capacity to return to their former level of SWB when confronted with almost any life circumstances (Lykken & Tellegen, 1996).

However, empirical investigations of set-point theory of SWB have often contradicted the theory: First, some life events are so severe that individuals only seldom recover to their former set-point. This applies for example to unemployment, especially when occurring repeatedly (Clark, Diener, Georgellis, & Lucas, 2008). Second, several studies found substantial individual differences in people's capacity to regulate their SWB, that is to recover from stressful life events and to return to former levels of SWB (see for example Headey, 2008). Some individuals showed a full recovery, whereas for others there was no evidence for any recovery at all.

Although such studies provide strong evidence that changes in life events are capable of affecting one's SWB and that the individual level of one's SWB after the experience of such events varies across people, still a number of important issues are left untouched. First, the findings presented reflect the links between SWB and a small number of changing life circumstances. Little is known about broader changes in the ecological and

societal context and their relationship to SWB. Although it is argued that ecological and societal trends (such as demographic shift) are likely to influence heavily the lives of individuals in the years to come (Lewis & Araya, 2002), few studies have investigated whether and how manifestations of these trends as experienced by individuals affect their SWB. Second, as Diener et al. (2006) commented, it is still unclear whether the regulation of one's SWB is an automatic process or whether the individual level of SWB can be enhanced by strategies directed at countering negative effects of social change.

Against this backdrop, in the present paper, we want to extend our understanding of the association between changing life conditions and SWB by addressing the following questions. First, what is the relationship between individual manifestations of changes at the societal level and SWB? Second, what kinds of control strategies are most effective in protecting SWB?

### **DOES SOCIAL CHANGE AFFECT SUBJECTIVE WELL-BEING?**

Social change is defined as a more or less rapid and comprehensive change of societal structures and institutions, including changes to the political, economic, and cultural frameworks of a society. A case in point is the transformation of the former communist countries in Europe in the 1980s and 1990s. Given that social change is evident at the macro level, one can ask whether such changes have an impact on individuals' behavior and development (Greenfield, 2009).

To model possible associations between social change and SWB, we want to refer to the Jena Model of Social Change and Human Development (Silbereisen, Pinquart, & Tomasik, 2010).

This model assumes that social change results in “demands”; that is, a perceived mismatch between what one used to do and what is now required concerning core life tasks of the age period studied, such as in work life and family life (e.g., finding a worthwhile job or a satisfying intimate relationship). The demands are the individual-level manifestations of the changes on the societal level (typically conceived as a change for better or worse having occurred over a personally relevant period of time).

The Jena Study has identified a set of demands that are supposed to be representative reflections of societal trends on individual-level micro-contexts; that is, work/occupation and family/intimate relationships (Tomasik & Silbereisen, 2009; see Table 1 for item wording). The topics chosen for work concerned career planning, job loss, and aspects of the quality of the workplace, all issues of high salience for adults. These work-related demands are revealed by time series of population statistics concerning topics that are paradigmatic for the kind of social change that could be observed in Germany over the past two decades. For example, individuals not only are faced with an increased risk of spells of unemployment (unemployment rate rose from 10.4% in 1995 to 13.0% in 2005, the year of the current study) but they are also increasingly confronted with less

secure nonstandard employment conditions, such as temporary work or part-time work (which increased from 17.2% in 1995 to 24.5% in 2005; Statistisches Bundesamt, 2006). Furthermore, individuals are increasingly faced with changing job requirements that call for continuous adjustments of one’s qualifications and confront people with the risk of working below their qualification (Goos, Manning, & Salomons, 2009).

The topics chosen for the domain of family also referred to a number of everyday manifestations of social change, namely, relationship stability, difficulties in finding direction and independence in one’s life, and ambivalence about having a child. These demands reflect a pluralization of the life course and demographic changes of the society. For example, the decrease in relationship stability is mirrored in higher prevalence of divorces (which went from 2.1 per 1000 persons in 1995 to 2.5 in 2005), a decrease in the number of marriages (from 5.3 per 1000 persons in 1995 to 4.7 in 2005), and a greater number of single parents (which increased from 13.5% in 1995 to 17.6% in 2005; Statistisches Bundesamt, 2006). The ambivalence about having a child is clearly mirrored in the decreasing number of newborn (from 9.4 per 1000 persons in 1995 to 8.3 in 2005) and especially in the East there was a particular decrease soon after unification (Statistisches Bundesamt, 2006).

**TABLE 1**  
Overview over demands of social change

---

When considering the past 5 years...

*Demands in the field of work and occupation*

- ... my career is more difficult to plan long-term.
- ... today, I have to be prepared more for the possibility of reluctantly only working part-time instead of full-time.
- ... the risk of losing my job has increased.
- ... the risk of not finding a new job has increased.<sup>1</sup>
- ... the risk of not being able to complete my education has increased.<sup>2</sup>
- ... my career plans were often hindered by unforeseen events and circumstances.
- ... it is now more likely that I will be forced to accept a job requiring lower qualifications than those I have.
- ... there are currently fewer job opportunities for me.
- ... there are currently fewer occupational training opportunities for me.<sup>2</sup>

*Demands in the field of family and intimate relationship*

- ... it is more likely that my partner could leave me.
  - ... I now have to take more things into account when it comes to decisions concerning my family or partner.
  - ... my personal contacts are less reliable now.
  - ... it is more difficult to decide, given my present life circumstances, whether I want to have a(nother) child or not.
  - ... the knowledge and experiences of my parents now provide less sense of direction in my life.
  - ... it is more likely the case that I now have to reckon with being or once again becoming financially long-term dependent on my parents.
- 

<sup>1</sup>Different wording used for unemployed; <sup>2</sup>different wording used for school and college students. Demands of social change were given the following introduction: “We are living in a period of rapid change. Globalization, new technologies and other developments modify our everyday life in a variety of different ways. Many of these changes have both positive and negative aspects. Please now consider your working life (in respect of the relationship to your partner and your family life) and in what ways things have changed over the past 5 years. In the case that you have not yet been employed for a period of 5 years please answer for the period of time which comes to mind.”

Our focus on negatively connotated societal trends should not convey that social change does not bring any benefits for the individual or even that the negative aspects of social change prevail. Benefits from social change such as the personal freedom citizens of the new democracies in Central and Eastern Europe experience today are at least as prevalent as negative aspects of social change. However, we suspect that it is the stress-inducing demand and not the benefit that represents a non-ignorable risk factor for SWB, thus making it the subject of adaptive action by those affected.

In line with this thought, Grümer and Pinquart (2011) demonstrated that adults confronted with an accumulation of demands associated with social change in the fields of both work and family showed higher levels of depressive symptoms. Analysis on the same dataset by Pinquart, Silbereisen, and Grümer (2012) found the same pattern of relationship also for younger individuals. These results support the claim that a perceived increase in uncertainty due to social change can bring about more negative emotions. In the current paper and as an extension of the abovementioned studies, we expect to find the same pattern of relationships of demands associated with social change for another indicator of SWB; that is, satisfaction with life.

However, people do not only vary in their level of exposure to demands associated with social change (and those exposed more are expected to show lower levels of SWB), but also people respond differently to the demands associated with social change. The effects of demands on SWB depend considerably on how people deal with such changes.

