

**Research article: For better or for worse: The moderating effects of personality on the marriage life satisfaction link**

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Competing Interest Statement

The authors have no competing interests to report. The Economic and Social Research Council provided research support (ES/K00588X/1). The data were made available by the German Institute for Economic Research (DIW Berlin). Neither the original collectors of the data nor the Archive bears any responsibility for the analyses or interpretations presented here.

Running Head: PERSONALITY, MARRIAGE, AND LIFE SATISFACTION

Abstract

On average, marriage tends to lead to temporary increases in life satisfaction, which quickly return to pre-marital levels. This general pattern, however, does not consider the personality of individuals entering into marriage. We examine whether following marriage pre-marital personality predicts different changes to life satisfaction in a sample of initially single German adults ( $N = 2015$ ), completing life satisfaction measures and indicating their marital status yearly for eight years (during which 468 married). We find that conscientious women experience greater life satisfaction following marriage than less conscientious women. Our data also indicate that introverted women and extraverted men experience longer-term life satisfaction benefits following marriage. Our results refute the claim of limited life satisfaction effects from marriage and caution against relying on average effects when examining the influence of life events on well-being.

*Keywords:* Marriage, life satisfaction, personality, subjective well-being, adaptation.

## For Better or for Worse: The Moderating Effects of Personality on the Marriage-Life Satisfaction Link

Considerable research has aimed at testing whether marriage leads to increases in life satisfaction. Married individuals robustly have higher average levels of life satisfaction than non-married individuals (Haring-Hidore, Stock, Okun, & Witter, 1985), but this relation is partially explained through social selection effects, whereby those with higher life satisfaction are more likely to marry (Mastekaasa, 1992). Nevertheless research that controls for selection effects suggests that any life satisfaction benefits of marriage are at best transitory. There are short-term life satisfaction increases following marriage but life satisfaction returns fairly rapidly to pre-marital levels (Yap, Anusic, & Lucas, 2012). However, this general pattern of results is unlikely to be true for everyone, with some people being more likely to experience greater life satisfaction benefits following marriage, whilst others may find the experience less beneficial. Here we explore whether a person's pre-marital personality predicts life satisfaction change following marriage.

Personality represents basic individual tendencies and, as conceptualized by the Five Factor Model, (FFM; McCrae & Costa, 2008), comprises agreeableness, conscientiousness, extraversion, neuroticism, and openness-to-experience. Individuals can infer and express accurately what these basic tendencies are from their own behaviors and experiences (McCrae & Costa, 2008). The FFM traits relate to an individual's life satisfaction (Steel, Schmidt, & Shultz, 2008), which may be through a direct relation, capturing an individual's predisposition to experience positive or negative emotions (as with the positive or negative affective components of extraversion or neuroticism). Alternatively, the relationship between personality and life satisfaction may be indirect (as with agreeableness, conscientiousness, and openness) through

orientating individuals toward positive situations (McCrae & Costa, 1991). However, evidence is emerging for a third pathway, in that there are differences in how personality influences responses to life events.

Specifically, personality has been shown to predict how life satisfaction is influenced following adverse life events such as disability (Boyce & Wood, 2011) and income loss (Boyce, Wood, & Ferguson, forthcoming), as well as protecting against depression during widowhood (Pai & Carr, 2010). Importantly such studies have utilized personality measures before the events took place, thus preventing confounding any effects with the possibility that personality traits develop in response to these events (Boyce, Wood, Daly, & Sedikides, 2015). Only two studies have assessed whether personality moderates the extent to which individuals' life satisfaction changes following marriage (Anusic, Yap, & Lucas, 2014; Yap et al., 2012). However, owing potentially to limited statistical power Yap et al., (2012) obtained null effects, whilst Anusic et al., (2014) did not utilize personality traits measured before marriage.

Since research in this area is limited we hypothesize that any of the FFM personality traits may be important. In accordance with our exploratory approach the literature on relationship satisfaction suggests an important role for agreeableness, conscientiousness, extraversion, and neuroticism (Malouff, Thorsteinsson, Schutte, Bhullar, & Rooke, 2010). Personality traits tend to influence relationship satisfaction via ongoing relationship dynamics (Solomon & Jackson, 2014), which may ultimately lead to the dissolution of the relationship (Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). Since the attainment of a satisfying relationship is a near universal goal (Roberts & Robins, 2000) factors that enhance the quality of a relationship are also likely to influence life satisfaction. Given there are personality differences across men and women with regard to relationship satisfaction (Solomon & Jackson, 2014) we

also explore personality differences across men and women. Since we make no specific predictions we consider statistical corrections for multiple comparisons (Nakagawa, 2004).

