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# MULTIDIMENSIONALITY OF THE LIFE COURSE, SPILLOVER EFFECTS, AND WELL-BEING: HOW DO PARENTHOOD AND PERSONALITY AFFECT CHANGES IN DOMAIN-SPECIFIC SATISFACTION?

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## Abstract

While widely recognized as important determinants of well-being, spillover effects across life domains after a critical event or transition are largely understudied in a truly longitudinal perspective. Specifically, little is known about how becoming a parent produces variations in subjective well-being in other life domains. By adopting a life-course perspective, we contributed to such questions by examining trajectories of life, job, and leisure satisfaction before and after first childbirth by gender and personality. Drawing on data from the German Socio-Economic Panel (SOEP; 1984–2013), we show that the shape of life and leisure satisfaction trajectories after birth subtly differ for men and women. Moreover, job satisfaction drops significantly shortly before childbirth only for women, rising again after the 1st year after childbirth. Personality moderates some of these relationships. Our results indicate that spillovers across life domains and their impact on well-being should be addressed in a longitudinal and multidisciplinary perspective.

## Keywords

well-being | transition to parenthood | personality | spillover effects | life course

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## **1. Introduction**

In a life-course perspective, lives are multidimensional pathways made of multiple domain-specific but interdependent trajectories, related to either family, employment, physical and mental health, or psychological developmental (Elder, 1995). In this perspective, critical life events inherently have multidimensional consequences, which simultaneously involve multiple life domains. Since interdependencies play out through time, in order to empirically capture it, researchers must address the impact of critical events in a dynamic perspective. One promising way is focusing on the analysis of positive and negative spillover effects between trajectories. Spillover effects refer to the consequences that actions, events, and transitions occurring in one's life domain (e.g., family) produce in other domains (e.g., work or health).

The analysis of spillover processes around the time window surrounding critical life-course transitions is a privileged observatory to understand whether and how well-being trajectories develop over time in conjunction with important changes in the life course. It is well-known that major life events and transitions may create, at least temporary, and sometimes long-lasting disruptions in people's baseline level of subjective well-being (Lucas, 2005, 2007a; Luhmann, Hofmann, Eid, & Lucas, 2012). In many cases with time, resilience and adaptation processes may compensate for occasional disruptions, and well-being may return to its initial level (Luhmann et al., 2012). Yet, a sustained decrease in well-being identifies a situation of latent vulnerability that becomes manifest as a consequence of a critical transition (Spini et al. in this issue).

Among the critical transitions that have been proven to impact subjective well-being and general satisfaction with life, the transition to parenthood has been widely studied (e.g., Anusic, Yap, & Lucas, 2014; Georgellis, Lange, & Tabvuna, 2012). The birth of a first child constitutes a major event in people's lives and is a transformative experience, marking a change in social roles for the new parents with consequences on future family developments. Research suggests that the well-being and the quality of the experience of new mothers and fathers is an important determinant of further fertility plans (Margolis & Myrskylä, 2015; Newman, 2008), and that new mothers would be often unprepared for the heavy demands related to childrearing (Presser, 2001). Despite such evidence, research have given limited attention to the way in which the birth of a first child triggers not only changes in general subjective well-being (e.g., Myrskylä & Margolis, 2014), but also simultaneous changes in satisfaction with other important life domains, such as work and leisure (for an exception looking at job satisfaction only, Georgellis et al., 2012). In addition, few studies have

systematically addressed gender differences in both pre- and post-childbirth satisfaction levels in connection to multiple life domains. This is surprising, considering that expectations and practices related to childrearing are unequally distributed across gender (Milkie, Bianchi, Mattingly, & Robinson, 2002). Mothers most likely adapt work and leisure activities, and hence their satisfaction with them, to a different extent than fathers.

Furthermore, potential moderators of the relationship between the birth of a first child and the evolution of people's satisfaction with different life domains are still largely understudied. Psychological dispositions, like personality, are a major factor underlying the relative stability of subjective well-being over time (for a review, Diener & Lucas, 1999). While recent evidence pointed out at the fact that personality may affect the way in which individuals adapt to parenthood and its consequences (Pocnet et al., in press), the evidence of whether personality moderates the impact of major life events and transitions on trajectories of life satisfaction, and satisfaction with job and leisure is, so far, inconclusive (Boyce & Wood, 2011; Boyce, Wood, & Brown, 2010; Yap, Anusic, & Lucas, 2012).

The empirical study of spillovers across life domains and their moderators is crucial to understand how individual well-being is produced, whether it evolves over time, and how. To empirically test our proposition, we engage in an original longitudinal analysis that examines the effects of the transition to parenthood on the levels and variations of general life satisfaction, as well as satisfaction in relation to the specific life domains of work and leisure. We use panel data from the German Socio-Economic Panel (SOEP) and reconstruct yearly changes in life, work, and leisure satisfaction 3 years before and after the birth of the first child in order to examine both short-term and longer-term adaptation to parenthood.

Our analysis contributes to family and life-course research in substantive ways: first by providing new insights on the consequences of life-changing events and transitions, like childbirth, on parents' multidimensional well-being over time and second, by explaining how the heterogeneity of well-being trajectories is related to the gender and psychological profiles of parents. We conclude that while the literature looking at family-related transitions and various dimensions of well-being is largely written from a singular disciplinary perspective, the understanding of how people react to life-course transitions benefit from a more comprehensive theoretical approach that is able to connect and transcend disciplinary boundaries.

## **2. Background**

### *2.1 Subjective Well-Being and Life Course*

Individual life course can be seen as a sequence of events and transitions, such as trajectories that range from the psychological and biological processes involved in human development to the sequence of events and transitions occurring in different life domains, (Elder, 1995). Life-course events and transitions have an impact on subjective well-being. Life satisfaction represents the cognitive aspect of subjective well-being (Diener, 1984): Declared levels of life satisfaction result from individuals' explicit assessment of their life conditions compared to their expectations. Life satisfaction can be assessed very broadly, or it may concern more specific life domains, such as work (e.g., satisfaction with work) or leisure (satisfaction with leisure; Diener, Scollon, & Lucas, 2003; Diener, Suh, Lucas, & Smith, 1999; Eid, 2008).

Subjective well-being is relatively stable when considered over the entire life span (Diener, Lucas, & Scollon, 2006). Yet, longitudinal analyses of individuals' life-satisfaction trajectories show that there are variations in levels triggered by the major life events they experience, such as changes in their marital status, bereavement, childbirth, unemployment, or disability (Lucas, 2007b; Lucas, Clark, Georgellis, & Diener, 2004; Myrskylä & Margolis 2014). Critical events can have a temporary effect on life satisfaction, highlighting the resiliency of individuals, while other events have longer-lasting effects (Lucas, 2007a). Short-term effects, such as those induced by a layoff, are sometimes temporary but can be important. Overall, subjective well-being, particularly its cognitive component represented by life satisfaction, is greatly influenced by major life events (for a review, see Luhmann et al., 2012).

### *2.2 Spillover Effects Across Life Domains*

Since life-course trajectories are interdependent, spillovers across domains are likely to occur. In line with existing definitions of the concept of process (Spector & Meier, 2014), spillover processes are sequences of conditions, events, or states unfolding over time, and linking an event in one life domain to its effect on another life domains. They can take the form of resources generated or drained by one life domain, which facilitate or conflict with another life domain, and subsequently impact subjective well-being (e.g., Knecht et al., in press). In a life course perspective, spillover effects can potentially be examined between any two life domains and they can be observed on a factual level or at the level of perceptions;

they can be positive or negative; they may have shorter or longer durations; they may be constant or change over time.

Spillovers may operate at the factual level, producing changes in employment status or in family configurations, or they may happen at the level of attitudes, identity redefinition, and changes in perceptions, touching on the subjective side of individuals' life-course trajectories (e.g., Hanappi, Bernardi, & Spini, 2014). In the contexts of family and work domains, a father changing his work rate following the birth of his first child would illustrate a factual spillover. The finding that people who perceived interference of their work in their family life report lower family satisfaction illustrates a subjective spillover (for a meta-analysis, Shockley & Singla, 2011). In our study, we specifically focus on multiple subjective spillovers prompted by a factual change in family composition (i.e., the arrival of the first child). Moreover, spillover effects may be positive or negative, translating into an increase or a decrease in individual well-being respectively. Positive spillovers depend on the circulation of resources from one domain to the other and trigger resilience (e.g., Bakouri & Staerklé, 2015; Jacob & Kleinert, 2014). Negative spillovers diffuse the consequences of hazards across life domains, like in the case of union dissolution increasing the chances of being unemployed (Covizzi, 2008), and as consequence experiencing vulnerability as decrease in psychological well-being (Hahn et al., 2015).

Last, spillovers effects can also vary and change in intensity according to the duration elapsed since the key event or transition occurred. Much research in the area of work-life balance for instance shows that individuals' workplace stressors and resources are likely to spill over into their private sphere and to lead to conflicts between the two life domains (e.g., Bakker & Demerouti, 2013; Michel et al., 2010). Yet, much of such research is cross-sectional (Amstad, Meier, Fasel, Elfering, & Semmer, 2011), and the rare longitudinal panel studies do not adopt a long-term perspective, with observation periods that do not exceed one year (Nohe, Meier, Sonntag, & Michel, 2015). For example, over the course of 1 year, people perceive relatively stable conflicts and facilitations between life domains of family, work, and leisure (Knecht et al., in press). Thus, the spillover effects grasped by these studies are potentially only partially representative of effects observed in a longer perspective that allows for adaptation to new conditions.