### **ARE CONTROL STRATEGIES OF GOAL ENGAGEMENT AND DISENGAGEMENT BENEFICIAL FOR SWB?**

The motivational theory of lifespan development (Heckhausen, Wrosch, & Schulz, 2010) offers a framework to examine and evaluate how individuals deal with demands associated with social change. In their theory, the authors distinguish between two broad types of control strategies, goal engagement and goal disengagement. Goal engagement comprises strategies directed toward overcoming a given stressor, for example by means of investing personal resources such as ability, time, and effort to fight difficulties that arise during goal striving or by seeking social support. If, however, goal attainment is not possible, goal disengagement strategies have the function to

protect the individual from the negative effects of failure by disengaging from the futile goal and by comparing to others who are worse off.

In contrast to classical stress and coping approaches, the motivational theory of lifespan development offers specific and testable propositions as to which strategies are beneficial for one's SWB under which conditions. Central to the theory is the concept of congruency between strategies and control opportunities. Strategies of engagement and disengagement are not adaptive in and of themselves, irrespective of the contextual opportunities for control (e.g., Heckhausen et al., 2010). Rather, the adaptiveness of a given strategy is a function of whether control opportunities in the relevant domain (e.g., work, family) are present or not. Heckhausen (1999) argues that successful development depends on individuals' ability to adjust and match their strategies to the control opportunities and constraints provided by the given social ecology. If the ecology provides sufficient opportunities for control, strategies of goal engagement are likely to pay off in terms of success. Because the choice of a strategy is guided by the individual perceptions of control in a given area of life (Heckhausen et al., 2010), in this paper we are particularly interested in the perception of such opportunities for control.

Perceived high control should motivate individuals to maintain or even expand their capacity for primary control. With perceived high control, strategies of goal disengagement are not adequate because they do not allow an individual to make use of his or her control potential. Furthermore, selecting goal disengagement in favorable settings provokes negative emotional reactions, such as regret, in the individual and is particularly prone to formal and informal social sanctions (Heckhausen, 1999). The inverse situation is present if the ecology does not offer sufficient opportunities to master the respective demands and is perceived as controlled by external factors, such as significant others or societal conditions. Under such circumstances of perceived low control, individuals who stay engaged and motivationally committed would expose themselves to repeated experiences of failure and wasted resources. Strategies of goal disengagement, however, allow individuals to switch to more promising goals and thus to maintain their capacity for primary control.

Heckhausen et al. (2010) provide a substantial amount of empirical evidence for the adaptive value of both control strategies if they are congruent to the controllability of a situation. For example, adults with high levels of strategies



of goal engagement experienced fewer health declines and a higher SWB when confronted with ongoing and reversible, and thus controllable, health problems (Wrosch & Schulz, 2008). In an intervention study, Gitlin et al. (2006) even showed that goal engagement significantly improved the chances of survival for patients with functional disabilities (such as cardiovascular disease). Strategies of goal disengagement, on the other hand, have been found to be beneficial for one's SWB under extreme life conditions such as caring for handicapped children (King, Scollon, Ramsey, & Williams, 2000) or after the death of a loved one (Mattlin, Wethington, & Kessler, 1990). Under these uncontrollable circumstances, goal disengagement has a relieving effect since it leads to a decrease in frustrating experiences (Heyl, Wahl, & Mollenkopf, 2007).

Although the studies summarized in the previous paragraph were thematically and conceptually quite different, all led to the same conclusion. A confrontation with different stressors affects SWB less if the control strategy is congruent to the controllability of the stressors. Applied to the case of individual responses to demands associated with social change, we expect in Hypothesis 1 the negative links between work- and family-related demands associated with social change and SWB to be less negative for individuals showing a constellation of high goal engagement and perceived high control. A more negative association is expected for individuals showing a constellation of high goal engagement and perceived low control.

Concerning strategies of goal disengagement, in Hypothesis 2 we expect the negative relationships between work- and family-related demands and SWB to be less negative for individuals showing a constellation of high goal disengagement and perceived low control. The relationship should be more negative for individuals showing a constellation of high goal disengagement and perceived high control.

No hypotheses were specified for those individuals with low levels of strategies. Low levels on both control strategies reflect indecisiveness towards life-choices that are neither congruent nor incongruent to opportunities. As such, we did not state hypotheses for individuals with low levels of strategies above and beyond our buffering and aggravating hypotheses for individuals with high levels of strategies.

In sum, the review of the literature leads us to pose the following sets of hypotheses.

- *Hypothesis 1:* Opportunity-congruent goal engagement buffers negative relationships

between demands associated with social change and SWB, whereas opportunity-incongruent goal engagement aggravates this negative relationship.

- *Hypothesis 2:* Opportunity-congruent goal disengagement buffers, and opportunity-incongruent goal disengagement aggravates negative relationships between demands associated with social change and SWB.

## METHODS

### Sample

The sample analyzed was gathered as part of the Jena Study on Social Change and Human Development (Silbereisen et al., 2010). Respondents were drawn from two East German and two West German states, namely Thuringia and Mecklenburg-Western Pomerania in the East and Baden-Württemberg in the West. These federal states represent comparatively two economically healthier regions from the East and West parts of Germany (Thuringia and Baden-Württemberg) and two regions with serious economical problems (Mecklenburg-Western Pomerania and Schleswig-Holstein).

Identical numbers of inhabitants from these states were interviewed. The sampling procedure used was multistage random: Each state was split into smaller administrative districts. Within each district, sampling points were selected at random from the register of the Association of the German Market Research and Social Research Institutes, which is representative for German household population aged 14 and older. Starting with these sampling points, interviewers followed a random route to identify households (Adams & Brace, 2006). At the households interviewers used the Kish-selection grid to select appropriate participants. A professional survey institute conducted face-to-face interviews. The response rate was high (77%). Further details on sampling and on the interview manual are provided by Silbereisen and colleagues (2010).

Close to 3100 interviews were performed between October 2005 and January 2006. For the present analyses, we excluded all subjects below the age of 20 years. The resulting sample consisted of 2537 German adults between the ages of 20 and 43 ( $M = 32.640$ ,  $SD = 7.396$ ); 44.3% were male ( $N = 1123$ ) and 50.7% were from East-Germany ( $N = 1287$ ). More than one-third of the sample ( $N = 1028$ ; 40.5%) had completed or were currently on the highest school track. The majority of

the participants ( $N = 1501$ ; 59.2%) were gainfully employed, 448 (17.7%) were unemployed, 264 (10.4%) were students or apprentices, and 324 (12.8%) were out of the labor market, comprising homemakers and individuals on parental leave. As compared to official statistics of the four federal states investigated, our sample comes close to the actual proportions in the populations. There was, however, an overrepresentation of those who were unemployed and out of the labor market, probably due to the fact that these people were more flexible to spend time on our lengthy interview (~60–90 minutes).

## Survey instruments

### *Demands associated with social change*

Concerning the perceived growing uncertainties in the domains of work and family, we asked our participants for temporal comparisons between their situation in the recent past and today's circumstances. As the assessments were part of a multiple-theme survey, we had to restrict the numbers of items to six topics each concerning work and family. The topics were selected based on the literature and public statistics dealing with issues of globalization, individualization, and demographic shift, and their relation to the domains of work and family (see Tomasik & Silbereisen, 2009).

For analyzing whether these changes happened in the respondent's life, we asked the participants for their endorsement of these statements when considering the past five years on a scale from 1 ("does not apply at all") to 7 ("applies completely"). The five-year interval was chosen in order to focus on an interval in which some change could happen, and in order to minimize memory bias. Note that with regard to employment status of the participants, for the group of unemployed and those still in university or vocational training we used two items with a slightly different wording (see Table 1).