## **Method**

### **Participants and Procedure**

We used the German Socio-Economic Panel Study (SOEP), an ongoing longitudinal study of German households. The SOEP began in 1984 with a sample of adult members from private households in West Germany, initially over-representing immigrants. Since 1984, the SOEP has expanded to include East Germany and various sub-samples to ensure a broadly representative sample of the entire German population (Wagner, Frick, & Schupp, 2007).

We focused on SOEP participants, regardless of their origin in the sample, who answered personality questions in 2005 and were single. Participants also responded to questions about their life satisfaction in every year from 2005 to 2012 and we ensured that their marital status was recorded in each of these years. We then observed the marital status across this period to determine whether individuals had married. Participants' current marital status is recorded in the SOEP as either married (living together with spouse), married (but permanently separated), single, divorced, or widowed. We concentrate only on those individuals that are initially single, marry and stay married (remaining living together with spouse) in the study period. All individuals that marry in our sample therefore marry for the first time. We included a control group of individuals who remained single throughout the study period such that we could account for life satisfaction selection effects and to ensure life satisfaction changes were the result of marriage rather than some national event that affected the entire sample. Our final sample consisted of 2,015 (986 females, 1,029 males) participants of which 1,547 remained single throughout the study period and 468 (248 females, 220 males) participants married for the

first time at some point in the study and remained married. In 2005, when all individuals were single, age ranged from 17 to 88 ( $M = 30.99$ ,  $SD = 12.53$ ).

## Measures

**Life satisfaction.** Life satisfaction was measured with one item each year for all 8 years. Participants responded to the question “How satisfied are you with your life, all things considered?” from 0 (completely dissatisfied) to 10 (completely satisfied). Participants’ responses were standardized ( $M = 0$ ,  $SD = 1$ ) across the sample. Single item scales, although typical for large data sets, can have a low reliability resulting in an underestimation of the true effect size (inflating Type II, but not Type I, error). Lucas and Donnellan (2007) estimate the unstable state/error component of life satisfaction in the SOEP and show that approximately 33% of the variance in responses can be attributed to the unstable state/error component over a one year period. They infer that the life satisfaction has an acceptable reliability of at least  $r = .67$ . Although reliability diminishes with an increased time interval the reliability is approximately  $r = .45$  across seven years. This is higher than normally observed for single items measures.

**Big Five Personality measures:** A 15-item (3 per trait) shortened version of the Big Five Inventory (Benet-Martínez & John, 1998) was administered in 2005. This version was developed specifically for use in the SOEP, where there is limited space for survey questions (Gerlitz, & Schupp, 2005). Participants responded to 15 items (1 = “does not apply to me at all”, 7 = “applies to me perfectly” scale), with three items assessing each of the FFM domains of agreeableness (e.g., “has a forgiving nature”), conscientiousness (e.g., “does a thorough job”), extraversion (e.g., “is communicative, talkative”), neuroticism (e.g., “worries a lot”), and openness (e.g., “has an active imagination”). Across each personality dimension all three scores were aggregated after appropriate reverse coding and then standardized ( $M = 0$ ,  $SD = 1$ ). Life

satisfaction and personality scores for the entire SOEP sample, as well as for each marriage category and by age group, are found in Table A1 and A2 respectively in the appendix. These scores are broadly comparable to SOEP sample wide scores.

The SOEP scale has comparable psychometric properties to longer FFM scales. For example, the short-item scale produces a robust five factor structure across all age groups (Lang, John, Lüdtke, Schupp, & Wagner, 2011). Donnellan and Lucas (2008) demonstrated that each of the scales in the SOEP correlates highly ( $r > .88$ ) with the corresponding scale in the full Big Five Inventory. Although Lang (2005) illustrates that the retest reliability across 6 weeks is acceptable ( $r > .75$ ) this reliability measure is insufficient as our study takes place over 7 years and may not apply to our specific marriage sub-sample. Since the shortened Big Five Inventory was administered four years later in the SOEP we estimate the retest reliability in our sample. It was at least  $r = .52$  across this time period and similar for those that married and those that did not (see Table A3). These values are comparable to longer scales over this time frame ( $r = .55$ ; see Roberts & DelVecchio, 2000). Table A4 shows the correlations between each of the FFM personality traits and life satisfaction in our sample. Neuroticism has a strong negative relationship with life satisfaction, whereas the remaining traits are less strongly positively related to life satisfaction, conforming with previous research (Steel et al., 2008).