Spillover effects between the work and family spheres have received considerable attention (e.g., the role of nonstandard work schedules on family well-being studied by Davis, Goodman, Pirretti, & Almeida, 2008; for the impact of work satisfaction on the couple

satisfaction, see Liu & Cheung, 2015), family and migration (e.g., the benefits of forming a union with a native for first-generation immigrants analyzed in Nystedt & Dribe, 2015), family and health (e.g., the classical example of the mental health premia of getting and staying married for men highlighted by Horwitz, White, & Howell-White, 1996), as well as between migration and health (e.g., mortality differences between immigrants and natives in Klinthäll & Lindström, 2011). Despite the interest in this area, considerable efforts remain incomplete regarding the consistent application of a truly longitudinal perspective to the study of spillover effects across life domains and considering more than two domains at the time. The literature has only just begun to examine theoretical and methodological issues related to the timing of spillover and their effects (Nohe et al., 2015). Timing, for example, pertains not only to the duration between the occurrence of an event and the production of the effects in a different life domain but also the duration of the effects themselves and the life-course stage in which specific spillover effects are most likely to be produced (Spector & Meier, 2014).

### *2.3 Parenthood, Subjective Well-Being, and Gender*

The literature has studied the specific mix of rewards and stresses involved in the transition to parenthood and their effects on parental well-being widely (for a review, see Umberson, Pudrovska, & Reczek, 2010). The overall net effects of the transition to parenthood on parental well-being is yet not univocal. Some research has concluded that it is positive (Aassve, Goisis, & Sironi, 2012; Herbst & Ifcher, 2012), since parents seem to enjoy increases in life satisfaction and self-esteem (Hansen, Slagsvold, & Moum, 2009) and therefore the social and psychological resources available to them (Nomaguchi & Milkie, 2003). Other research has suggested that, on the contrary, negative consequences predominate (Alesina, Di Tella, & MacCulloch, 2004), since parenthood creates opportunities for conflicts, due to a redefinition of roles within the couple and in other life spheres. Parenthood may mean restriction of freedom due to the care and needs of the newborn, may produce sexual dissatisfaction if the child absorbs most of his or her parent's energy and attention – intimacy levels in the household are decreased by the new presence – and may be a source of financial strains (Twenge, Campbell, & Foster, 2003). Parental strain, time and financial stresses, and depression are observed especially among mothers (Evenson & Simon, 2005), and these negative effects persist for a number of years (e.g. Buddelmeyer, Hamermesh, & Wooden, 2015). Studies controlling for self-selective effects of happiness and well-being on having children conclude that, despite happy couples being more likely to have children, once they become parents, their well-being decreases (Myrskylä & Margolis, 2014; Parr, 2010).

Given the life changes produced by parenthood, it is likely that the birth of the first child modifies satisfaction with work or leisure and that such modifications are gender specific. Parenthood most often necessitates several rearrangements in the allocation of time and resources. Parents, particularly mothers, have to adapt their employment schedules or leisure habits to meet childcare responsibilities (Hynes & Clarkberg, 2005; Sanchez & Thomson, 1997, Le Goff & Levy, in press). With rising female employment and a shift from single- to dual-earner households, many neo-parent families (particularly parents of preschoolers) may opt to share childcare responsibilities. They can do so by working nonstandard hours and alternating to provide childcare time (Pagnan, Lero, & MacDermid Wadsworth, 2011; Presser, 1995), particularly when childcare is not easily outsourced (Bünning & Pollmann-Schult, in press; Carriero, Ghysels, & van Klaveren, 2009). Such adaptation is often associated with negative outcomes for working parents (Li et al., 2014). The most recent studies have suggested that the relationship between work–family conflict and strain is reciprocal and develops over time (e.g., Nohe et al., 2015). This reciprocal causality implies continuous feedbacks and can lead to vicious or virtuous cycles (Lee, Tang, Kim, & Albert, 2015).

#### *2.4 The Moderating Role of Personality*

Baseline well-being is influenced by personality, which has an important and systematic impact on life and job satisfaction (Judge et al., 2002; Steel, Schmidt, & Shultz, 2008), and, to a less clear extent, leisure satisfaction (Kesavayuth, Rosenman, & Zikos, 2016; Lu & Hu, 2005). However, the fact that well-being is influenced by personality traits does not mean that well-being, especially life-, job-, and leisure-satisfaction, does not change in reaction to changing circumstances, as in the case of the birth of a first child (Georgellis et al., 2012; Luhmann, et al., 2012). On the contrary, dispositional traits, such as personality dimensions, are supposed to determine a person's response tendency to life events in terms of positive and negative emotions (Lucas & Diener, 2015) as well as of cognitions and behaviors (DeNeve & Cooper, 1998; Judge et al., 2002). For instance, personality dimensions, contribute to how people anticipate and react to situations at work (e.g., Judge & Kammeyer-Mueller, 2012) by generating different affective, cognitive, and behavioral responses in face of given events (Ilies, Schwind, & Heller, 2007; Judge, Heller & Mount, 2002).

Some studies have shown that some personality traits did moderate the impact of critical events on well-being; in particular, agreeableness alters the impact of disability, while conscientiousness impacts unemployment (Boyce & Wood, 2011; Boyce et al., 2010). Yet,



such moderations are not systematic, and other studies show it to be acting inconsistently or being non-existent (Anusic et al., 2014; Pocnet et al., in press). For this reason, one needs to study which type of major life events and under which circumstances personality dimensions operate as moderators.

Some personality configurations (e.g., low neuroticism) are associated with more effective coping skills that allow people to adapt more easily to changing life circumstances and manage stress-inducing life events (Solomon & Jackson, 2014). While neuroticism and extraversion have an impact on the activation and use of coping strategies, agreeableness and conscientiousness also had an impact on problem-focused and relationship-focused strategies, respectively (Lee-Baggley, Preece, & DeLongis, 2005). This suggests that personality has an impact on how effectively couples can use dyadic coping skills to manage interpersonal stress due to parenthood (e.g., child misbehavior and care-induced marital conflict) and pushes to examine personality–context interaction in the case of the transition to parenthood.

### *2.5 Hypotheses on the Spillovers Between Work, Family, and Leisure and the Moderation Role Played by Personality*

Based on the abovementioned, we expect that the transition to parenthood has an impact on parents' general life satisfaction and that this effect changes over time and varies across gender and personality. In the short term (here: a year after the birth of the child), parents may be emotionally rewarded by the presence of their offspring, while in the longer run (here: two to three years after), stresses related to care and role changes may turn satisfaction downward (H1a). Given the different average roles of mothers and fathers in early care and parental roles (e.g., Laflamme, Pomerleau, & Malcuit, 2002), we may expect differential effects on life satisfaction by gender (H1b). Such differences may be observable in short-term effects (e.g., the mother being closer to the newborn than the father would have higher increases in life satisfaction after birth) and long-term effects (e.g., mothers having a larger average burden of parenting and normatively defined tradeoffs between childcare and other rewarding activities may experience more important downward changes in life satisfaction during the first two or three years of the child's life and then recuperate when the child enters preschool).

The literature shows that, with parenthood, parents adapt work and leisure time to care needs. Mothers especially reduce working time and withdraw from work-related responsibilities or from the labor market temporarily. This is particularly the case in contexts like Germany, the empirical case study for this paper, where maternal full-time employment

is hindered by a diffused practice of maternal child care, combined with a low use of informal childcare arrangements for children under 3 years of age (European Commission, 2009). Under these conditions, mothers usually work part time or interrupt their labor force participation for a few years after birth (Salladarré & Hlaimi, 2014). We expect that, on average, the transition to parenthood will negatively affect mothers' job satisfaction, at least in the first two or three years after the arrival of the first child (H2a).

Previous research defined leisure time as time not spent on paid work, unpaid work, or self-care (Bittman & Wajcman, 2000). If satisfaction with leisure time is the perceived gap between the actual and the desired amount and kind of leisure activities (Francken & Raaij, 1981), and given that both parents are likely to experience substantive reduction of their freedom and leisure time (Claxton & Jenkins, 2008), we expect that satisfaction with leisure drops for both men and women in the short term (H2b). Even though, as with work, in the longer-term some care time will be freed, levels of leisure time may never be fully restored to pre-parenthood times. In addition, gender may play a role in the way in which fathers and mothers experience leisure time after birth and therefore in their satisfaction with it. Previous research has shown that mothers' leisure time is often interrupted by household chores and child care, while fathers tend to enjoy continuous, and therefore possibly more satisfying, spells of leisure time (Bittman & Wajcman, 2000). We expect that leisure-time satisfaction will stay below pre-parenthood levels for both parents in the long term but that for women, the gap may be larger (H2c).

Last, heterogeneity in individual resources, whether cumulated through life experiences or due to fixed characteristics, may change the way in which mothers' and fathers' well-being is altered by parenthood. Individual choice and a sense of personal control in making decisions about parenthood may play an important role in shaping the effects of parenthood on well-being (Keeton, Perry-Jenkins, & Sayer, 2008). We expect that the psychological capital represented by personality moderates the ways in which parenthood affects the well-being of mothers and fathers (H3). In particular, low neuroticism and high conscientiousness should help parents manage their adaptation to parenthood. High extraversion and high agreeableness may also help parents take advantage of social contextual resources. Considering the mixed results of literature concerning the moderator impact of personality, it will be particularly interesting to analyze whether effects could be gender specific.

### **3. Data and Methods**

#### *3.1 Data*

We use data from 30 waves (1984-2013) of the German Socio-Economic Panel (SOEP) (Wagner et al., 2007). One of the longest running panels, the SOEP was initiated in 1984, with the East German states joining in 1991. The panel includes reliable measures for the examination of yearly changes in general, work and leisure-related well-being before and after childbirth as well as for the key moderators in our study, personality. Having a high response rate (Schoeni et al., 2013) and a relatively low level of attrition compared to other panel sources (Lipps, 2009), the SOEP has a substantially large sample size enabling us to perform analyses across multiple population subgroups. We only select respondents for whom first birth occurred during the participation/ observation window (i.e., 1984-2013), who were between 14 and 49 years old at entry into the panel, and who participated in the panel both before and after first childbirth. After removing cases with missing information on any of the variables of interest, the final sample comprises of 3,656 respondents. For models estimating changes in work well-being only, the sample is restricted to respondents who stayed employed (either full-time or part-time) during the observation period (3,255 respondents) to avoid potential bias of individuals dropping out of the labor market. When running analyses that estimate personality factors, the samples are trimmed based on the number of cases with available collected information on personality (see each table for the exact figures of the sample used for each set of estimations).