For each of the two life domains, we summed up the number of items that were strongly or very strongly endorsed by the respondent (values of 6 or 7). This was done for building a cumulative index similar to critical life event scales because the demands associated with social change cover diverse areas. Earlier research also showed that the accumulation of different stressors has a greater impact on psychosocial development than single stressors (e.g., Sameroff, 2000).

Tomasik and Silbereisen (2009) provide evidence for the validity of the cumulative index.

For example, a higher load of demands was found for unemployed respondents in comparison to employed respondents, for divorced, separated, or widowed individuals in comparison to married individuals as well as for individuals attending a low school track in comparison to those on a high track. Depending on the work and family status, one is more or less protected against the accumulation of demands as studied. Also, differences were found along political and regional contexts. East Germans reported a higher load of work-related demands compared to West Germans, probably reflecting the objective differences in economic prosperity between the two regions (in 2005 GDP per capita was 30% lower in East Germany compared to West Germany; Statistisches Bundesamt, 2006).

### *Control strategies*

A scale based on the framework of the motivational theory of lifespan development was used to assess control strategies of goal engagement and goal disengagement with regard to demands associated with social change. Participants were asked to rate their endorsement to 12 control strategies immediately after having rated their endorsement to the six demands in the domain of work. This procedure was repeated for the domain of family with the very same 12 items. Nine items reflect goal-engaging strategies; three items reflect goal-disengaging strategies. A sample item for strategies of goal engagement is "I am prepared to make a big effort in order to find a good solution"; a sample item for strategies of goal disengagement is "If I can't find a solution then I put the problem to the back of my mind" (1 = "does not apply at all"; 7 = "applies completely"). For each domain-specific control strategy we built a latent measurement model according to Tomasik, Silbereisen, and Pinquart (2010b). The model for work-related strategies of goal engagement fitted the data well,  $\chi^2(21) = 149.540$ ,  $p < .05$ ;  $SRMR = .020$ ;  $RMSEA = .050$ ; the same applies to the model for work-related strategies of goal disengagement,  $\chi^2(1) = 1.431$ ,  $ns$ ;  $SRMR = .009$ ;  $RMSEA = .013$ . The two models for family-related strategies of goal engagement,  $\chi^2(21) = 180.922$ ,  $p < .05$ ;  $SRMR = .021$ ;  $RMSEA = .055$ ; and goal disengagement,  $\chi^2(1) = 1.067$ ,  $ns$ ;  $SRMR = .007$ ;  $RMSEA = .005$ , also fitted the data well.

### *Perceived control*

Perceived control was assessed with a single item indicator developed by the research group of the

Jena Study. Participants were asked “To what extent is your ability to deal with these demands determined by yourself?” (1 = “to no extent”; 7 = “to the full extent”) after having rated their endorsement to the 12 demands associated with social change.

### **Satisfaction with life**

Satisfaction with life was chosen as first indicator for SWB and assessed with a measure adapted from the German Socio-Economic Panel (GSOEP; Wagner, Burkhauser & Behringer, 1993). Respondents were asked “How satisfied are you at present with your life altogether?” and could answer on a scale ranging from 1 (“very dissatisfied”) to 7 (“very satisfied”).

### **Depressive symptoms**

The second indicator for SWB was the scale “depressive symptoms” of the short version of the SCL-R-90 by Derogatis (1977), which is sensitive to symptomatic manifestations from mild dysphoria to levels of symptomatology characteristic of depressive disorders. The scale consisted of six items (e.g., “feeling no interest in things”), each item was scored on a seven-point Likert scale ranging from “not at all” to “very strong.” The measurement model fitted the data well after freeing one covariance between two items,  $\chi^2(8) = 72.538$ ,  $p < .01$ ;  $SRMR = .022$ ;  $RMSEA = .053$ .

### **Sociodemographic variables**

Six sociodemographic factors were used as control variables (see Diener et al., 1999, for an overview of the association between these sociodemographic factors and SWB). Gender, age, educational attainment, and region (East vs. West Germany) were assessed with single item indicators. In addition, employment status was assessed with a dummy-coded variable contrasting unemployed participants against employed and individuals out of the labor force (such as homemakers or students). Lastly, we assessed income change by asking how the household income had changed during the past 12 months. We contrasted individuals with a decrease in income against individuals with no changes and an increase in income.

## **RESULTS**

Structural equation modeling (SEM) was used to test the relations among the study variables (satisfaction with life, depressive symptoms, load of demands associated with social change, control strategies of goal engagement and disengagement, perceived control, and sociodemographic variables). Depressive symptoms and control strategies were constructed as latent factors; satisfaction with life, demands associated with social change, perceived control and sociodemographics as manifest variables. Due to the non-normal distribution of depressive symptoms (with most individuals reporting no or few depressive symptoms), maximum likelihood with adjusted means was used to estimate the models.

Intercorrelations between study variables are presented in Table 2. At the bivariate level, participants with a higher load of demands associated with social change in both domains of life had lower levels of SWB; that is, lower life satisfaction and higher depressive symptoms. Higher levels of strategies of goal engagement (in both domains of life) were related to higher levels of SWB; the same applies to perceived control. Strategies of goal disengagement in both domains of life were associated with lower levels of SWB. Both work- and family-related demands were positively related to strategies of goal engagement in the respective domain; however, no relationship was found concerning strategies of goal disengagement. Concerning sociodemographic variables, we found relationships for both indicators of SWB with education, income change, region, and unemployment status. Higher educational level was related to higher levels of SWB. Similarly, individuals from East Germany, unemployed persons, and those with a decrease in income during the past 12 months had significantly lower levels of SWB as compared to their respective reference groups.

Before testing the buffer and aggravating effects according to Hypotheses 1 and 2 we needed to assure that demands associated with social change were negatively linked to SWB. For that we set up an SEM for each indicator of SWB. We predicted satisfaction with life by work- and family-related demands and included control strategies in both domains of life, perceived control, and sociodemographic variables in the model. The results of this model with parameter estimates ( $B$ ), confidence intervals, and the respective standardized regression coefficients ( $\beta$ ) are given in Table 3. The model revealed a good fit to data,  $\chi^2(368) = 1038.721$ ,  $p < .01$ ;  $SRMR = .022$ ;  $RMSEA = .027$ ,



**TABLE 2**  
Intercorrelations of the study variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	M	SD
1 Sex																
2 Age	.056**															
3 Education	.046*	.196**														
4 Employment status	-.049*	-.006	-.073**													
5 Income change	.007	-.004	-.014	.347**												
6 Region	-.012	-.083**	.337**	.172**	.077**										3.442	2.183
7 Work-related demands associated	.012	.014	-.083**	.376**	.199**	.174**									2.497	1.524
8 Family-related demands associated with social change	.016	-.041*	-.029	.113**	.047**	.203**	.403**								5.120	.912
9 Control strategies of goal engagement (work domain) <sup>2</sup>	.028	-.007	.085**	-.049**	-.081**	.133**	.135**	.236**							5.240	.977
10 Control strategies of goal engagement (family domain) <sup>2</sup>	.062**	-.006	-.047*	.069**	-.099**	.103**	.139**	.255**	-.895**						2.501	1.250
11 Control strategies of goal disengagement (work domain) <sup>2</sup>	-.073**	-.019	-.140**	.089**	.006	-.109**	.012	-.035	-.361**	-.343**					2.492	1.295
12 Control strategies of goal disengagement (family domain) <sup>2</sup>	-.092**	.033	-.106**	.098**	.001	-.072**	-.002	.029	-.334**	-.378**	.887**				5.070	1.537
13 Perceived control	.018	-.013	.122**	-.239**	-.166**	.002	-.181**	-.015	.261**	.262**	-.173**	-.171**			5.080	1.485
14 Satisfaction with life	.023	-.048*	.041*	-.418**	-.277**	-.112**	-.298**	-.147**	.207**	.224**	-.063**	-.048*	.307**		1.894	1.306
15 Depressive symptoms <sup>2</sup>	.020	-.004	-.052**	.297**	.216**	.043*	.203**	.140**	-.265**	-.262**	.138**	.127**	-.253**	-.476**		

<sup>1</sup>Unemployed group is contrasted against the employed and out of the labor force group (including students, housewives); <sup>2</sup>individuals with a decrease in income are contrasted against individuals with no income change and an increase in income; <sup>3</sup>latent variable scores are transformed into original metric of scale for the calculation of means. \* $p < .05$ ; \*\* $p < .01$ .