**Covariates.** Marriage is correlated with a number other factors which may be associated with life satisfaction. We control for an individual's age, the presence of children in the marriage, education level, and an individual's satisfaction with family life. We also include time-period dummies to allow for time-period specific differences in life satisfaction. Since age and education also correlate with personality (Srivastava, John, Gosling, & Potter, 2003) any personality interactions may be driven by these factors. For example, older individuals (or

analogously those more highly educated) may have a higher life satisfaction during marriage than those younger. Since age (or education) is also likely to be associated with personality, not appropriately controlling for the interaction of these variables with marriage may lead to a spurious interaction between personality and marriage. Thus we include interactions of both age and education (recorded in 2005) with our marriage variables.

We dealt with missing data in education (15.9%) and family satisfaction (2.2%) using multiple imputations. We used multiple imputation chained equations (MICE; White, Royston, & Wood, 2011) using predictive mean matching and obtained 5 imputations (based on five sequential iterations using MICE). We also imputed the missing education-marriage interaction terms to ensure these variables had the correct means and covariances.

### **Data Analytic Strategy**

To examine whether personality predicts life satisfaction differences in how individuals respond to marriage we carried out an interaction analysis within a multilevel framework. We analyze the Level 1 effect of marriage on life satisfaction (*LS*) across all time points (*t*) from 2006 to 2012 for men and women separately. Since we were interested in life satisfaction over the course of the marriage we coded individuals at each time-point according to the number of years since they had been married up to that time-point. Since the years before marriage are often associated with benefits to life satisfaction we include dummy variables to indicate that an individual will get married in the next year or alternatively that they will get married at some point in the study. At a given time-point participants were classified as either never experiencing marriage throughout the study, not yet married but would at some point during the study ( $M_{t+>1}$ ), experienced marriage in the following year ( $M_{t+1}$ ), or married for 1 through to 7 years ( $M_{\text{Myrs}}$ ). Our analysis allowed us to establish, and control for, any life satisfaction selection effects, and

also determine the effect on life satisfaction at different years of marriage. To determine non-linear effects we included the square and cube of the number of years that the participant had been married ( $Myrs^2$ ,  $Myrs^3$ ).

Measures of personality (P), taken in 2005 when all participants were single, were used as person-specific (*i*) Level 2 predictors to determine whether the Level 1 effect of marriage on life satisfaction at each time point was moderated by pre-marital personality. We did this by interacting each of the Level 1 post-marriage continuous variables ( $Myrs$ ,  $Myrs^3$ ,  $Myrs^2$ ) with all the measures of pre-marital personality. However, we proceeded to omit any of the personality-marriage cubic terms that were non-significant. Upon re-estimation without any non-significant personality-marriage cubic terms we repeated this procedure and omitted any personality-marriage quadratic terms that were also non-significant. Our final model included, unless there were significant quadratic and cubic terms, only linear personality interactions. Individuals' level of life satisfaction in 2005 was used as an additional person-specific Level 2 predictor such that our effects can be interpreted as residualized changes. Our basic model is shown in Equation 1:

$$\begin{aligned} \text{Equation 1: } LS_{it} = & \gamma_{00} + \gamma_{10}LS_i + \gamma_{20}P_i + \gamma_{01}(M_{t+>1})_{it} + \gamma_{02}(M_{t+1})_{it} + \\ & \gamma_{03}(Myrs)_{it} + \gamma_{04}(Myrs^2)_{it} + \gamma_{05}(Myrs^3)_{it} + \gamma_{13}P_i \cdot (Myrs)_{it} + \\ & \gamma_{14}P_i \cdot (Myrs^2)_{it} + \gamma_{15}P_i \cdot (Myrs^3)_{it} + \sigma_{i3}(Myrs)_{it} + \sigma_{i4}(Myrs^2)_{it} + \\ & \sigma_{i5}(Myrs^3)_{it} + \sigma_{i0} + \varepsilon_{it} \end{aligned}$$

Person-specific slopes and intercept errors are captured by the  $\sigma$  terms and  $\varepsilon$  captures the overall model error. By controlling for life satisfaction in 2005,  $\gamma_{01}$  and  $\gamma_{02}$  are interpretable as marriage selection effects, and  $\gamma_{03}$ ,  $\gamma_{04}$ , and  $\gamma_{05}$  signify changes in life satisfaction by year of

marriage. The coefficients  $\gamma_{13}, \gamma_{14}, \gamma_{15}$  represent the personality-marriage interaction effects. Since our analysis is largely exploratory we consider our results in light of possible Type 1 error through multiple comparisons (Nakagawa, 2004).