#### *3.2 Measurements*

The SOEP provides annual data on well-being. We capture general, work, and leisure related well-being by looking at measures of life, job, and leisure satisfaction, respectively. All three constructs are measured on an identical 11-point Likert scale ranging from 0 ('completely dissatisfied') to 10 ('completely satisfied'). The item that measures life satisfaction is as follows: "How satisfied are you with your life, all things considered?". This measure is commonly used in studies on adaptation to life events to capture subjective well-being (Luhmann et al., 2012). To assess job satisfaction, respondents have to answer the following question: "How satisfied are you with your job?" Finally, leisure satisfaction is captured through the item "How satisfied are you with your leisure time?"

Information on the birth of the first biological child is available for both women and (since 2001) for men. We therefore impute the timing of first childbirth mainly by looking at yearly changes in the total number of biological births and number of children in the

household and then double-checked comparing imputations with the exact information on year of first childbirth, when available. To examine how the three kinds of satisfaction vary not only at time of childbirth, but both years before and years after transition to parenthood, we computed time to and since first childbirth, taking values between -3 and 3, denoting seven time periods: (-3) 3 years before (reference period), (-2) 2 years before, (-1) 1 year before, (0) year of childbirth, (1) 1 year after, (2) 2 years after, and (3) 3 years after childbirth. The linear coefficient for time then represents the linear trajectory of general, work and leisure related well-being at the year 0, namely the childbirth year (Cohen et al., 2003).

The five constructs of personality (neuroticism, extraversion, conscientiousness, openness, and agreeableness) are measured on 3-item scales. Personality was measured twice during the entire panel (i.e., in 2005 and 2009). For respondents who remained in the panel enough to be surveyed twice, we consider the first measurement only.

Time-varying controls include: education (i.e., number of years spent in education or training), marital status (1 ‘married’, 2 ‘single’, 3 ‘widowed’, 4 ‘divorced’, 5 ‘separated’), employment status (1 ‘full-time’, 2 ‘part-time’, 3 ‘not working’), age (categories: 1 ‘17-25’, 2 ‘26-30’, 3 ‘31-35’, 4 ‘36-40’, 5 ‘41-45’, 6 ‘46-50’, 7 ‘51-58’), survey period (1 ‘1984-1988’, 2 ‘1989-1993’, 3 ‘1994-1998’, 4 ‘1999-2003’, 5 ‘2004-2008’, 6 ‘2009-2013’), self-rated health status (1 ‘bad’, 2 ‘poor’, 3 ‘satisfactory’, 4 ‘good’, 5 ‘very good’), a dummy variable indicating if a second birth occurred within the three years after first childbirth, and region (1 ‘West Germany’, 2 ‘East Germany’).

### *3.3 Analytical Approach and Modeling*

To study intra-individual change in general, work-related, and leisure-related satisfaction measures, we estimated multilevel linear growth curve models (Mitchell, 2012; Singer & Willett, 2003), with time to and since first childbirth treated as a continuous predictor. This method enabled us to uncover changes in satisfaction related to the anticipation of, initial reaction to, and longer-term adaptation to the transition to parenthood. In such models, time is treated as level one and the respondent as level two. Similarly, characteristics that change over time are considered level-one predictors, while time-invariant factors are treated as level-two variables. A random slope of time is also added. The multilevel design accounts for the non-independence of observations among time points for each person (Snijders & Bosker, 2012) and accommodates unbalanced panel designs or missing within-subject observations (Bliese & Ployhart, 2002). To investigate potential non-linear patterns of change over time, we tested for the quadratic and cubic effects of time. In

the paper, we have reported only models with significant polynomial growth functions.<sup>1</sup> To identify if gender and personality dimensions affect the pathways of well-being before and after the first childbirth differently, we included cross-level interactions between our key covariates and (linear and non-linear) time effects. This allowed us to construct satisfaction trajectories for various specific groups (e.g., men in general, women in general, men with high neuroticism levels, women with low extraversion levels, etc.). We assumed that the well-being trajectories started at various points and could change at different rates.

All models were fit using the `xtmixed` command in Stata 14. For a better visualization of the results, we plotted graphs of the predicted means of life, job, or leisure satisfaction, based on multilevel growth curve models that included interactions between time and gender (Figure 1), and later interactions among time, gender, and each of the five personality dimensions (Figures 2–4). Tables 2–5 report the model estimates on which the plotted predicted values are based.

#### 4. Results

We first report some descriptive statistics of the variables used in our analysis. Table 1 indicates that the sample has slightly more women than men. At the time of first childbirth, respondents have an average of 12.61 years of formal education, and are on average 30.63 years old. Two thirds (67.11%) are married, while 28.71% are single. Approximately half of them are full-time employed (with supplementary inspection revealing that this is the case among 78.66% of men, and only 31.75% of women, who are more likely to be part-time employed or not working). Table 1 also shows higher SD values for neuroticism, openness, and extraversion, indicating that these particular personality dimensions are more widely spread around the mean. Additional descriptive analyses (not shown) further indicate that 37.08% of respondents have high levels of neuroticism, while 74.19% have high levels of extraversion.

*Table 1: Descriptive statistics for variables used in analyses of life, job, and leisure satisfaction*

<i>Variables</i>	<i>M (SD)</i>
Life satisfaction (range 0-10)	7.54 (1.52)
Job satisfaction (range 0-10)	7.06 (2.06)
Leisure satisfaction (range 0-10)	6.48 (2.21)

Table 1 (continued)

<i>Variables</i>	<i>M (SD)</i>
Personality dimensions	
Neuroticism (range 1-7)	3.81 (1.19)
Extraversion (range 1-7)	4.90 (1.12)
Openness (range 1-7)	4.45 (1.14)
Agreeableness (range 1.33-7)	5.33 (0.97)
Conscientiousness (range 1.33-7)	5.83 (0.90)
Gender (%)	
Male	47.66
Female	52.34
Years of education (range 7-18)	12.61 (2.75)
Age (range 18-60)	30.63 (6.07)
Marital status (%)	
Married	67.11
Single	28.71
Widowed	0.04
Divorced	2.94
Separated	1.21
Employment status (%)	
Full-time	54.11
Part-time	33.46
Not in labor force	12.43
Self-rated health status (%)	
Very poor	0.72
Poor	4.67
Satisfactory	20.65
Good	55.84
Very good	18.12
Second birth (%)	0.87
Region (%)	
West Germany	77.2
East Germany	22.8
<i>N</i>	<i>2,654</i>

*Source:* GSOEP, 1984–2013, version 30.

*Note:* *M* – mean, *SD* – standard deviation

All figures related to both dependent and independent time-varying factors correspond to the values measured for the year of first childbirth. The sample size reflects the removal of cases with missing values on personality measures.

Furthermore, we present our multivariate results in three steps. First, we show the nonlinear trend in overall well-being and its interaction with gender. We estimated here the time at which overall well-being reached its maximum/minimum for women and men, and—whenever this time fell within the observation window—compared the estimated maxima/minima to the baseline and the adaptation year (three years before and after childbirth, respectively). When this time fell outside of the observation window, or when the effect of time was linear rather than curvilinear, overall well-being at childbirth was compared to its baseline and adaptation levels. Second, we followed the same steps with respect to satisfaction with job and leisure. Third, we presented the results for personality interactions, focusing on significant results. Personality dimensions were centered before exploring the form of the interactions, and the maxima and minima of the trajectories were computed at the mean and  $\pm 1.5$  standard deviations (SD) of personality dimensions (Cohen et al., 2003).

#### *4.1 Parenthood and Overall Well-Being*

With respect to the trajectories of overall well-being, the quadratic term and its interaction with gender appeared to be negative and significant, indicating that the trajectories of overall well-being differed for women and men (see Table 2 and top graph in Figure 1). The negative signs suggested that the trajectories followed inverted U-shapes.

We also tested whether women's and men's overall well-being at these peaks differed from their overall well-being three years before and after childbirth (predicted values in Figure 1)<sup>2</sup>. The model suggested that women's have higher level of overall well-being at the time of the peak than three years before, and after childbirth. Moreover, they do not report different levels of overall well-being three years before and after childbirth. Men do not experience any significant increase in their overall well-being before the peak,  $z = 0.96$ ,  $p = 1.00$ , but their overall well-being significantly decreases in the years following the peak and they report significantly lower overall well-being three years after childbirth compared to three years before it.

#### *4.2 Parenthood and domain specific well-being*

Regarding job satisfaction, the quadratic term of time is non-significant, but its interaction with gender is (see Table 2). Men's trajectories of job satisfaction are linear and descending, in contrast to the U-shape of women's. Bonferroni's adjusted comparisons of job satisfaction at the minimum level, three years before, and after childbirth showed that its

minimum differed significantly from its baseline level, and from its level after adaptation. Baseline and adaptation levels instead did not significantly differ from each other. The middle graph in Figure 1 depicts this trajectory and contrasts it to the linear decline in job satisfaction observed for men.