TABLE 3

Regression of satisfaction of life on demands associated with social change, control strategies, perceived control and sociodemographic variables

Variable		B	$\beta$	
Work-related demands associated with social change		-.086	(-.108/-.064)	-.145**
Family-related demands associated with social change		-.111	(-.142/-.079)	-.120**
Control strategies of goal engagement in the work-domain		.114	(.020/.208)	.081**
Control strategies of goal engagement in the family-domain		.253	(.141/.365)	.194**
Control strategies of goal disengagement in the work domain		-.052	(.150/.047)	-.049
Control strategies of goal disengagement in the family domain		.153	(.059/.246)	.153**
Perceived control		.128	(.097/.159)	.140**
Sex	Female	.010	(-.068/.088)	.004
Age		-.010	(-.030/.010)	-.012
Education	Higher school track	.011	(-.078/.099)	.004
Employment status	Unemployed <sup>1</sup>	-1.001	(-1.137/-.866)	-.274**
Income change	Decrease in income <sup>2</sup>	-.168	(-.223/-.114)	-.104**
Region	East Germany	-.095	(-.200/.010)	-.034
R <sup>2</sup>		.310		

Model fit:  $\chi^2(368) = 1038.721$ ,  $p < .01$ ;  $CFI = .978$ ;  $SRMR = .022$ ;  $RMSEA = .027$ .  $B$  = unstandardized regression coefficient (in parentheses 95% lower and upper confidence interval for  $B$ );  $\beta$  = standardized regression coefficient.  $R^2$  = explained variance. <sup>1</sup>Unemployed group contrasted against employed and out of the labor force group (students, housewives etc.); <sup>2</sup>individuals with a decrease in income are contrasted against individuals with no income change and an increase in income. \*\* $p < .01$ ; \* $p < .05$ .

and the independent variables accounted for 31.0% of the variance of satisfaction with life. The model for depressive symptoms was built accordingly and also yielded a good fit,  $\chi^2(541) = 1748.035$ ,  $p < .01$ ;  $SRMR = .025$ ;  $RMSEA = .029$ . The amount of variance explained was 28.4% (see Table 4).

We found robust associations for life satisfaction with both work-related demands ( $\beta = -.135$ ) and family-related demands ( $\beta = -.120$ ). Depressive symptoms also were significantly linked to both work-related demands ( $\beta = .098$ ) and family-related demands ( $\beta = .170$ ). Since the demands in both domains of life have a unique relationship with SWB independent of other correlates of SWB such as employment status, an analysis of potential moderator effects makes sense.

### Hypothesis 1

Generally, testing for interaction effects within an SEM framework is accomplished by modeling latent interaction terms based on the product-indicator model. However, such models require complex nonlinear constraints and are difficult to estimate, especially when comprising three-way interactions (Little, Card, Bovaird, Preacher, & Crandall, 2007). Against this background, we opted for multigroup design as it is proposed for the latent interaction between a latent continuous

variable and an observed categorical variable where the regression parameter for the latent continuous variable predicting a DV can vary across the groups (Muthen & Asparouhov, 2003). Such models are easier to specify and to estimate, but are considered conservative models for testing interaction effects: Due to building of subgroups they have reduced variance and thus a lower power to detect interaction effects.

For the analyses of Hypothesis 1 in the work domain, we split our sample into three groups of different levels of perceived control and goal engagement in the work domain. The buffer group comprised individuals with high levels of both goal engagement and perceived control ( $> M + 0.5SD$ ) and the aggravated group comprised individuals with high goal engagement ( $> M + 0.5SD$ ) but low perceived control ( $< M - 0.5SD$ ). As a reference we used individuals with medium levels of strategies of both goal engagement and perceived control ( $> M - 0.5SD$  and  $< M + 0.5SD$ ; see Table 5 for descriptive statistics of these groups). Regarding the family domain, the sample was split into groups of different levels of perceived control and goal engagement in the family domain. Each of these independent groups consisted of at least 200 individuals.

To test for differences in the relationship between work-related demands and SWB between the three groups, we estimated and compared two models: We estimated, first, the same models as

TABLE 4

Regression of depressive symptoms on demands associated with social change, control strategies, perceived control and sociodemographic variables

Variable		<i>B</i>	$\beta$
Work-related demands associated with social change		.019 (.012/.026)	.118**
Family-related demands associated with social change		.047 (.034/.060)	.150**
Control strategies of goal engagement in the work domain		-.077 (-.119/-.034)	-.179**
Control strategies of goal engagement in the family domain		-.057 (-.095/-.019)	-.143**
Control strategies of goal disengagement in the work domain		.023 (-.014/.060)	.034
Control strategies of goal disengagement in the family domain		-.018 (-.053/-.016)	-.029
Perceived control		-.030 (-.041/-.019)	-.108**
Sex	Female	.027 (-.004/.059)	.032
Age		.000 (-.002/.002)	.000
Education	Higher school track	-.004 (-.033/.026)	-.004
Employment status	Unemployed <sup>1</sup>	.234 (.179/.289)	.210**
Income change	Decrease in income <sup>2</sup>	.052 (.034/.071)	.107**
Region	East Germany	.013 (-.019/.044)	.015
<i>R</i> <sup>2</sup>		.284	

Model fit:  $\chi^2(541) = 1748.035$ ,  $p < .01$ ;  $CFI = .971$ ;  $SRMR = .025$ ;  $RMSEA = .029$ . *B* = unstandardized regression coefficient (in parentheses 95% lower and upper confidence interval for *B*);  $\beta$  = standardized regression coefficient. *R*<sup>2</sup> = explained variance. <sup>1</sup>Unemployed group contrasted against employed and out of the labor force group (students, housewives etc.); <sup>2</sup>individuals with a decrease in income are contrasted against individuals with no income change and an increase in income. \*\* $p < .01$ ; \* $p < .05$ .

TABLE 5

Descriptive statistics for the buffer, aggravated, and reference groups

		Hypothesis 1 (goal engagement) <i>M (SD)</i>	Hypothesis 2 (goal disengagement) <i>M (SD)</i>
<i>Work domain</i>			
Reference group	Control strategy	5.087 (.256)	2.573 (.389)
	Perceived control	5.000 (.061)	4.980 (.108)
Buffer group	Control strategy	6.094 (.306)	4.002 (.648)
	Perceived control	6.550 (.498)	3.160 (1.013)
Aggravated group	Control strategy	6.088 (.325)	4.122 (.728)
	Perceived control	3.020 (1.142)	6.370 (.483)
<i>Family domain</i>			
Reference group	Control strategy	5.144 (.283)	2.547 (.381)
	Perceived control	4.990 (.066)	4.990 (.093)
Buffer group	Control strategy	6.254 (.299)	4.031 (.674)
	Perceived control	6.550 (.498)	3.140 (1.016)
Aggravated group	Control strategy	6.205 (.298)	4.119 (.759)
	Perceived control	2.970 (1.152)	6.380 (.487)

Control strategy scales ranged from 1 ("does not apply at all") to 7 ("applies completely"); single item for perceived control ranged from 1 ("to no extent") to 7 ("to the full extent").

displayed in Tables 3 and 4 (leaving out strategies of goal engagement in the work domain and perceived control) and allowed the regression weights for the relationship between work-related demands and indicators of SWB to vary across the three groups (free model). For the second model (constrained model) we constrained the regression parameter to be equal, first, in the reference and buffer groups (testing of buffer effect) and second, in the reference and aggravated groups (testing of

aggravating effect). This procedure was repeated for the analyses in the family domain.