## Results

To test whether there is an interaction between personality and marriage in predicting life satisfaction we carried out multilevel regressions separately for both women and men, initially including no controls. Table 1 Regression 1 provides the results for women. The coefficients on the marriage main effect variables suggest that on average women that will marry during the study are 0.13 *SD* (coefficient on  $M_{t+>1}$ ) higher in life satisfaction than those who don't marry. In the year directly preceding marriage women have on average life satisfaction levels 0.29 *SD* (coefficient on  $M_{t+1}$ ) higher than those who never marry. The first year of marriage is then associated with a life satisfaction level of 0.21 *SD*, with each additional year of marriage changing life satisfaction according to  $0.30 * \text{Years Married} - 0.10 * \text{Years Married}^2 + 0.01 * \text{Years Married}^3$ . Thus the effect of marriage on life satisfaction is initially positive but eventually reduces.

Regression 1 illustrates that the effect of marriage on life satisfaction is also dependent upon pre-marriage personality. There are significant interaction terms for both conscientiousness and extraversion. This suggests that woman with basic underlying tendencies (see McCrae & Costa, 2008) that result in them endorsing behaviours reflective of conscientiousness or low extraversion experience higher life satisfaction during marriage. This is illustrated in Figure 1. In the left-hand panel we observe that women who score themselves moderately high on conscientiousness (+1 *SD*) experience sustained life satisfaction benefits, whereas women who score themselves as moderately low on conscientiousness (-1 *SD*) quickly experience falls in life

satisfaction. After some years the life satisfaction levels of those moderately low in conscientious are similar to those that remained single throughout the study. The middle panel in Figure 1 shows that the effect of marriage on life satisfaction for women who score themselves moderately low ( $-1 SD$ ) and moderately high ( $+1 SD$ ) on extraversion. There is significance only on the linear interaction but the curvature remains owing to the main effect coefficients and the interaction only changing the trajectory of the curvature. Initially there are no satisfaction differences by extraversion. However, after a few years of marriage women that endorse behaviors reflective of extraversion begin to experience reductions in life satisfaction, whilst those that don't maintain their level of life satisfaction. Thus women who score low on extraversion appear to experience long-term life satisfaction benefits following marriage. We note the sudden spike in life satisfaction in years 6 and 7 but we suggest caution since only a small number of participants in our sample experienced 6 or 7 years of marriage.

Table 1 Regression 3 provides the results for men. On average men that will marry during the study experience life satisfaction increases in the year directly preceding the marriage, where life satisfaction rises to  $0.18 SD$ . The first year of marriage is then associated with a life satisfaction of  $0.17 SD$  higher than those who remain single, with each additional year of marriage changing life satisfaction according to  $0.25 * \text{Years Married} - 0.07 * \text{Years Married}^2 + 0.01 * \text{Years Married}^3$ . The effect of marriage on life satisfaction is on average positive but returns to pre-marital levels of life satisfaction quickly. Regression 3 suggests, however, that men who endorse behaviors reflective of extraversion experience higher life satisfaction during marriage. The right-hand panel in Figure 1 shows the effect of marriage on life satisfaction for men that score themselves moderately low ( $-1 SD$ ) and moderately high ( $+1 SD$ ) on extraversion. Whilst all men experience a pre-marital increase in their life satisfaction, men that are

extraverted seem to experience longer-term benefits to their life satisfaction during marriage. Introverted men, however, experience significant drops in their life satisfaction that result in them being approximately 0.20 *SD* lower in life satisfaction than those who never marry.

Due to the possibility of Type 1 errors owing to multiple comparisons we re-evaluate our results after making a Bonferroni-type correction ( $p = 0.05/\alpha$ , where  $\alpha$  represents the number of comparisons made which is 10 here). Only the conscientious interaction in women survives this correction ( $p = .004$ ). Although Bonferroni-type corrections minimize the possibility of Type 1 errors they have been criticized for increasing the likelihood of Type 2 errors (Nakagawa, 2004). Thus we suggest that the other interactions, rather than being rejected, should be simply treated with caution.