*Table 2: Estimates of Multilevel Growth Curve Models of Life Satisfaction, Work Satisfaction, and Leisure Satisfaction*

	Life Satisfaction	Job Satisfaction	Leisure Satisfaction
<b>Fixed effects</b>			
Gender (ref.: men)			
Women	0.215***	-0.160**	0.159*
Time (ref.: childbirth year)			
Women × Time	0.029*	0.046*	-0.139***
<i>Quadratic: Time × Time</i>			
Women × Time × Time	-0.011*	0.023**	-0.014
<i>Cubic: Time × Time × Time</i>			
Women × Time × Time × Time			0.012**
Time			
Years of education	0.051***	0.030**	-0.013
Marital status (ref.: married)			
Single	-0.229***	-0.106*	0.058
Widowed	-0.665	0.329	-0.019
Divorced	-0.229**	-0.278*	-0.005
Separated	-0.457***	0.157	0.026
Employment status (ref.: full-time)			
Part-time	-0.099***	-0.095*	0.235***
Not in labor force	-0.292***		0.237***
Age (ref.: 17–25)			
26–30	-0.019	-0.012	-0.094
31–35	-0.024	-0.024	-0.073
36–40	-0.052	0.010	-0.078
41–45	-0.168*	-0.178	0.097
46–50	-0.200	0.071	0.046
51–63	-0.288	-0.192	0.524*



Table 2 (continued)

	Life Satisfaction	Job Satisfaction	Leisure Satisfaction
Period (ref.: 1984–1993)			
1994–1998	0.010	−0.284***	0.182**
1999–2003	0.121*	−0.197*	0.264***
2004–2008	0.093	−0.265**	0.215**
2009–2013	0.161**	−0.224*	0.391***
Self-rated health status (ref.: very poor)			
Poor	0.819***	0.896***	−0.140
Satisfactory	1.386***	1.325***	0.212
Good	1.854***	1.861***	0.640***
Very good	2.310***	2.330***	1.069***
Second birth	0.067**	0.007	−0.269***
Region: East Germany	−0.430***	−0.273***	−0.277***
Intercept	5.529***	5.631***	6.044***
<b>Level-two random effects</b>			
Variance (time)	0.030***	0.054***	0.061***
Variance (intercept)	0.782***	1.189***	1.759***
Covariance (time, intercept)	0.001	0.003	0.036**
<b>Level-one variance</b>			
Residual variance	1.239***	2.303***	2.684***
<i>N</i> (observations)	19,267	13,504	18,273
<i>N</i> (individuals)	3,656	3,255	3,655

Note. \*  $p < 0.05$  ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$  (two-tailed tests). Unstandardized coefficients are shown. ref. = reference category

Turning to satisfaction with leisure, results indicated that having a cubic term and its interaction with gender in addition to the quadratic terms significantly improved the model (see Table 2). In particular, the cubic term was significant for women and marginal for men. This suggested that women, and to a lesser extent men, report trajectories of leisure satisfaction with a maximum followed by a minimum. According to this model, women's leisure satisfaction reached its maximum around two years before, and its minimum more than two years after childbirth, respectively (also see the bottom graph in Figure 1). Men reached their maximum in the third last year before childbirth and their minimum more than two years after childbirth. Multiple pairwise comparisons with a Bonferroni's correction

indicated that women experience a significant increase in leisure satisfaction between the baseline year and the maximum. In addition, their leisure satisfaction decreases significantly between this maximum and the minimum point, to stabilize between the minimum and the last year of observation. Although the amplitude is less marked for men, they report a similar pattern with one exception: men do not experience an increase in leisure satisfaction between the baseline year and the moment they reach their maximum.

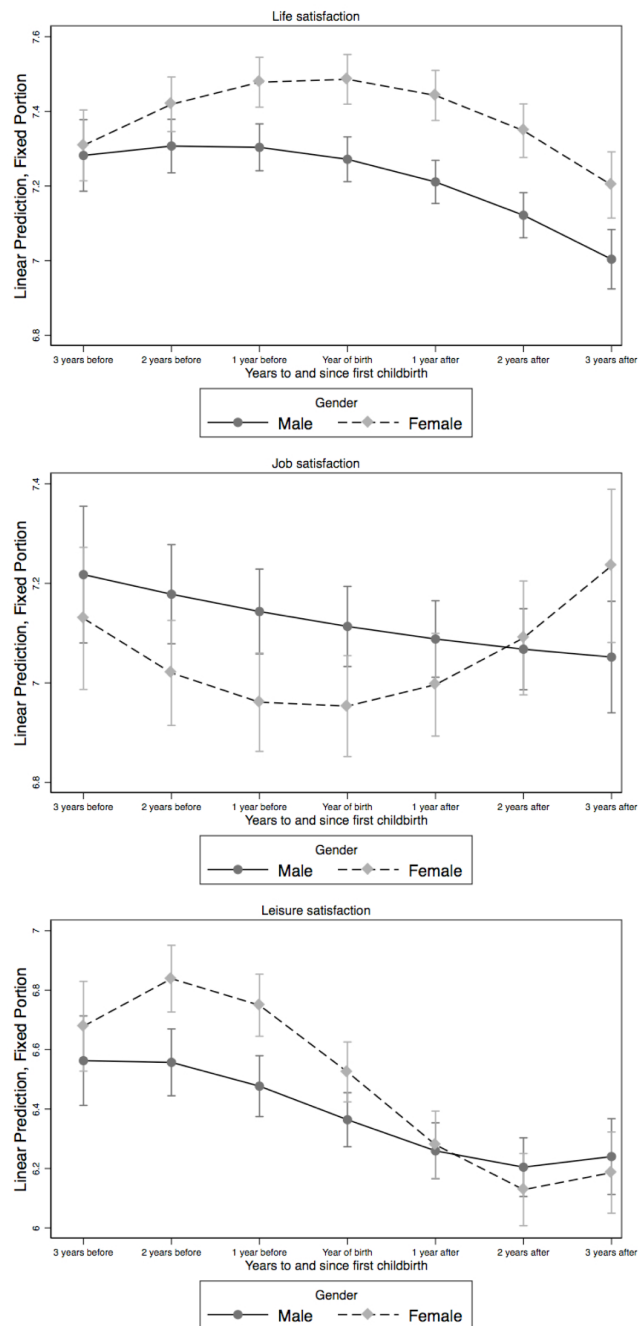


Figure 1: Predicted life, work, and leisure satisfaction trajectories before and after first childbirth (95% confidence interval), by gender. Source: SOEP and authors' calculations based on models in Table 2.

### 4.3 Personality interactions

For each model, we then included cross-level interactions between time and gender effects and each dimension of personality, separately. For overall well-being, the interaction between neuroticism, gender and the quadratic term of time was only marginally significant (see Table 3). We nevertheless estimated the peaks of the trajectories for women and men at the mean and +/-1.5 SD of neuroticism and contrasted them with baseline and adaptation levels of overall-being. These analyses revealed that women with low or average scores of neuroticism and men with high or average scores had trajectories of overall well-being that were similar to those described earlier. However, the trajectories for women high, and men low in neuroticism were different (see Figure 2, upper left graphs).

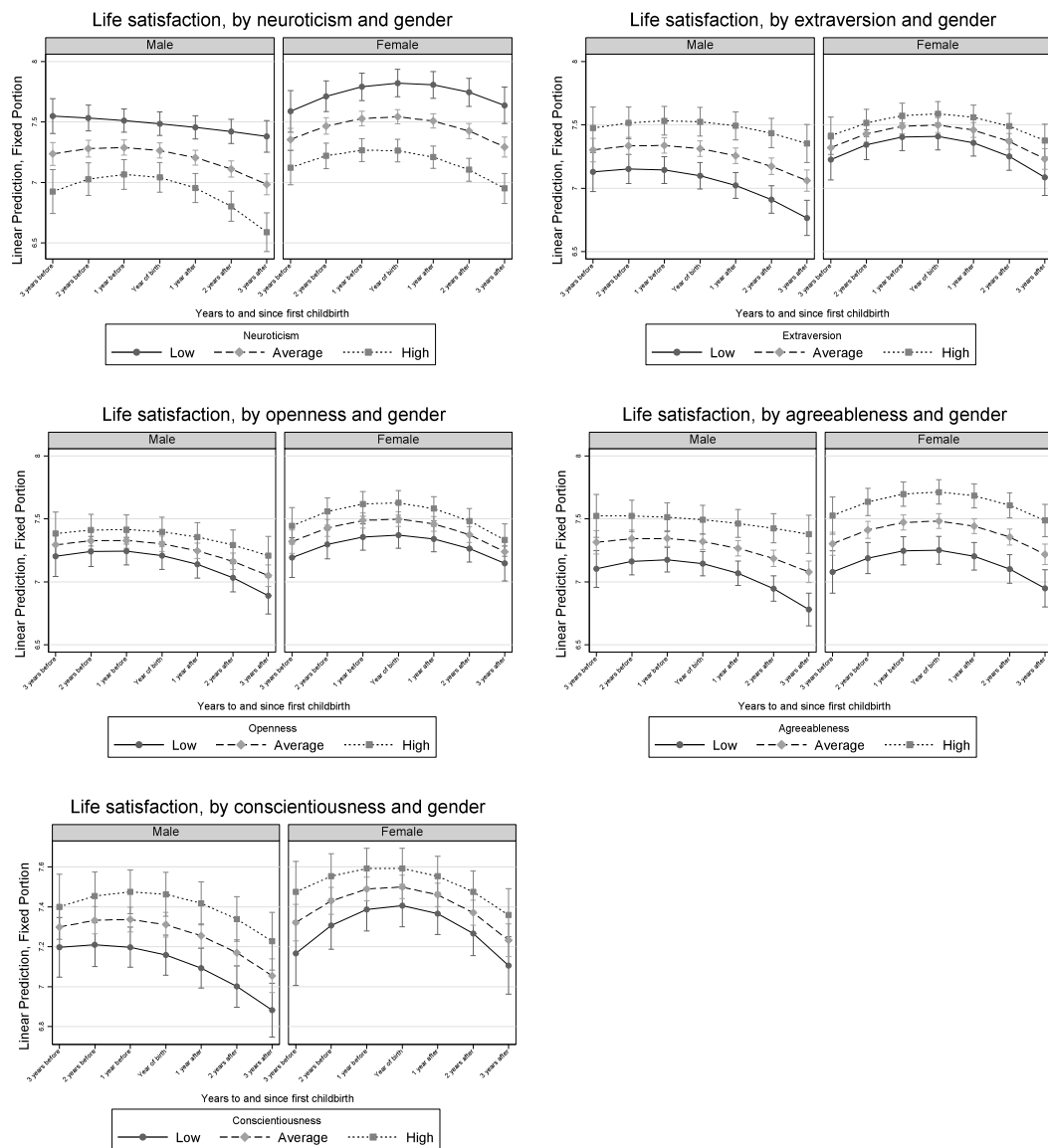


Figure 2: Predicted life satisfaction trajectories before and after first childbirth, by personality dimensions and gender. Source: SOEP, authors' calculations based on models in Table 3.