The buffer effect specified in Hypothesis 1 would be supported if constraining the regression parameters in the reference and buffer groups to be equal significantly reduced model fit and the regression weights in the buffer group were less negative than in the reference group. The aggravating hypothesis would be supported if constraining the parameters in the reference and aggravated

**TABLE 6**  
Model testing of buffer and aggravated effects for control strategies of goal engagement

<i>Regression coefficient tested</i>	<i>Group tested</i>	<i>Free model <math>\chi^2</math> (df)</i>	<i>Constrained model <math>\chi^2</math> (df)</i>	$\Delta\chi^2$ ( $\Delta$ df)	<i>sig</i>	<i>B reference group</i>	<i>B buffer/ aggravated group</i>
Work demands – Satisfaction with life	Buffer group	28.316 (28)	31.959 (29)	3.643 (1)	**	–.065	–.014
	Aggravated group	28.316 (28)	31.183 (29)	2.867 (1)	*	–.065	–.105
Work demands – Depressive symptoms	Buffer group	811.422 (308)	814.290 (309)	2.868 (1)	*	.023	–.002
	Aggravated group	811.422 (308)	815.320 (309)	4.898 (1)	**	.023	.052
Family demands – Satisfaction with life	Buffer group	29.510 (28)	33.458 (29)	3.948 (1)	**	–.067	–.018
	Aggravated group	29.510 (28)	34.073 (29)	4.563 (1)	**	–.067	–.163
Family demands – Depressive symptoms	Buffer group	765.806 (308)	769.695 (309)	3.889 (1)	**	.042	.007
	Aggravated group	765.806 (308)	766.772 (309)	0.966 (1)	<i>ns</i>	.042	.049

Besides demands of social change the models further include gender, age, education, employment status, income change, and East/West region as predictors of SWB.

groups to be equal led to a significantly reduced model fit and the regression weights in the aggravated group were more negative than in the reference group.

The results met our expectations: Equating the coefficients in the buffer and reference groups for the paths between the work-related demands and both indicators for SWB significantly reduced model fit (see Table 6). The buffer group had significantly weaker regression coefficients compared to the reference group. The regression parameters also differed significantly between reference group and aggravated group. Individuals in the aggravated group reported significantly stronger links between work demands and SWB than individuals in the reference group.

The results for the relationship between family-related demands and SWB partially supported our hypothesis: Concerning possible buffer effects, we found a significantly different model fit between buffer and reference groups for both indicators of SWB (see Table 6). Regarding possible aggravating effects, the aggravated and reference groups differed only for satisfaction with life; no aggravated effect was found for depressive symptoms (Figure 1).

## Hypothesis 2

We employed the same multigroup strategy as described above by splitting the sample into a buffer group (goal disengagement in the respective domain  $>M + 0.5SD$  and perceived control  $<M - 0.5SD$ ), an aggravated group (goal disengagement in the respective domain  $>M + 0.5SD$  and perceived control  $>M + 0.5SD$ ) and a reference group (both goal disengagement in the respective domain and perceived control  $>M - 0.5SD$  and  $<M + 0.5SD$ ; see Table 5 for

descriptive details on the groups) and by comparing the model fits of free and constrained models. Group size was at least 200 participants.

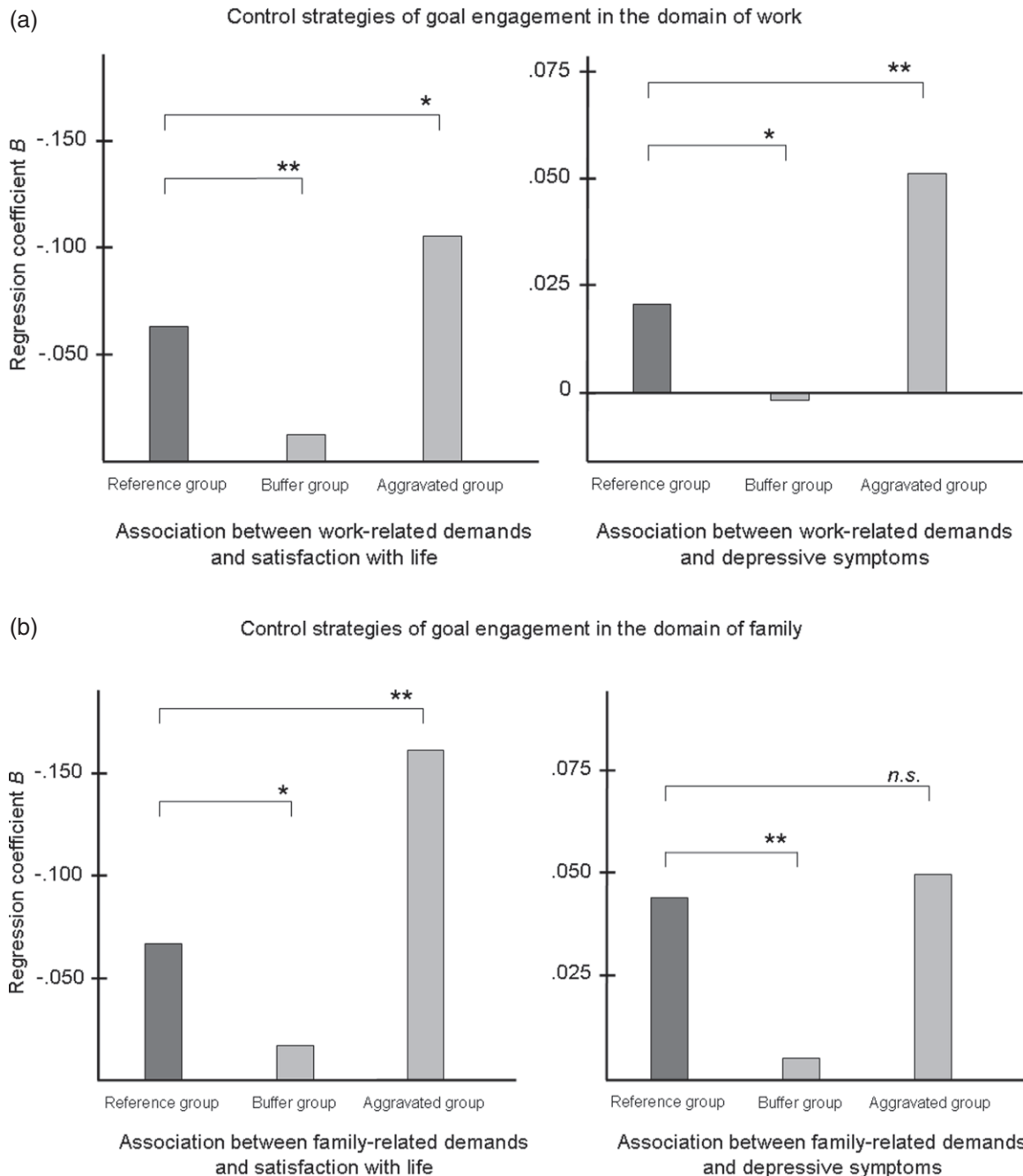
Concerning the work domain, the results predominantly supported our expectations: We found a reduced model fit when equating the regression coefficient in the buffer and reference groups only for depressive symptoms, and not for satisfaction with life. Furthermore, the model fit differed significantly between aggravated and reference group: The relationships between work-related demands and SWB were significantly stronger in the aggravated group than in the reference group (Figure 2 and Table 7).