Further a number of other factors may correlate not only with marriage and life satisfaction but also with personality. We account for these by including additional controls including age, the presence of children, education level, and an individual's satisfaction with family life, as well as the interaction of the individual's pre-marital age and education with the marriage variables up to the quadratic term of years spent married. The conscientiousness interaction effects are still evident, whereas for extraversion these effects are significant at only the 10% level. There is now a linear effect on neuroticism. These changes are driven by the inclusion of family satisfaction, which is strongly correlated with life satisfaction. This suggests further caution for the extraversion result in both men and women.

### **Discussion**

Although individuals may experience initial life satisfaction increases following marriage these effects on average return quickly to pre-marital levels. However, we show that an individual's reaction depends on their pre-marital personality. Specifically, women who reported

being conscientious experienced sustained increases in their life satisfaction following marriage whereas those less conscientious experienced small transitory life satisfaction increases. Such a result might be explained by the tendency for conscientious individuals to place more value on relationship goals (Roberts & Robins, 2000) and therefore conscientious individuals may strive harder to ensure success (Duckworth, Peterson, Matthews, & Kelly, 2007). This result is consistent with conscientious individuals being more satisfied with their relationships (Malouff et al., 2010). This conscientiousness effect, however, was not found in men. Although we expected some differences between men and women it is not clear why this was the case and we speculatively suggest this could be due to differences in how men and women value life goals (Roberts & Robins, 2000). We also found effects that differed across men and women for extraversion, with introverted women but extraverted men experiencing long-term benefits to their life satisfaction. Extraversion generally predicts enhanced relationship satisfaction (Solomon & Jackson, 2014) and although it is not clear why we observed inconsistent effects it has been suggested that the importance of extraversion for relationship satisfaction may be cultural (Malouff et al., 2010). Some caution is, however, recommended with our results on extraversion since the effects were dependent on the inclusion of certain controls and further the effect did not pass the more stringent significance level to account for multiple comparisons. One reason for our limited power to detect some of the effects might be due to our scales for personality and life satisfaction being shorter than ideal. This may have also resulted in our effects being under-estimated. Our research nevertheless demonstrated a test-retest stability in a short-item personality scale over four years that was comparable to longer scales, adding to the literature on personality stability whilst being consistent with the literature on personality change (Boyce et al., 2015).

Our exploratory approach to understanding how personality moderates the influence of marriage on life satisfaction was an attempt to establish initial research in this area. Now that the basic relationship has been established we hope that this opens up possibilities for future research to explore mechanistic pathways. We suggest that our results might be driven by specific personality types valuing or not valuing certain features of their new environment, such as different social opportunities that arise following marriage. Alternatively, life satisfaction may increase following marriage not due to the direct effect of marriage per se but via the indirect effect marriage has in protecting an individual when they encounter life stressors. Personality may both increase the likelihood of other life stressors occurring during marriage and/or moderate the impact of such life stressors. It is also possible that partner personality may have an important effect in explaining why some marriages yield more satisfaction than others (Solomon & Jackson, 2014). Since most of our sample did not include partners from the same marriage we were unable to examine the influence of partner personality. We recognize this limitation and future research should therefore explore the role of partner personality. Although more work is needed in understanding and testing precise mechanisms behind our results, our research is the first to demonstrate that personality moderates the effect of marriage on life satisfaction and adds to a growing literature illustrating the importance of personality traits for generating higher or lower well-being following commonly occurring life events.

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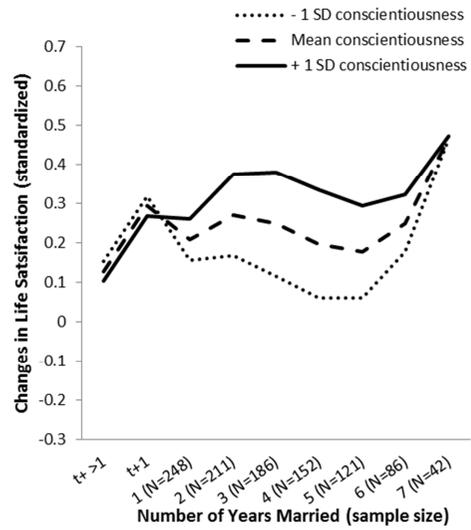
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Table 1: *Multilevel Analyses of the Effect of Marriage on Life Satisfaction Moderated by Personality*