In particular, women high in neuroticism did not report a significant increase in overall well-being between baseline level and the peak, but a significantly decrease after childbirth. Differently, for men low in neuroticism, the estimated peak of overall well-being occurred outside the observation window. And contrasts between levels of overall well-being in the year of the childbirth, at the baseline, and adaptation scores (i.e., three years before and after childbirth) revealed non-significant. This suggested that men low in neuroticism are not affected in their overall well-being by the birth of their first child. Neuroticism was the sole personality dimension to significantly moderate the different trajectories of women's and men's job satisfaction (see Table 4). Estimations of these trajectories for women and men with low, mean, or high score of neuroticism showed several differences with the pattern obtained when we do not account for neuroticism. More particularly, women with average scores of neuroticism only reported a significant increase in job satisfaction between their minimum level (reached in the year preceding childbirth), and the level after adaptation,  $b = 0.27$ ,  $SE = .09$ ,  $z = 3.12$ ,  $p = .005$ . Furthermore, in stark contrast to their counterparts with high neuroticism, women with lower scores in this personality dimension had inverted U-shaped trajectories of job satisfaction with a maximum reached in the third year following childbirth. Nevertheless, their change in job satisfaction between the baseline level and the peak was statistically not significant,  $b = 0.21$ ,  $SE = .18$ ,  $z = 1.19$ ,  $p = .698$ . Thus, this suggested that women low in neuroticism were not affected in their job satisfaction by the birth of their first child. Turning to men, those with average, or high scores of neuroticism had trajectories of job satisfaction comparable to those obtained without the moderation of neuroticism. That is, they reported no change when comparing levels after adaptation to those observed in the year of the childbirth. In addition, men low in neuroticism reported stable job satisfaction over the years (see Figure 3, upper left graph). Overall, the birth of the first child does not seem to affect much the job satisfaction of men and women, especially of those low in neuroticism.

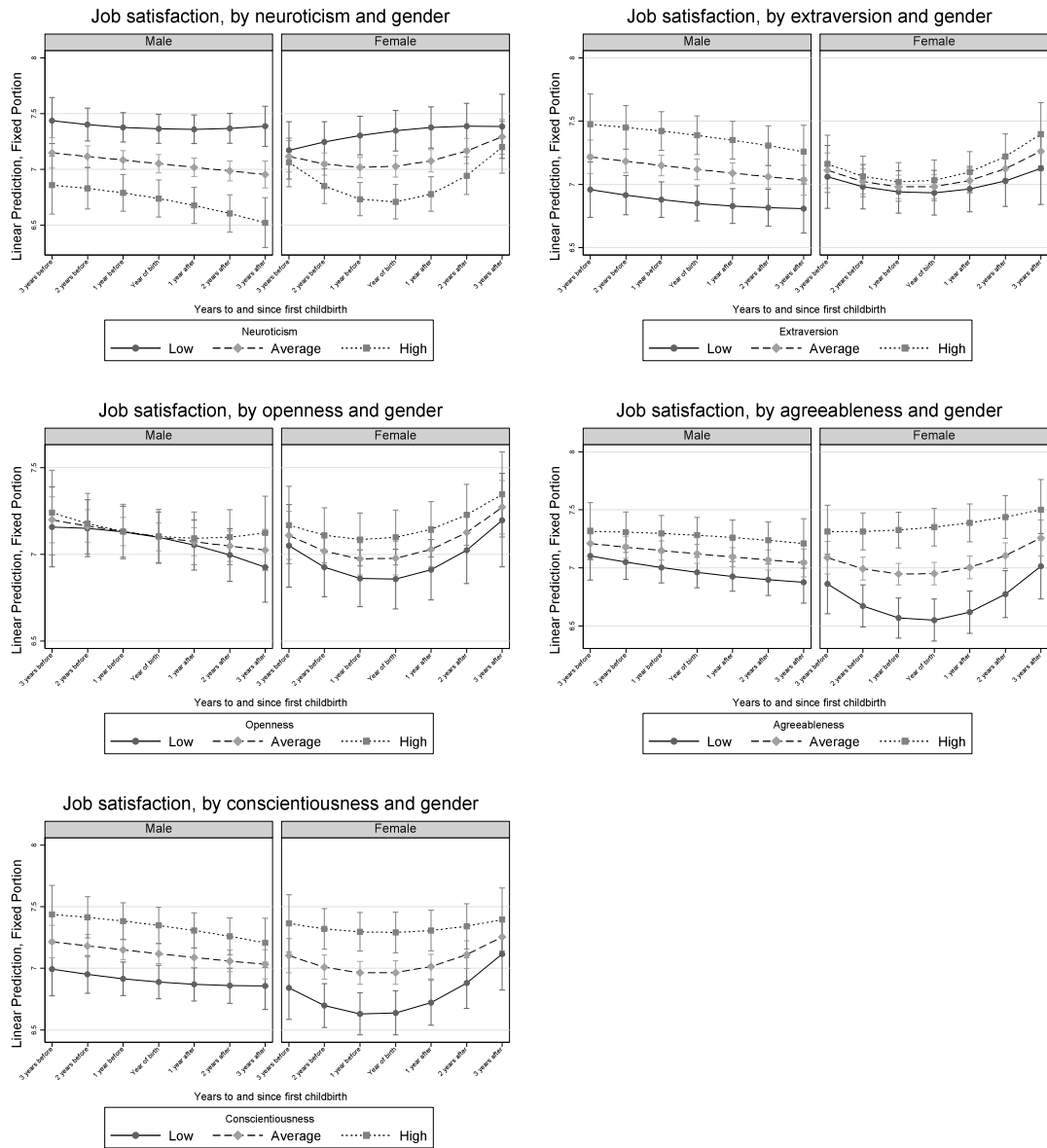


Figure 3: Predicted job satisfaction trajectories before and after first childbirth, by personality dimensions and gender. Source: SOEP, authors' calculations based on models in Table 4.

Turning to leisure satisfaction, two interactions between the quadratic effects of time, gender, and personality dimensions revealed significant (see Table 5). The first personality dimension to present such an effect was conscientiousness. For women, comparisons of the trajectories in leisure satisfaction of those with low, average, or high scores of conscientiousness revealed different patterns, especially in the years preceding childbirth. In particular, for those low in conscientiousness, leisure satisfaction showed a strong decrease between the baseline and the childbirth, which continued somewhat less strongly after childbirth. However, in sharp contrast to women low in conscientiousness, women high in conscientiousness did not report different satisfaction with their leisure between the baseline

and the childbirth. Their years following childbirth were however also characterized by a decrease in leisure satisfaction for those with high scores, and for those with mean scores. For men, conscientiousness appeared to moderate trajectories of leisure satisfaction in such a way that those high in conscientiousness reported stronger decreasing trajectories in the years preceding and following childbirth than their counterparts with lower score of conscientiousness. More precisely, those with low score of conscientiousness did not seem to be significantly affected in their leisure satisfaction by the birth of their first child, considering either the years before, or the years after the birth (see Figure 4, middle left graphs).

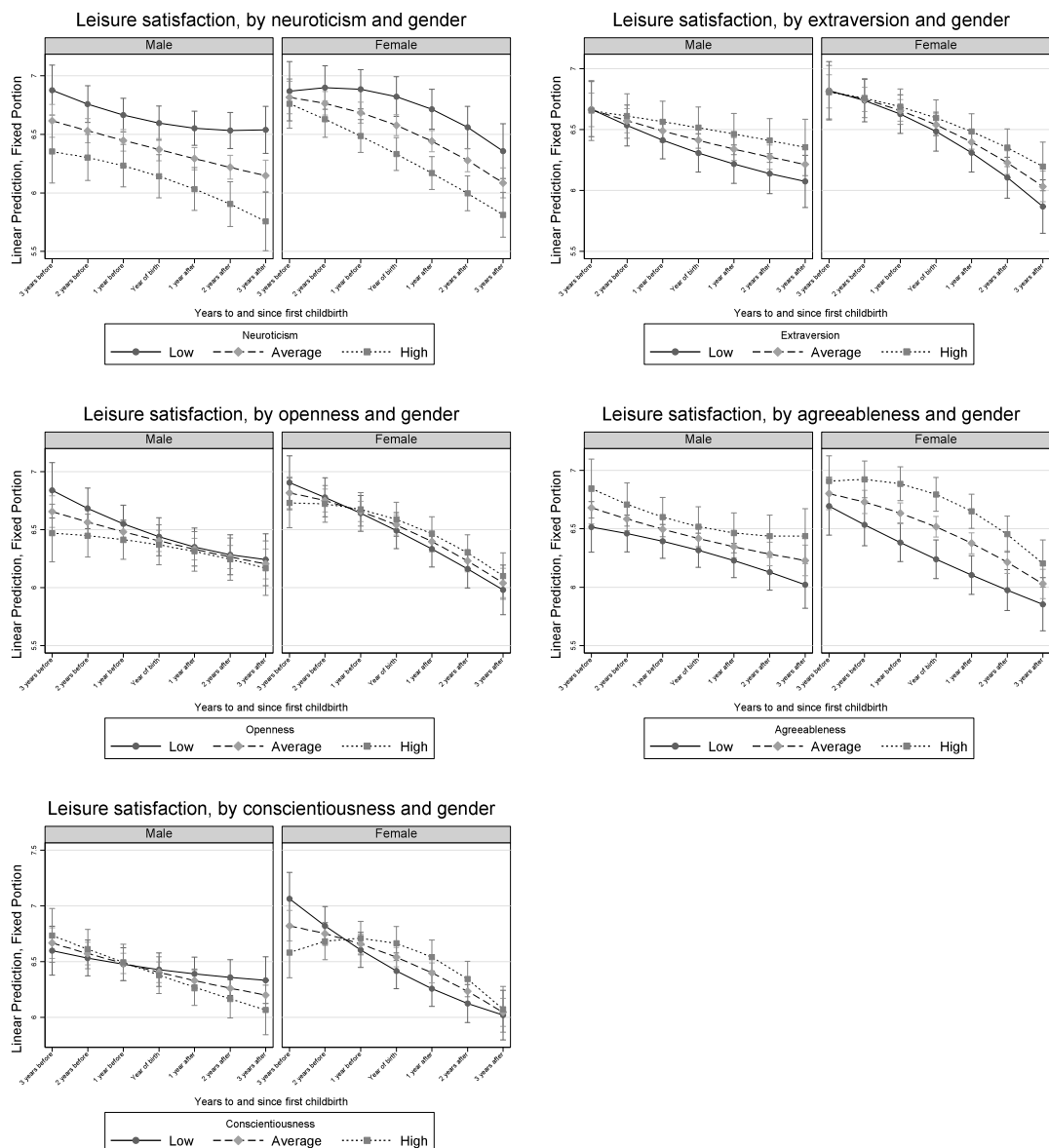


Figure 4: Predicted leisure satisfaction trajectories before and after first childbirth, by personality dimensions and gender. Source: SOEP, authors' calculations based on models in Table 5.