Concerning the family domain, the results also partially met our expectations: Significantly different model fits were found between buffer and reference groups, individuals in the buffer group reported a less negative relationship between family demands and indicators of SWB than the reference group. However, we found no difference between the models for the aggravated and reference groups; the coefficients of these groups did not differ.

## DISCUSSION

Previous psychological research found significant links between demands associated with social change and indicators of SWB (e.g., Grümer & Pinguart, 2011). In the current study, we addressed the question of which kinds of control strategies are most effective in protecting SWB in response to demands associated with social change. Our findings predominantly supported the predictions based on the motivational theory of lifespan development. The following discussion focuses, first, on the results in favor of our hypotheses. Second, we discuss findings that did not support





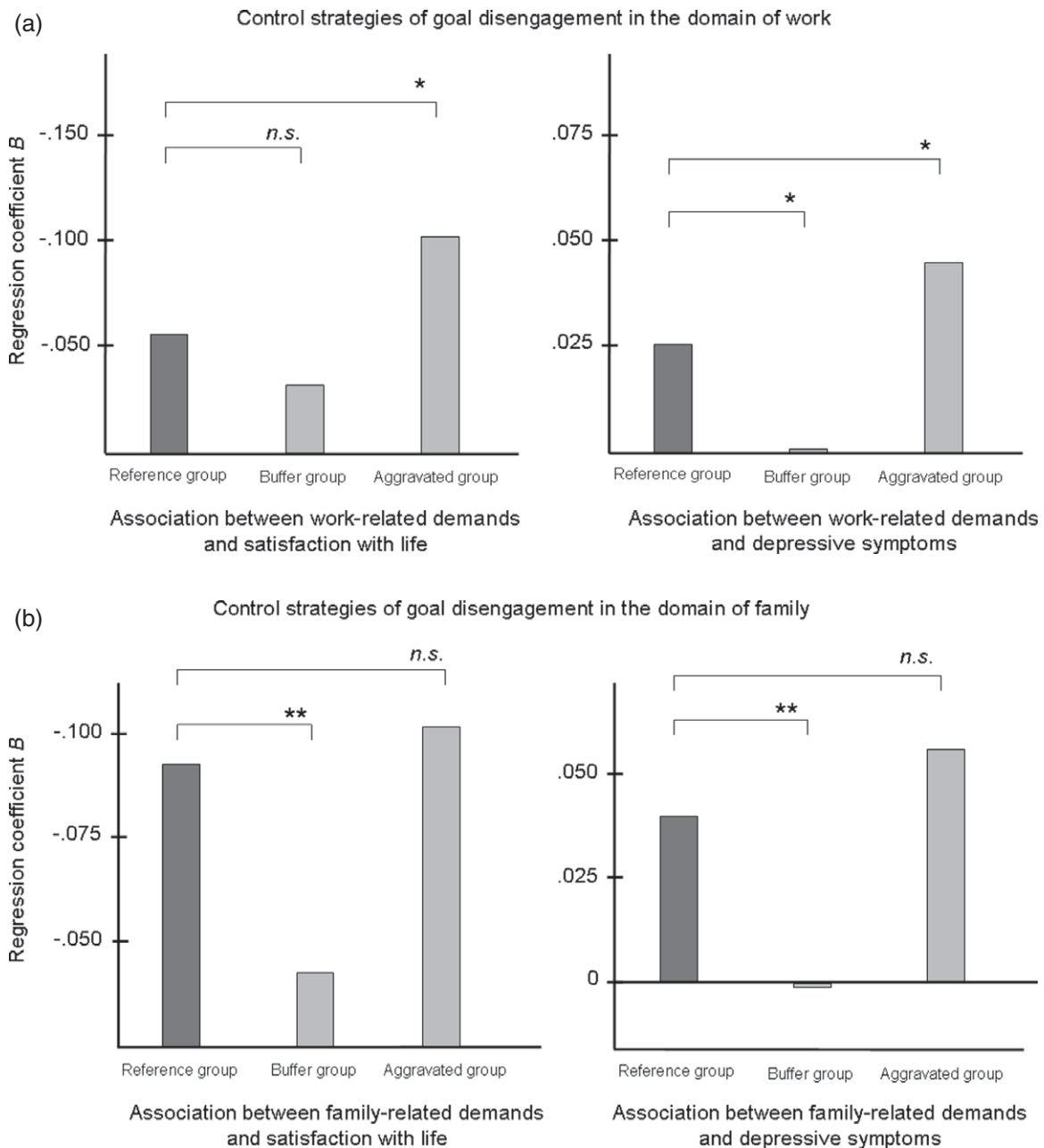
**Figure 1.** (a) Moderation of relationship between work-related demands associated with social change and SWB by engaging control strategies and perceived control. (b) Moderation of relationship between family-related demands associated with social change and SWB by disengaging control strategies and perceived control.

our hypotheses and further noteworthy results. In the last part, limitations of the study and our concluding remarks are presented.

### Hypothesis 1

In our analyses we found full support for the proposed buffer effect and our assumption that

strategies of goal engagement such as the investment of effort are more beneficial under conditions of perceived high control and may contribute to SWB. In line with previous research on the congruency between sufficient control opportunities and strategies of goal engagement, we interpret this finding such that under conditions of perceived high control, goal engagement is most likely to pay off in terms of various benefits such



**Figure 2.** (a) Moderation of relationship between work-related demands associated with social change and SWB by engaging control strategies and perceived control. (b) Moderation of relationship between family-related demands associated with social change and SWB by disengaging control strategies and perceived control.

as higher SWB, better health, or higher education (Heckhausen et al., 2010). Perceived high control allows individuals to maintain or even expand their capacity for primary control.

We also found in three out of four analyses support for our expectation of an aggravating effect of goal engagement if conditions are perceived as not controllable. We observed that staying committed to a goal when perceiving only low control was related to lower levels of SWB. An exception was the link between family-related

demands and depressive symptoms where no aggravating effect was found. Generally however, a typical consequence of remaining engaged with a futile goal pursuit is experiencing frequent and frustrating failures: Individuals confronted with goal failure are likely to experience emotional distress and a decline in SWB (Nesse, 2000). Furthermore, individuals staying engaged to a goal regardless of the control opportunities have a high risk of wasteful investment of resources. A depletion of one's resources is shown to be a