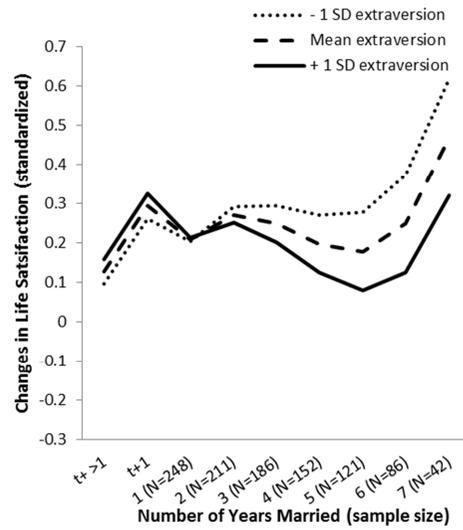
	Women: Regression 1			Women: Regression 2			Men: Regression 3			Men: Regression 4		
Dependent Variable: Life satisfaction at T												
Independent Variables:	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$	<i>b</i>	<i>SE</i>	$\beta$
Life satisfaction at T = 0	0.43	0.02	.43**	0.35	0.02	.35**	0.46	0.02	.46**	0.39	0.02	.39**
Agreeableness at T = 0 (Agre.)	0.02	0.02	.02	0.00	0.02	.00	0.04	0.02	.04*	0.01	0.02	.01
Conscientiousness at T = 0 (Cons.)	-0.03	0.02	-.03	-0.04	0.02	-.04	-0.01	0.02	-.01	0.01	0.02	.01
Extroversion at T = 0 (Extr.)	0.03	0.02	.03	0.02	0.02	.02	0.06	0.02	.06**	0.04	0.02	.04
Neuroticism at T = 0 (Neur.)	-0.07	0.02	-.07**	-0.08	0.02	-.08**	-0.07	0.02	-.07**	-0.08	0.02	-.08**
Openness at T = 0 (Open.)	0.08	0.02	.08**	0.05	0.02	-.05*	0.00	0.02	-.01	-0.00	0.02	-.00
<i>Marriage variables</i>												
Not yet married at T ( $M_{t+1}$ )	0.13	0.05	.03*	0.11	0.05	.03*	-0.01	0.05	-.00	-0.08	0.05	-.02
Married in T + 1 ( $M_{t+1}$ )	0.29	0.06	.05**	0.16	0.06	.02*	0.18	0.06	.03**	0.07	0.06	.01
Years Married at T (Myrs)	0.30	0.06	.39**	0.15	0.06	.15*	0.25	0.06	.30**	0.07	0.06	.07
Years Married at T Squared (Myrs <sup>2</sup> )	-0.10	0.02	-.69**	-0.05	0.02	-.27*	-0.09	0.03	-.59**	-0.04	0.02	-.17
Years Married at T Cubed (Myrs <sup>3</sup> )	0.01	0.00	.39**	0.01	0.00	.16*	0.01	0.00	.33**	0.00	0.00	.10
<i>Personality interaction variables</i>												
Agre.*Years Married at T	-0.02	0.01	-.02	-0.01	0.01	-.00	0.01	0.01	.01	0.00	0.01	.00
Cons.*Years Married at T	0.09	0.03	.11**	0.08	0.03	.07**	0.00	0.01	.00	-0.00	0.01	-.00
Cons.*Years Married at T Squared	-0.01	0.00	-.07*	-0.01	0.00	-.05*						
Extr.*Years Married at T	-0.03	0.01	-.04**	-0.02	0.01	-.02	0.02	0.01	.03*	0.02	0.01	.02
Neur.*Years Married at T	-0.02	0.01	-.02	-0.01	0.01	-.01	0.02	0.01	.03	0.02	0.01	.02*
Open.*Years Married at T	-0.00	0.01	-.01	-0.00	0.01	-.00	-0.01	0.01	-.01	-0.01	0.01	-.00

Notes: Regressions 1 ( $N = 6902$  from 986 individuals) and 3 ( $N = 7203$  from 1029 individuals). Regression 2 ( $N = 6902$  from 986 individuals) and 4 ( $N = 7203$  from 1029 individuals) included controls for the individual's age in 2005, years spent in education in 2005, time-period dummies, whether children were in the household, household size, family satisfaction, and interactions age and education in 2005 with the marriage variables up to the quadratic; \* $p < .05$  \*\* $p < .01$ .  $N =$  number of level 1 observations