Agreeableness was the second personality dimension to moderate the quadratic effects of time on leisure satisfaction of women and men (see Table 5). Several differences were noted for both genders according to the level of agreeableness considered (see Figure 4, middle right graphs). First, women with low or mean scores in agreeableness had decreasing leisure satisfaction before and after childbirth, which indicated rather linear trajectories. Still, whereas for those with low score in agreeableness this decrease appeared rather constant in the years preceding childbirth, and following it, for those with average scores, the decrease was stronger after, compared to before childbirth. More importantly, for women high in agreeableness, leisure trajectories adopted an inverted U-shape with a peak in leisure satisfaction in the third last year before childbirth (-2.21), which then decreased significantly when compared to three years after childbirth, Men high in agreeableness also presented a curvilinear trajectory of leisure satisfaction. However, in contrast to women, their trajectory had a U-shape, decreasing significantly from the baseline level, three years before childbirth until the third year after childbirth, where it reached a minimum. Finally, men with low, or average score in agreeableness comparatively showed more linear decreases in leisure satisfaction in the years before and after childbirth (see Figure 4, middle high graphs).

Table 3: Estimates of Fixed Effects From Multilevel Growth Curve Models of Personality Dimensions on Life Satisfaction

	Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness
<b>Main effects</b>					
Personality dimension	-0.124***	0.126***	0.055*	0.121***	0.114***
Women	0.279***	0.186***	0.196***	0.163***	0.189***
Time (i.e., year of childbirth)	-0.042***	-0.040***	-0.041***	-0.039***	-0.041***
<b>Interactive effects</b>					
Personality dimension × Women	-0.032	-0.073*	0.020	0.040	-0.044
Personality dimension × Time	-0.008	0.012	0.007	0.010	0.009
Women × Time	0.032*	0.025*	0.027*	0.025*	0.026*
Women × Personality dimension × Time	-0.002	-0.007	-0.010	-0.005	-0.012
<b>Quadratic effects</b>					
Time × Time	-0.017***	-0.015***	-0.015***	-0.014***	-0.015***
Personality dimension × Time × Time	-0.008*	0.001	0.002	0.006	-0.001
Women × Time × Time	-0.007	-0.010+	-0.010+	-0.011*	-0.010+
Women × Personality dimension × Time × Time	0.008+	0.001	-0.003	-0.005	0.005
Intercept	5.556***	5.505***	5.555***	5.537***	5.504***
AIC	56,606.97	56,675.58	56,698.98	56,646.34	56,692.81
$\chi^2$	1,867.326***	1,778.754***	1,747.709***	1,816.873***	1,755.104***
<i>df</i>	34	34	34	34	34



Table 4: Estimates of Fixed Effects From Multilevel Growth Curve Models of Personality Dimensions on Job Satisfaction

	Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness
<b>Main effects</b>					
Personality dimension	-0.175***	0.159***	0.001	0.112**	0.173***
Women	-0.023	-0.136*	-0.124	-0.170**	-0.153*
Time (i.e., year of childbirth)	-0.032*	-0.030*	-0.029*	-0.028+	-0.031*
<b>Interactive effects</b>					
Personality dimension × Women	-0.004	-0.130*	0.068	0.167*	0.072
Personality dimension × Time	-0.013	-0.003	0.006	0.007	-0.006
Women × Time	0.062**	0.056**	0.056**	0.056**	0.056**
Women × Personality dimension × Time	0.010	0.012	-0.004	-0.005	-0.009
<b>Quadratic effects</b>					
Time × Time	-0.000	0.001	0.001	0.001	0.001
Personality dimension × Time × Time	-0.003	-0.002	0.004	-0.002	-0.003
Women × Time × Time	0.020*	0.022*	0.022*	0.024**	0.023**
Women × Personality dimension × Time × Time	0.018*	0.005	-0.008	-0.011	-0.008
Intercept	5.419***	5.363***	5.400***	5.395***	5.322***
AIC	47,731.12	47,766.73	47,786.38	47,749.05	47,750.09
$\chi^2$	664.971***	624.803***	602.499***	644.607***	643.198***
<i>df</i>	33	33	33	33	33

Note. +  $p < 0.10$  ; \*  $p < 0.05$  ; \*\*  $p < 0.01$  ; \*\*\*  $p < 0.001$  (two-tailed tests). Unstandardized coefficients are shown. ref. = reference category; AIC = Akaike Information Criterion.

Table 5: Estimates of Fixed Effects From Multilevel Growth Curve Models of Personality Dimensions on Leisure Satisfaction

	<i>Neuroticism</i>	<i>Extraversion</i>	<i>Openness</i>	<i>Agreeableness</i>	<i>Conscientiousness</i>
<b>Main effects</b>					
Personality dimension	-0.127**	0.061	-0.020	0.071	-0.019
Women	0.209**	0.128+	0.137*	0.100	0.136*
Time (i.e., year of childbirth)	-0.078***	-0.075***	-0.075***	-0.075***	-0.078***
<b>Interactive effects</b>					
Personality dimension × Women	-0.011	-0.028	0.048	0.123+	0.111
Personality dimension × Time	-0.012	0.014	0.014	0.005	-0.025+
Women × Time	-0.044*	-0.055**	-0.054**	-0.054**	-0.052**
Women × Personality dimension × Time	-0.008	0.002	0.000	0.003	0.059**
<b>Quadratic effects</b>					
Time × Time	0.001	0.003	0.003	0.004	0.003
Personality dimension × Time × Time	-0.006	-0.002	-0.005	0.007	-0.001
Women × Time × Time	-0.015+	-0.016*	-0.015+	-0.015+	-0.015+
Women × Personality dimension × Time × Time	0.011+	0.004	0.001	-0.017*	-0.019*
Intercept	6.106***	6.060***	6.055***	6.073***	6.061***
AIC	67,395.26	67,427.1	67,429.29	67,410.41	67,417.11
$\chi^2$	761.227***	727.162***	724.611***	744.785***	737.615***
<i>df</i>	34	34	34	34	34

Note. +  $p < 0.10$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$  (two-tailed tests). Unstandardized coefficients are shown. ref. = reference category; AIC = Akaike Information Criterion.

## **5. Conclusion and discussion**

This paper contributes to the literature on life-course domains' interdependencies, spillover effects, and changes in subjective well-being. Our work demonstrates the value of analyzing the impact of life-course events and transitions on trajectories of subjective well-being by taking a longitudinal perspective that allows for shorter- and longer-term variations after the focal event or transition has occurred. It argues in favor of focusing on spillover effects across multiple life domains to detect sources of vulnerability related to the interdependency of life-course trajectories.

We illustrate our case by studying the transition to parenthood, a critical transition in the family domain and a compelling case to study spillover effects from the family to other domains. In particular, we examine how the transition to parenthood affects the subjective well-being of men and women in Germany. As previous research shows, parenthood produces significant changes in life satisfaction and may prompt critical spillovers on domain-specific work and leisure satisfaction. We additionally examine the moderating role played by gender and personality in the production, intensity, and direction of spillover effects among family, work, and leisure in the years before and after parenthood. Drawing on the socio-demographic and the psychological literature on life-course interdependencies, spillover effects, and the production of well-being, we expected changes in parents' life, work, and leisure satisfaction after the transition to parenthood and that such changes vary over time, across gender, and by personality traits.

We observed a marked difference between men and women trajectories of work satisfaction, while the differences in life satisfaction and leisure satisfaction were weaker. While there were no significant drops in fathers' satisfaction with work, women's transition to parenthood triggered significant decreases in satisfaction with work starting two years before childbirth. Nonetheless, women's satisfaction with work started to rise significantly in the years following childbirth. Personality played a moderator role in these effects: Women who scored low on neuroticism did not experience major variation in their satisfaction with work when becoming mothers. The opposite was true for women who scored high on neuroticism. Moreover, women and men, particularly those high on agreeableness or conscientiousness, differed in important ways in how their leisure satisfaction evolved before and after childbirth. Such moderations confirmed that interaction between life events and personality are context-driven. Due to unequal caring roles and the division of tasks in Germany, such contextual changes induced by the birth of a first child are different for men

and women. It will be extremely interesting to see whether the younger cohorts in the following waves of the SOEP will display less gender effect as a consequence of the recent reforms favoring work family reconciliation. The presence of gender-specific moderations may explain the mixed results in the previous literature on the role played by personality on the impact of major life events on well-being (Anusic et al., 2014; Boyce & Wood, 2011).

The empirical analyses of this study are not without limitations. One such limitation is that we did not dispose of information on the satisfaction with the couple relationship before and after the transition to parenthood. Relational quality and social support are known to be important factors of resilience to stressors (e.g., Fagan & Lee, 2013). We also missed information to explore the mechanisms keeping leisure-related satisfaction low in the medium term for men and women alike. Despite such limitations, our analyses contribute to family research and life-course research in substantive ways, first by providing new insights on the consequences of parenthood on parental well-being modeling spillover across life domains and over time. Thus, these results speak in favor of longer-term spillover effects from one life domain (family) to others (work and leisure). These spillover effects suggest that some life events (in our case, a childbirth) and probably the social and gendered context surrounding them require very different adaptation efforts from men and women. We re-assert the need to analyze spillover phenomena to empirically grasp the interdependent nature of life-course trajectories and its multidimensionality. While the interdependence of life domains is well known, research addressing it with a truly longitudinal design that allows for disentangling the reciprocal influences of various domains is rare. Our results are encouraging and call for further research going beyond interdependence as the mutual effect of one trajectory on the other. One challenge for the future analyses of life domains' interdependency is to detect and measure the role played by an individual's anticipation as well as the impact of anticipated future events and transitions on the current ones.