**TABLE 7**  
Model testing of buffer and aggravated effects for control strategies of goal disengagement

<i>Regression coefficient tested</i>	<i>Group tested</i>	<i>Free model <math>\chi^2(df)</math></i>	<i>Constrained model <math>\chi^2(df)</math></i>	$\Delta\chi^2$ ( $\Delta df$ )	<i>sig</i>	<i>B reference group</i>	<i>B buffer/aggravated group</i>
Work demands – Satisfaction with life	Buffer group	40.828 (28)	42.479 (29)	1.451 (1)	<i>ns</i>	–.055	–.030
	Aggravated group	40.828 (28)	44.111 (29)	3.283 (1)	*	–.055	–.101
Work demands – Depressive symptoms	Buffer group	796.070 (308)	799.466 (309)	3.396 (1)	*	.025	–.001
	Aggravated group	796.070 (308)	798.825 (309)	2.755 (1)	*	.025	.043
Family demands – Satisfaction with life	Buffer group	42.929 (28)	46.585 (29)	3.656 (1)	**	–.093	–.035
	Aggravated group	42.929 (28)	43.860 (29)	0.931 (1)	<i>ns</i>	–.093	–.103
Family demands – Depressive symptoms	Buffer group	733.702 (308)	737.513 (309)	3.811 (1)	**	.040	–.001
	Aggravated group	733.702 (308)	735.796 (309)	2.094 (1)	<i>ns</i>	.040	.055

Besides demands of social change the models further include gender, age, education, employment status, income change, and East/West region as predictors of SWB.

powerful predictor for higher levels of depressive symptomatology (Wrosch, Schulz, & Heckhausen, 2004). Furthermore, the failure to withdraw commitment from unattainable demands prevents individuals from investing in other tasks and thus from maximizing their primary control capacity across different life domains. In this regard, this finding also supports the assumptions of the motivational theory of lifespan development that strategies of goal engagement have detrimental consequences for control striving and SWB under conditions of perceived insufficient control.

## Hypothesis 2

In our analyses, we found evidence for our expectation that strategies of goal disengagement can stabilize one's satisfaction with life if individuals perceive insufficient control. Though we failed to demonstrate the buffer effect for the single link between work-related demands and satisfaction with life, the majority of our results support the assumption that perceived low control can be seen as a prerequisite for strategies of goal disengagement. It has been noted that individuals with perceived low control disengage from stressors more rapidly and also get engaged with new goals more easily (Miller & Wrosch, 2007). Accordingly, analyses by Tomasik, Silbereisen, and Heckhausen (2010a) on the same dataset, but assessing the degree of opportunities via objective indicators of the region where the respondents live (such as the regional economic strength), revealed that the relationship between goal disengagement and SWB was less negative in economically poorer regions. In interpreting this finding the authors stress that these poorer regions

offer less potential for one's own control, and thus people may benefit more from strategies of goal disengagement. In line with such research on positive aspects of strategies of goal disengagement, we interpret the benefits of these strategies under conditions of perceived low control in two ways: First, strategies of goal disengagement lower the likelihood of further failure experiences in case of low controllability of stressors (Heyl et al., 2007). Second, an ongoing goal engagement under uncontrollable conditions is cost-expensive, consuming resources that might otherwise have been invested more successfully into other domains of life (Heckhausen, 1999). Under such conditions, strategies of goal disengagement protect from unnecessary waste of important resources and thus are related to higher levels of SWB.

We also found partial support for our expectation of an aggravated effect for high goal disengaging if conditions are perceived as controllable. This effect was found in the domain of work, but not in the domain of family. Our finding of a more negative relationship for goal disengagement converges with empirical findings showing that goal disengagement has detrimental consequences for further control striving under favorable conditions (for example, Tomasik et al., 2010a). In accordance with the motivational theory of lifespan development, we explain our finding that not seizing perceived opportunities offered by favorable conditions but rather disengaging and looking for self-protective attributions and alternatives forgoes opportunities for primary control. That should lead to negative consequences in the long run, including declines in SWB (Heckhausen et al., 2010). Goal disengagement can have adverse effects if one underachieves and does not take advantage of one's own control potential.

### Further noteworthy findings

Generally, we observed consistent findings with our expectations supporting the propositions of the motivational theory of lifespan development (Heckhausen et al., 2010). There were four particularly noteworthy findings. The first pertains to the adaptive value of control strategies. As our findings showed, the adaptive value of goal engagement and disengagement is determined by their congruence with (perceived) opportunities and constraints for primary control striving provided by the social ecology (Heckhausen et al., 2010). The key to whether strategies of goal engagement or disengagement are beneficial for one's SWB lies in the degree of control individuals perceive to have over the changing life circumstances. Under conditions of perceived high control, goal engagement is clearly linked to higher SWB. Under conditions of perceived low control goal disengagement is more adaptive and has protective consequences for individual's SWB. Thus, positive outcomes in terms of SWB depend not on an individual's use of certain control strategies per se, but on whether these control strategies of goal engagement or disengagement are congruent with perceived control opportunities in the relevant domain.

A second discussion point pertains to the question of what happens when control strategy and control opportunities are incongruent. The motivational theory of lifespan development predicts that such incongruence should have undesirable consequences, and this is what we found. Incongruence between control strategies and perceived control opportunities was associated with lower levels of SWB. Trying to overcome a nonchangeable situation or detaching from an actually changeable situation aggravated the already negative link between demands associated with social change and SWB. Thus, if the individual uses opportunity-incongruent control strategies to deal with them, stressors have the potential to lower one's SWB.

The third discussion-worthy issue concerns the extent to which the buffer and aggravated effects were found across the domains of life. Whereas we found buffer effects in both work and family domains, the pattern for aggravating effects was predominantly found in the domain of work. Only one out of five significant aggravated effects was located in the family domain. In other words, using incongruent control strategies made matters worse, especially in the work domain. As one's work and occupation provides the material and social foundation for other domains of life

(Gershuny, 2003) we suspect that there are higher economical, psychological, and social costs associated with uncertainties in the work domain, especially when opportunity-incongruent control strategies are applied.

Lastly and in addition to our hypothesis, we also observed two strong significant associations between sociodemographic variables and SWB. First, we found that unemployed persons had significantly lower levels of SWB as compared to both employed and those out of the labor force. Reasons for this given in the literature include higher levels of perceived stress and perceived low control in the unemployed (Paul & Moser, 2009). Although in our study unemployed individuals reported higher levels of demands and lower perceived control (see Table 2), in additional analyses (not reported here) we found no evidence of an interaction effect between employment status and demands associated with social change on SWB, indicating that the demands have the same association with SWB across our employment groups. Second, we found individuals with a decrease in household income during the past 12 months to report lower levels of SWB. According to set-point theory of SWB, changes in income may temporarily lead to increases or decreases in SWB, especially if the change in income results in the inability to pursue one's goals and needs (Diener et al., 1999). This effect, however, might vanish when considering longer periods of time than our assessment of income change during the past 12 months. For example, Diener, Sandvik, Seidlitz, and Diener (1993) found no differences in SWB due to income changes over a 10 year period.

### Limitations and conclusion

The first limitation pertains to our study design, which provided only concurrent, that is, cross-sectional data and hence does not warrant any conclusions about the direction of effects. Although our variables independently account for variance in SWB, we cannot fully explore the dynamic interplay between the variables. For example, our proposed sequence of effects from demands associated with social change, control strategies and perceived control to SWB could also have worked in the reverse direction. It is known that individuals prefer specific strategies according to their level of SWB. For example, individuals with higher levels of SWB generally prefer strategies of goal engagement whereas lower levels of SWB can be seen as a predictor for strategies of goal disengagement (Heckhausen



et al., 2010). There are at least two reasons as to why our interpretation of directed effects from stressors to SWB can be considered more plausible. First, there are longitudinal studies supportive of that direction (e.g., Poulin & Heckhausen, 2007). Second, the wording of our research variables suggests a temporal sequence. Both strategies and perceived control refer specifically to the demands associated with social change and thus to situations across the past five years. The indicators of SWB, on the other hand, were assessed explicitly referring to the *current* life situation (satisfaction with life) and to the last month (depressive symptoms), respectively.