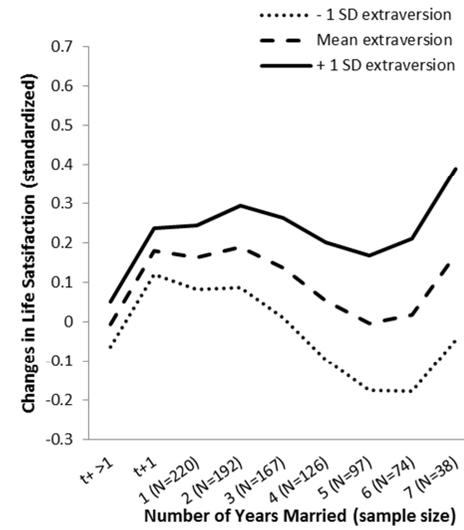
Figure 1: A longitudinal comparison of the life satisfaction of men and women experiencing marriage (relative to those who did not marry in the study), as moderated by pre-marriage self-reported personality above (+1 SD) and below (-1 SD) mean levels.



(i) women by their conscientiousness score



(ii) women by their extraversion score



(iii) men by their extraversion score

Appendix to “For Better or for Worse: The Moderating Effects of Personality on the Marriage-Life Satisfaction Link

Table A1: Means and standard deviations of life satisfaction and personality by marriage group

	Life satisfaction at T	Agreeableness before marriage	Conscientiousness before marriage	Extraversion before marriage	Neuroticism before marriage	Openness before marriage
Never married at T ( <i>N</i> = 10829)	6.94 ( <i>SD</i> = 1.73)	16.07 ( <i>SD</i> = 2.97)	16.74 ( <i>SD</i> = 3.06)	14.61 ( <i>SD</i> = 3.56)	11.56 ( <i>SD</i> = 3.58)	13.92 ( <i>SD</i> = 3.56)
Not yet married at T ( <i>N</i> = 928)	7.17 ( <i>SD</i> = 1.48)	16.15 ( <i>SD</i> = 2.85)	17.11 ( <i>SD</i> = 2.91)	15.05 ( <i>SD</i> = 3.04)	10.98 ( <i>SD</i> = 3.80)	13.95 ( <i>SD</i> = 3.04)
Married in T+1 ( <i>N</i> = 388)	7.45 ( <i>SD</i> = 1.40)	16.32 ( <i>SD</i> = 2.83)	17.21 ( <i>SD</i> = 2.77)	14.94 ( <i>SD</i> = 3.27)	11.37 ( <i>SD</i> = 3.77)	13.96 ( <i>SD</i> = 3.17)
Married 1 year at T ( <i>N</i> = 468)	7.50 ( <i>SD</i> = 1.40)	16.33 ( <i>SD</i> = 2.76)	17.28 ( <i>SD</i> = 2.75)	14.94 ( <i>SD</i> = 3.32)	11.42 ( <i>SD</i> = 3.68)	13.91 ( <i>SD</i> = 3.23)
Married 2 year at T ( <i>N</i> = 403)	7.49 ( <i>SD</i> = 1.39)	16.37 ( <i>SD</i> = 2.78)	17.42 ( <i>SD</i> = 2.65)	14.95 ( <i>SD</i> = 3.37)	11.50 ( <i>SD</i> = 3.68)	13.90 ( <i>SD</i> = 3.31)
Married 3 year at T ( <i>N</i> = 353)	7.35 ( <i>SD</i> = 1.47)	16.44 ( <i>SD</i> = 2.75)	17.38 ( <i>SD</i> = 2.66)	14.86 ( <i>SD</i> = 3.41)	11.66 ( <i>SD</i> = 3.60)	13.91 ( <i>SD</i> = 3.31)
Married 4 year at T ( <i>N</i> = 278)	7.37 ( <i>SD</i> = 1.39)	16.53 ( <i>SD</i> = 2.59)	17.35 ( <i>SD</i> = 2.60)	14.81 ( <i>SD</i> = 3.53)	11.74 ( <i>SD</i> = 3.48)	13.87 ( <i>SD</i> = 3.31)
Married 5 year at T ( <i>N</i> = 218)	7.29 ( <i>SD</i> = 1.45)	16.44 ( <i>SD</i> = 2.61)	17.36 ( <i>SD</i> = 2.58)	14.73 ( <i>SD</i> = 3.64)	11.95 ( <i>SD</i> = 3.44)	13.86 ( <i>SD</i> = 3.48)
Married 6 year at T ( <i>N</i> = 160)	7.33 ( <i>SD</i> = 1.37)	16.46 ( <i>SD</i> = 2.61)	17.48 ( <i>SD</i> = 2.64)	14.93 ( <i>SD</i> = 3.68)	12.01 ( <i>SD</i> = 3.51)	13.84 ( <i>SD</i> = 3.46)
Married 7 year at T ( <i>N</i> = 80)	7.64 ( <i>SD</i> = 1.20)	16.34 ( <i>SD</i> = 2.41)	17.63 ( <i>SD</i> = 2.66)	14.93 ( <i>SD</i> = 3.60)	11.66 ( <i>SD</i> = 3.22)	13.69 ( <i>SD</i> = 3.54)
SOEP sample in 2005 ( <i>N</i> ~ 21,000)	6.95 ( <i>SD</i> = 1.83)	16.36 ( <i>SD</i> = 2.93)	17.70 ( <i>SD</i> = 2.82)	14.49 ( <i>SD</i> = 3.42)	11.88 ( <i>SD</i> = 3.67)	13.50 ( <i>SD</i> = 3.63)