Second, we provide new insights on the consequences over time of life-changing events and transitions, such as childbirth, on parents' well-being. Previous research has overwhelmingly focused on changes in life satisfaction and well-being during the first year of parenthood. Very little research has investigated the duration of such changes and their development over time, especially when focused on life domain-specific satisfaction with work and leisure time. While it is known that well-being is influenced by major life events, it is also recognized that most life events have a moderate and transitory impact on well-being (Diener et al., 1999). Our model distinguishes between shorter- and longer-term effects,

making it possible to test the durability of spillover effects over time. Non-transitory decreases in well-being may be important indicators of vulnerability in a dynamic framework (Spini et al. in this issue). Our results also highlight that changes in life satisfaction occur already before the event and that, after birth, satisfaction with work follows different trajectories for men and women.

Third, we contribute to the literature by explaining how the heterogeneity in well-being trajectories is related to the given individuals' demographic and psychological profiles. In the case of parenthood, the gender and psychological characteristics of parents partially explain the impact of parenthood on life satisfaction trajectories. The literature is ambivalent about whether life satisfaction is stable over time or if it varies along with changes in the life course (Pocnet et al., in press). This paper shows that, when we consider a specific major life event rather than the aggregation of a heterogeneous set of events, and when we analyze changes before and after the event with a truly longitudinal approach, we observe quite systematic changes in well-being.

The results of the paper reach beyond the specialized literature and are potentially relevant for public intervention preoccupied with promoting parental health. Parenthood has important effects on well-being. Although recent studies recognize that parenting stress is greater for some groups than others, we lack a solid understanding of the various mechanisms through which parenting affects well-being. In this paper, we show that strains and benefits of parenting are not distributed equally—between mothers and fathers—and that they affect parents in different ways depending on their personality characteristics. Such results suggest that people are not equal in the perceptions, the timing of reactions, and possibly the nature of the challenges and opportunities that the first child represents for other life domains. This has wide implications for future research and practice. Such conclusions also show that multidisciplinary collaboration in examining life-course multidimensionality and spillover effects is crucial for understanding the determinants of social inequalities in well-being.

## 6. Notes

<sup>1</sup> Cubic terms proved significant only in the model predicting leisure satisfaction (reported in Table A1).

<sup>2</sup> A Bonferroni's correction was used to adjust the *p*-values of these multiple pairwise comparisons.

## 7. References

- Aassve, A., Goisis, A., & Sironi, M. (2012). Happiness and childbearing across Europe. *Social Indicators Research, 108*, 65–86. doi:10.1007/s11205-011-9866-x
- Alesina, A., Di Tella, R., & MacCulloch, R. (2004). Inequality and happiness: Are Europeans and Americans different? *Journal of Public Economics, 88*, 2009–2042. doi:10.1016/j.jpubeco.2003.07.006
- Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta-analysis of work–family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology, 16*, 151–169. doi:10.1037/a0022170
- Anusic, I., Yap, S. C. Y., & Lucas, R. E. (2014). Does personality moderate reaction and adaptation to major life events? Analysis of life satisfaction and affect in an Australian national sample. *Journal of Research in Personality, 51*, 69–77. doi:10.1016/j.jrp.2014.04.009
- Bakker, A. B., & Demerouti, E. (2013). The spillover-crossover model. In J. G. Grzywacz & E. Demeouti (Eds.), *New Frontiers in Work and Family Research* (pp. 54–70). Hove, UK: Psychology Press.
- Bakouri, M., & Staerklé, C. (2015). Coping with structural disadvantage: Overcoming negative effects of perceived barriers through bonding identities. *The British Journal of Social Psychology/The British Psychological Society, 54*(4), 648–670. doi:10.1111/bjso.12102
- Bittman, M. & Wajcman, J. (2000). The rush hour: The character of leisure time and gender equity. *Social Forces, 79*, 165–189. doi:10.1093/sf/79.1.165
- Bliese, P. D., & Ployhart, R. E. (2002). Growth modeling using random coefficient models: Model building, testing, and illustrations. *Organizational Research Methods, 5*, 362–387.
- Boyce, C. J., Wood, A. M., & Brown, G. D. A. (2010). The dark side of conscientiousness: Conscientious people experience greater drops in life satisfaction following unemployment. *Journal of Research in Personality, 44*, 535–539. doi:10.1016/j.jrp.2010.05.001

- Boyce, C. J., & Wood, A. M. (2011). Personality prior to disability determines adaptation: Agreeable individuals recover lost life satisfaction faster and more completely. *Psychological Science, 22*, 1397–1402. doi:10.1177/0956797611421790
- Buddelmeyer, H., Hamermesh, D. S., & Wooden, M. (2015). *The stress cost of children* (Melbourne Institute Working Paper No. 1/15).
- Bünning, M., & Pollmann-Schult, M. (in press). Parenthood, child care, and nonstandard work schedules in Europe. *European Societies*. doi:10.1080/14616696.2016.1153698
- Carriero, R., Ghysels, J., & van Klaveren, C. (2009). Do parents coordinate their work schedules? A comparison of Dutch, Flemish, and Italian dual-earner households. *European Sociological Review, 25*, 603–617. doi:10.1093/esr/jcn077
- Claxton, A., & Perry-Jenkins, M. (2008). No fun anymore: Leisure and marital quality across the transition to parenthood. *Journal of Marriage and Family, 70*, 28–43. doi:10.1111/j.1741-3737.2007.00459.x
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Hillsdale, NJ: Erlbaum.
- Covizzi, I. (2008). Does union dissolution lead to unemployment? A longitudinal study of health and risk of unemployment for women and men undergoing separation. *European Sociological Review, 24*(3), 347–361. doi:10.1093/esr/jcn006
- Davis, K. D., Goodman, W. B., Pirretti, A. E., & Almeida, D. M. (2008). Nonstandard work schedules, perceived family well-being, and daily stressors. *Journal of Marriage and Family, 70*(4), 991–1003. doi:10.1111/j.1741-3737.2008.00541.x
- DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin, 124*, 197–229. doi:10.1037/0033-2909.124.2.197
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*, 542–575. doi:10.1037/0033-2909.95.3.542
- Diener, E., & Lucas, R. E. (1999). Personality and subjective well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 213–229). New York, NY: Sage Found.
- Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist, 61*, 305–314. doi:10.1037/0003-066X.61.4.305

- Diener, E., Scollon, C. N., & Lucas, R. E. (2003). The evolving concept of subjective well-being: The multifaceted nature of happiness. *Advances in cell aging and gerontology*, *15*, 187–219. doi:10.1016/S1566-3124(03)15007-9
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*, 276–302. doi:10.1037/0033-2909.125.2.276
- Eid, M. (2008). Measuring the immeasurable: Psychometric modeling of subjective well-being data. In M. Eid & R. J. Larsen (Eds.), *The science of subjective well-being* (pp. 141–167). New York, NY: Guilford Press.
- Elder Jr., G. H. (1995). The life course paradigm: Social change and individual development. In G. H. Elder Jr. & K. Lüscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 101–136). Washington, DC: American Psychological Association.
- European Commission. (2009). *The provision of childcare services: A comparative review of 30 European countries*. Luxembourg, Luxembourg: Office for Official Publications of the European Communities.
- Evenson, R. J., & Simon, R. W. (2005). Clarifying the relationship between parenthood and depression. *Journal of Health and Social Behavior*, *46*(4), 341–358. doi:10.1177/002214650504600403
- Fagan, J., & Lee, Y. (2013). Longitudinal associations among fathers' perception of coparenting, partner relationship quality, and parental stress during early childhood. *Family Process*, *53*, 80–96. doi:10.1111/famp.12055
- Francken, D. A., & Raaij van, F. (1981). Satisfaction with leisure time activities. *Journal of Leisure Research*, *13*(4), 337–352.
- Georgellis, Y., Lange, T., & Tabvuma, V. (2012). The impact of life events on job satisfaction. *Journal of Vocational Behavior*, *80*, 464–473. doi:10.1016/j.jvb.2011.12.005
- Hanappi, D., Bernardi, L., & Spini, D. (2014). Vulnerability as a heuristic for interdisciplinary research: Assessing the thematic and methodological structure of empirical life-course studies. *Longitudinal and Life Course Studies*, *6*(1), 59–87.
- Hansen, T., Slagsvold, B., & Moum, T. (2009). Childlessness and psychological wellbeing in midlife and old age: An examination of parental status effects across a range of outcomes. *Social Indicators Research*, *94*, 343–362. doi:10.1007/s11205-008-9426-1