A second limitation of our study pertains to our measurement of perceived control: First, whereas demands associated with social change and control strategies were assessed specifically in the work and family domains, perceived control was assessed as a global indicator. It is plausible to assume that a domain-specific assessment of perceived control might have led to a higher congruence between control strategies and perceived control and thus to clearer buffer and aggravating effects. Second, perceived control was assessed only with a single-item indicator. Given that multiple-item indicators allow a precise estimation of the residual variance, there is the possibility that a single-item assessment is of low reliability and validity. As the majority of results, however, are in favor of our hypotheses, our assessment of perceived control did not seem to have impaired our analyses.

Notwithstanding these limitations, the present study is one of the first to link the individual's burdening with demands associated with social change to measures of SWB and to analyze systematically which kinds of control strategies are most effective in protecting SWB. As Germany and other countries are confronted with major social and economic changes, their effects on individual lives and how to deal with them will become an increasingly important issue. We found that even individuals confronted with a high burden of demands associated with social change are able to successfully protect their level of SWB if they match their strategies to the perceived controllability of the stressors.

Manuscript received November 2011  
Revised manuscript accepted October 2012  
First published online November 2012

## REFERENCES

- Adams, K., & Brace, I. (2006). *Introduction to market and social research*. London, UK: Kogan Page.
- Clark, A. E., Diener, E., Georgellis, Y., & Lucas, R. E. (2008). Lags and leads in life satisfaction: A test of the baseline hypothesis. *Economic Journal*, *118*, F222–F243.
- Derogatis, L. R. (1977). *The SCL-90-R manual I: Scoring, administration and procedures for the SCL-90*. Baltimore, MD: Clinical Psychometric Research.
- Diener, E., Lucas, R., & Scollon, C. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist*, *61*, 305–314.
- Diener, E., Sandvik, E., Seidlitz, L., & Diener, M. (1993). The relationship between income and subjective well-being: Relative or absolute? *Social Indicators Research*, *28*, 195–223.
- Diener, E., Suh, M., Lucas, R. E., & Smith, H. E. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*, 276–302.
- Gershuny, J. (2003). *Changing times: Work and leisure in postindustrial society*. Oxford, UK: Oxford University Press.
- Gitlin, L. N., Winter, L., Dennis, M. P., Corcoran, M., Schinfeld, S., & Hauck, W. W. (2006). A randomized trial of a multicomponent home intervention to reduce functional difficulties in older adults. *Journal of the American Geriatrics Society*, *54*, 809–816.
- Goos, M., Manning, A., & Salomons, A. (2009). Job polarization in Europe. *American Economic Review*, *99*, 58–63.
- Greenfield, P. M. (2009). Linking social change and developmental change: Shifting pathways for human development. *Developmental Psychology*, *45*, 401–418.
- Grüner, S., & Pinquart, M. (2011). Perceived changes in personal circumstances related to social change: Associations with psychosocial resources and depressive symptoms. *European Psychologist*, *16*, 68–78.
- Headey, B. W. (2008). The set-point theory of well-being: Negative results and consequent revisions. *Social Indicators Research*, *86*, 389–403.
- Heckhausen, J. (1999). *Developmental regulation in adulthood: Age-normative and sociostructural constraints as adaptive challenges*. New York, NY: Cambridge University Press.
- Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A motivational theory of life-span development. *Psychological Review*, *117*, 32–60.
- Heyl, V., Wahl, H., & Mollenkopf, H. (2007). Affective well-being in old age: The role of tenacious goal pursuit and flexible goal adjustment. *European Psychologist*, *12*, 119–129.
- King, L. A., Scollon, C. K., Ramsey, C., & Williams, T. (2000). Stories of life transition: Subjective well-being and ego development in parents of children with Down syndrome. *Journal of Research in Personality*, *34*, 509–536.
- Lewis, G., & Araya, R. (2002). Globalization and mental health. In N. Sartorius, W. Gaebel, & J. J. Lopez-Ibor (Eds.), *Psychiatry in society* (pp. 57–78). New York, NY: Wiley.
- Little, T. D., Card, N. A., Bovaird, J. A., Preacher, K. J., & Crandall, C. S. (2007). Structural equation modeling of mediation and moderation with contextual factors. In T. D. Little, J. A. Bovaird, & N. A. Card (Eds.), *Modeling contextual effects in longitudinal studies* (pp. 207–230). Mahwah, NJ: Lawrence Erlbaum Associates.

- Lykken, D., & Tellegen, A. (1996). Happiness is a stochastic phenomenon. *Psychological Science, 7*, 186–189.
- Mattlin, J. A., Wethington, E., & Kessler, R. C. (1990). Situational determinants of coping and coping effectiveness. *Journal of Health and Social Behavior, 31*, 103–122.
- Miller, G. E., & Wrosch, C. (2007). You've gotta know when to fold'em: Goal disengagement and systemic inflammation in adolescence. *Psychological Science, 18*, 773–777.
- Muthen, B., & Asparouhov, T. (2003). Modeling interactions between latent and observed continuous variables using maximum-likelihood estimation in Mplus. *Mplus Web Notes, 3*, 1–9.
- Nesse, R. (2000). Is depression an adaptation? *Archives of General Psychiatry, 57*, 14–20.
- Paul, K., & Moser, K. (2009). Unemployment impairs mental health: Meta-analyses. *Journal of Vocational Behavior, 74*, 264–282.
- Pinquart, M., Silbereisen, R. K., & Grümer, S. (2012). Perceived demands of social change and depressive symptoms in adolescents from different educational tracks. *Youth & Society*. Advance online publication. doi: 10.1177/0044118X11435575.
- Poulin, M., & Heckhausen, J. (2007). Stressful events compromise control strivings during a major life transition. *Motivation and Emotion, 31*, 300–311.
- Sameroff, A. (2000). Developmental systems and psychopathology. *Development and Psychopathology, 12*, 297–312.
- Silbereisen, R. K., Pinquart, M., & Tomasik, M. J. (2010). Demands of social change and psychosocial adjustment: Results from the Jena study. In R. K. Silbereisen, & X. Chen (Eds.), *Social change and human development: Concepts and results* (pp. 125–147). London, UK: Sage.
- Statistisches Bundesamt (Ed.). (2006). *Leben und Arbeiten in Deutschland 2005* [Life and work in Germany 2005]. Wiesbaden, Germany: Statistisches Bundesamt.
- Tomasik, M. J., & Silbereisen, R. K. (2009). Demands of social change as a function of the political context, institutional filters, and psychosocial resources. *Social Indicators Research, 94*, 13–28.
- Tomasik, M. J., Silbereisen, R. K., & Heckhausen, J. (2010a). Is it adaptive to disengage from demands of social change? Adjustment to developmental barriers in opportunity-deprived regions. *Motivation and Emotion, 34*, 384–398.
- Tomasik, M. J., Silbereisen, R. K., & Pinquart, M. (2010b). Individuals negotiating demands of social and economic change: A control theoretical approach. *European Psychologist, 15*, 246–259.
- Wagner, G. G., Burkhauser, R. V., & Behringer, F. (1993). The English language public use file of the German socio-economic panel. *Journal of Human Resources, 28*, 429–433.
- Wrosch, C., & Schulz, R. (2008). Health engagement control strategies and 2-year changes in older adults' physical health. *Psychological Science, 19*, 536–540.
- Wrosch, C., Schulz, R., & Heckhausen, J. (2004). Health stresses and depressive symptomatology in the elderly: A control-process approach. *Current Directions in Psychological Science, 13*, 17–20.