Notes: *N* = number of level 1 observations

Table A2: Test-retest reliability for personality over a four year period

	Agreeableness	Conscientiousness	Extraversion	Neuroticism	Openness
Full sample ( <i>n</i> = 2015)	.52	.56	.63	.56	.57
Never married ( <i>n</i> = 1547)	.51	.56	.62	.55	.58
Married ( <i>n</i> = 468)	.53	.55	.68	.59	.53

Notes: *n* = number of level 2 observations

Table A3: Means and standard deviations of life satisfaction and personality by age group in 2005

	Life satisfaction at T	Agreeableness before marriage	Conscientiousness before marriage	Extraversion before marriage	Neuroticism before marriage	Openness before marriage
Under 20 ( <i>N</i> = 312)	7.44 ( <i>SD</i> = 1.69)	16.43 ( <i>SD</i> = 2.87)	15.41 ( <i>SD</i> = 3.25)	14.97 ( <i>SD</i> = 3.56)	11.61 ( <i>SD</i> = 3.42)	14.46 ( <i>SD</i> = 3.41)
20 to 25 ( <i>N</i> = 431)	7.29 ( <i>SD</i> = 1.62)	16.00 ( <i>SD</i> = 2.90)	16.42 ( <i>SD</i> = 3.15)	15.05 ( <i>SD</i> = 3.54)	11.59 ( <i>SD</i> = 3.55)	14.06 ( <i>SD</i> = 3.36)
25 to 30 ( <i>N</i> = 392)	7.13 ( <i>SD</i> = 1.57)	16.17 ( <i>SD</i> = 2.85)	17.13 ( <i>SD</i> = 2.64)	14.83 ( <i>SD</i> = 3.45)	11.65 ( <i>SD</i> = 3.53)	13.72 ( <i>SD</i> = 3.39)
30 to 35 ( <i>N</i> = 259)	7.13 ( <i>SD</i> = 1.48)	16.03 ( <i>SD</i> = 3.03)	17.59 ( <i>SD</i> = 2.56)	11.31 ( <i>SD</i> = 3.68)	11.31 ( <i>SD</i> = 3.68)	13.86 ( <i>SD</i> = 3.46)
35 to 40 ( <i>N</i> = 227)	6.81 ( <i>SD</i> = 1.91)	15.97 ( <i>SD</i> = 2.90)	17.40 ( <i>SD</i> = 2.79)	14.69 ( <i>SD</i> = 3.36)	11.03 ( <i>SD</i> = 3.48)	14.00 ( <i>SD</i> = 3.24)
40 to 50 ( <i>N</i> = 220)	6.48 ( <i>SD</i> = 1.99)	15.87 ( <i>SD</i> = 3.13)	17.65 ( <i>SD</i> = 2.91)	14.09 ( <i>SD</i> = 3.78)	11.81 ( <i>SD</i> = 3.98)	13.68 ( <i>SD</i> = 3.87)
Over 50 ( <i>N</i> = 174)	6.79 ( <i>SD</i> = 1.82)	16.51 ( <i>SD</i> = 2.85)	17.22 ( <i>SD</i> = 2.87)	13.58 ( <i>SD</i> = 3.46)	11.57 ( <i>SD</i> = 3.72)	13.32 ( <i>SD</i> = 3.88)

Notes: *N* = number of level 1 observations

Table A4: Correlations between life satisfaction and personality

	Agreeableness	Conscientiousness	Extraversion	Neuroticism	Openness
Life satisfaction	.12**	.07**	.16**	-.20**	.11**
Agreeableness		.29**	.11**	-.11**	.13**
Conscientiousness			.15**	-.14**	.12**
Extraversion				-.21**	.34**
Neuroticism					.00

\*\*p < .01