- Herbst, C., & Ifcher, J. (2012). *A bundle of joy: Does parenting really make us miserable?* Retrieved from SSRN database. (1883839)
- Horwitz, A. V., White, H. R., & Howell-White, S. (1996). Becoming married and mental health: A longitudinal study of a cohort of young adults. *Journal of Marriage and Family, 58*, 895–907. doi:10.2307/353978
- Hynes, K., & Clarkberg, M. (2005). Women's employment patterns during early parenthood: A group-based trajectory analysis. *Journal of Marriage and Family, 67*, 222–239. doi:10.1111/j.0022-2445.2005.00017.x
- Ilies, R., Schwind, K. M., & Heller, D. (2007). Employee well-being: A multilevel model linking work and nonwork domains. *European Journal of Work and Organizational Psychology, 16*, 326–341. doi:10.1080/13594320701363712
- Jacob, M., & Kleinert, C. (2014). Marriage, gender, and class: The effects of partner resources on unemployment exit in Germany. *Social Forces, 92*, 839–871. doi:10.1093/sf/sot130
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology, 87*, 530–541. doi:10.1037/0021-9010.87.3.530
- Judge, T. A., & Kammeyer-Mueller, J. D. (2012). Job attitudes. *Annual Review of Psychology, 63*, 341–367. doi:10.1146/annurev-psych-120710-100511
- Keeton, C. P., Perry-Jenkins, M., & Sayer, A. G. (2008). Sense of control predicts depressive and anxious symptoms across the transition to parenthood. *Journal of Family Psychology, 22*, 212–221. doi:10.1037/0893-3200.22.2.212
- Kesavayuth, D., Rosenman, R. E., & Zikos, V. (2016). Retirement, personality, and well-being. *Economic Inquiry, 54*, 733–750. doi:10.1111/ecin.12307
- Klinthäll, M., & Lindström, M. (2011). Migration and health: A study of effects of early life experiences and current socio-economic situation on mortality of immigrants in Sweden. *Ethnicity & Health, 16*(6), 601–623. doi:10.1080/13557858.2011.602392
- Knecht, M., Wiese, B. S., & Freund, A. M. (in press). Going beyond work and family: A longitudinal study on the role of leisure in the work–life interplay. *Journal of Organizational Behavior*. doi:10.1002/job.2098
- Laflamme, D., Pomerleau, A., & Malcuit, G. (2002). A comparison of fathers' and mothers' involvement in childcare and stimulation behaviors during free-play with their infants at 9 and 15 months. *Sex Roles, 47*, 507–518. doi:10.1023/A:1022069720776

- Lee, Y., Tang, F., Kim, K. H., & Albert, S. M. (2015). The vicious cycle of parental caregiving and financial well-being: A longitudinal study of women. *The Journal of Gerontology, 70B*, 425–431. doi:10.1093/geronb/gbu001
- Lee-Baggley, D., Preece, M., & DeLongis, A. (2005). Coping with interpersonal stress: Role of Big Five traits. *Journal of Personality, 73*, 1141–1180. doi:10.1111/j.1467-6494.2005.00345.x
- Le Goff, J.-M. & Levy, R. (in press). *Devenir parents : devenir inégaux. Transition à la parentalité et inégalités de genre*. Zürich : Seismo
- Li, J., Johnson, S. E., Han, W.-J., Andrews, S., Kendall, G., Strazdins, L., & Dockery, A. (2014). Parents' nonstandard work schedules and child well-being: A critical review of the literature. *Journal of Primary Prevention, 35*, 53–73. doi:10.1007/s10935-013-0318-z
- Lipps, O. (2009). *Attrition of households and individuals in panel surveys* (SOEP Papers No. 164). Berlin, Germany: DIW Berlin. Retrieved from [http://www.diw.de/documents/publikationen/73/96125/diw\\_sp0164.pdf](http://www.diw.de/documents/publikationen/73/96125/diw_sp0164.pdf)
- Liu, H., & Cheung, F. M. (2015). Testing crossover effects in an actor–partner interdependence model among Chinese dual-earner couples. *International Journal of Psychology, 50*, 106–114. doi:10.1002/ijop.12070
- Lucas, R. E. (2005). Time does not heal all wounds: A longitudinal study of reaction and adaptation to divorce. *Psychological Science, 16*, 945–950. doi:10.1111/j.1467-9280.2005.01642.x
- Lucas, R. E. (2007a). Adaptation and the set-point model of subjective well-being: Does happiness change after major life events? *Current Directions in Psychological Science, 16*, 75–79. doi:10.1111/j.1467-8721.2007.00479.x
- Lucas, R. E. (2007b). Long-term disability is associated with lasting changes in subjective well being: Evidence from two nationally representative longitudinal studies. *Journal of Personality and Social Psychology, 92*, 717–730. doi:10.1037/0022-3514.92.4.717
- Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2004). Unemployment alters the setpoint for life satisfaction. *Psychological Science, 15*, 8–13. doi:10.1111/j.0963-7214.2004.01501002.x
- Lucas, R. E., & Diener, E. (2015). Personality and subjective well-being: Current issues and controversies. In M. Mikulincer & P. R. Shaver (Eds.), *APA handbook of personality and social psychology: Vol. 4. Personality processes and individual differences* (pp.

- 577–599). Washington DC: American Psychological Association. doi:10.1037/14343-026
- Luhmann, M., Hofmann, W., Eid, M., & Lucas, R. E. (2012). Subjective well-being and adaptation to life events: A meta-analysis. *Journal of Personality and Social Psychology, 102*, 592–615. doi:10.1037/a0025948
- Margolis, R., & Myrskylä, M. (2015). Parental well-being surrounding first birth as a determinant of further parity progression. *Demography, 52*(4), 1147–1166. doi:10.1007/s13524-015-0413-2
- Michel, J. S., Kotrba, L. M., Mitchelson, J. K., Clark, M. A., & Baltes, B. B. (2010). Antecedents of work–family conflict: A meta-analytic review. *Journal of Organizational Behavior, 32*, 689–725. doi:10.1002/job.695
- Milkie, M. A., Bianchi, S. M., Mattingly, M. J., & Robinson, J. P. (2002). Gender division of childrearing: Ideals, realities, and the relationship to parental well-being. *Sex Roles, 47*, 21–38. doi:10.1023/A:1020627602889
- Mitchell, M. N. (2012). *Interpreting and visualizing regression models using Stata*. College Station, TX: Stata Press.
- Myrskylä, M., & Margolis, R. (2014). Happiness: Before and after the kids. *Demography, 51*(5), 1843–1866. doi:10.1007/s13524-014-0321-x
- Newman, L. (2008). How parenthood experiences influence desire for more children in Australia: A qualitative study. *Journal of Population Research, 25*, 1–27.
- Nohe, C., Meier, L. L., Sonntag, K., & Michel, A. (2015). The chicken or the egg? A meta-analysis of panel studies of the relationship between work family conflict and strain. *Journal of Applied Psychology, 100*, 522–536. doi:10.1037/a0038012
- Nomaguchi, K. M., & Milkie, M. A. (2003). Costs and rewards of children: The effects of becoming a parent on adults’ lives. *Journal of Marriage and Family, 65*, 356–374. doi:10.1111/j.1741-3737.2003.00356.x
- Nystedt, P., & Dribe, M. (2015). Is there an intermarriage premium for male immigrants? Exogamy and earnings in Sweden 1990–2009. *International Migration Review, 49*, 3–35. doi:10.1111/imre.12081
- Pagnan, C. E., Lero, D. S., & MacDermid Wadsworth, S. M. (2011). It doesn’t always add up: Examining dual-earner couples’ decision to off-shift. *Community, Work & Family, 14*, 297–316. doi:10.1080/13668803.2010.520843

- Parr, N. (2010). Satisfaction with life as an antecedent of fertility: Partner + happiness = children? *Demographic Research*, 22, 635–661. doi:10.4054/DemRes.2010.22.21
- Pocnet, C., Antonietti, J.-P., Strippoli, M.-P. F., Glaus, J., Preisig, M., & Rossier, J. (in press). Individuals' quality of life linked to major life events, perceived social support, and personality traits. *Quality of Life Research*. doi:10.1007/s11136-016-1296-4
- Presser, H. B. (1995). Job, family, and gender: Determinants of nonstandard work schedules among employed Americans in 1991. *Demography*, 32, 577–598. doi:10.2307/2061676
- Presser, H. B. (2001). Comment: A gender perspective for understanding low fertility in post-transitional societies. *Population and Development Review*, 27, 177–183.
- Salladarré, F., & Hlaimi, S. (2014). Women and part-time work in Europe. *International Labour Review*, 153, 29–310.
- Sanchez, L., & Thomson, E. (1997). Becoming mothers and fathers: Parenthood, gender, and the division of labor. *Gender & Society*, 11, 747–772.  
doi:10.1177/089124397011006003
- Schoeni, R. F., Stafford, F., McGonagle, K. A., & Andreski, P. (2013). Response rates in national panel surveys. *Annals of the American Academy of Political and Social Science*, 645, 60–76. doi:10.1177/0002716212456363
- Shockley, K. M., & Singla, N. (2011). Reconsidering work—Family interactions and satisfaction: A meta-analysis. *Journal of Management*, 37, 861–886.  
doi:10.1177/0149206310394864
- Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis: Modeling change and event occurrence*. New York, NY: Oxford University Press.
- Snijders, T., & Bosker, R. (2012). *Multilevel analysis: An introduction to basic and applied multilevel analysis* (2nd ed.). London, UK: Sage.
- Solomon, B. C., & Jackson, J. J. (2014). Why do personality traits predict divorce? Multiple pathways through satisfaction. *Journal of Personality and Social Psychology*, 106, 978–996. doi:10.1037/a0036190
- Spector, P. E., & Meier, L. L. (2014). Methodologies for the study of organizational behavior processes: How to find your keys in the dark. *Journal of Organizational Behavior*, 35, 1109–1119. doi:10.1002/job.1966
- Steel, P., Schmidt, J., & Shultz, J. (2008). Refining the relationship between personality and subjective well-being. *Psychological Bulletin*, 134, 138–161. doi:10.1037/0033-2909.134.1.138

- Twenge, J. M., Campbell, W. K., & Foster, C. A. (2003). Parenthood and marital satisfaction: A meta-analytic review. *Journal of Marriage and Family*, 65(3), 574–583.  
doi:10.1111/j.1741-3737.2003.00574.x
- Umberson, D., Pudrovska, T., & Reczek, C. (2010). Parenthood, childlessness, and well-being: A life course perspective, *Journal of Marriage and the Family*, 72, 612–629.  
doi:10.1111/j.1741-3737.2010.00721.x
- Wagner, G. G., Frick, J. R., & Schupp, J. (2007). The German Socio-Economic Panel Study (SOEP): Scope, evolution and enhancements. *Schmollers Jahrbuch*, 127, 139–169.
- Yap, S. C., Anusic, I., & Lucas, R. E. (2012). Does personality moderate reaction and adaptation to major life events? Evidence from the British Household Panel Survey. *Journal of Research in Personality*, 46, 477–488. doi:10.1016/j.jrp.2012.05.005