



## Brief Report

## The dark side of conscientiousness: Conscientious people experience greater drops in life satisfaction following unemployment

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## ABSTRACT

Conscientious individuals tend to achieve more and have higher well-being. This has led to a view that conscientiousness is always positive for well-being. We hypothesize that conscientiousness could be detrimental to well-being when failure is experienced, such as when individuals become unemployed. In a 4-year longitudinal study of 9570 individuals interviewed yearly we show that the drop in an individual's life satisfaction following unemployment is significantly moderated by their conscientiousness. After 3 years of unemployment individuals high in conscientiousness (i.e. one standard deviation above the mean) experience a 120% higher decrease in life satisfaction than those at low levels. Thus the positive relationship typically seen between conscientiousness and well-being is reversed: conscientiousness is therefore not always good for well-being.

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### 1. Introduction

Conscientiousness is positively associated with well-being (DeNeve & Cooper, 1998; Steel, Schmidt, & Shultz, 2008). Conscientious individuals appear to be orientated towards life situations that are beneficial for well-being (McCrae & Costa, 1991), set themselves higher goals (Barrick, Mount, & Strauss, 1993; DeNeve & Cooper, 1998), and have high levels of motivation (Judge & Ilies, 2002). Conscientious individuals are therefore more likely to achieve highly (McGregor & Little, 1998) and obtain higher well-being (DeNeve & Cooper, 1998). Overall, this body of literature has led conscientiousness to be conceptualized as a positive, adaptive personality trait that is important for well-being, employment, and personal functioning (DeNeve & Cooper, 1998).

Although conscientiousness is generally positively related to well-being and functioning, with a correlation between 0.2 and 0.3 (Steel et al., 2008); there may be situations where this pattern is reversed, and where high conscientiousness poses a risk for well-being and productivity. These situations have not previously been studied, leading to a perhaps erroneous view that being more conscientious is always better. Given the strong links between conscientiousness and goal setting, motivation, and achievement, we hypothesize that under conditions of failure conscientious people may experience sharper decreases in well-being. We use a nationally representative dataset of 9570 people to investigate the role that conscientiousness has on well-being following a life event that

represents a severe and chronic failure. Specifically, we examine how prospectively measured conscientiousness may interact with unemployment to affect well-being.

Unemployment is ever present in our societies. For example, during 2009 there were on average 14.3 million unemployed individuals in the United States representing an unemployment rate of 9.3%; a rate not seen since 1983.<sup>1</sup> Many individuals face the prospect of unemployment at some point in their lives and the experience can be devastating. The loss of work generally represents a failure in life and can be extremely harmful to well-being (e.g. Frey & Stutzer, 2002). In addition to the loss of earnings, unemployment represents a loss of purpose and can erode an individual's identity and sense of self-worth (Turner, 1995). It is not simply the case that less happier people are selected into unemployment (Diener, Suh, Lucas, & Smith, 1999), and a meta-analysis of longitudinal studies shows that unemployment has an average causal effect size of .38 on mental health (McKee-Ryan, Song, Wanberg, & Kinicki, 2005). Additionally, it can be difficult to recover psychologically from unemployment (Lucas, Clark, Georgellis, & Diener, 2004).

Although conscientious people may potentially experience greater distress following failure, there are additional reasons that suggest conscientious individuals could experience greater distress from unemployment. First, evidence suggests that conscientious people tend to accumulate more wealth (Ameriks, Caplin, & Leahy, 2003) and obtain more well-being from income increases (Boyce & Wood, submitted for publication). To the extent that accumulating

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<sup>1</sup> Current Population Survey, February 2010 – <http://www.bls.gov/web/cpseea1.pdf>.

wealth might be a goal of conscientious people, unemployment might represent a chronic blocking of an important goal, which can lead to decreased well-being (Emmons, 1992). Second, employment may be more important to conscientious people, offering opportunities for conscientious people to use their particular strengths (cf. Barrick et al., 1993; DeNeve & Cooper, 1998). Both the increased importance of employment and the use of strengths have been related to well-being (McKee-Ryan et al., 2005; Seligman, Steen, Park, & Peterson, 2005), and becoming unemployed would remove the opportunities for conscientious people to gain emotional benefits in this way. Third, being conscientious may lead to different appraisals of the reasons for unemployment. Specifically, un-conscientious people might attribute unemployment to a lack of effort whilst working in their previous job (a temporary and specific cause for failure). Contrastingly, conscientious people who worked to their ability would not be able to interpret the situation in this way, and may attribute their failure to their own lack of ability (a stable and general cause of failure). This attribution style has been related to clinical depression (Alloy, Abramson, Whitehouse, & Hogan, 2006; Mongrain & Blackburn, 2005), anxiety (Ralph & Mineka, 1998), and negative affect (Sanjuan, Perez, Rueda, & Ruiz, 2008).

As conscientious people seem theoretically more likely to (a) experience distress from failure, (b) have accumulating wealth as a goal, (c) value their workplace more, and (d) appraise unemployment differently, we hypothesize that conscientious people would experience greater distress from unemployment. It is not the purpose of this study to examine which of these mechanisms is responsible for the effect, but rather to demonstrate that the usually observed positive relationship between conscientiousness and well-being can sometimes be reversed. In doing so, we aim to encourage a broader study of conscientiousness, one that considers the situations in which conscientiousness is adaptive and when conscientiousness poses a risk to well-being. Additionally, this will provide the first study to suggest that the effects of unemployment on well-being depend on any personality characteristic. This observation may have applied implications for the support given to people post-employment.

## 2. Method

### 2.1. Participants and procedure

The sample was nationally representative and consisted of 9570 individuals (4514 males, 5056 females) who completed measures at four time-points, each 1 year apart. At the first time-point age ranged from 17 to 83 ( $M = 39.96$ ,  $SD = 12.29$ ) and household income varied from €150 to €30,000 each month ( $M = 3071.28$ ,  $SD = 1769.45$ ,  $Mdn = 2700.00$ ). Participation was part of the German Socio-Economic Panel Study (GSOEP), a longitudinal sample of German households, with questions relevant for this analysis only included during the 2005, 2006, 2007 and 2008 waves. All members of the household were invited to participate, with questionnaires being administered through yearly face-to-face interviews conducted in German. Further data on sampling are available in Haisken-DeNew and Frick (1998).

In 2005 all participants were employed. We use a multilevel approach to analyze the level-one effect of an individual's employment status on life satisfaction (LS) across subsequent time-points ( $t$ ) in 2006, 2007 and 2008. At each time-point participants are categorized as being either employed or, depending on the number of years they have been unemployed up to that point, as being unemployed for 1 year (U1yr), 2 years (U2yr) or 3 years (U3yr). An individual unemployed for all 3 years would receive a coding of U1yr in their first year of unemployment, U2yr in the second and U3yr in the third. A measure of conscientiousness (C) taken in 2005, is then used as a

person specific (i) level-two predictor to determine whether the level-one effect of unemployment on life satisfaction (at  $t$ ) is moderated by an individual's pre-unemployment level of conscientiousness. Life satisfaction in 2005 is used as an additional person-specific level-two predictor to give the model shown in the following equation.

$$LS_{it} = \gamma_{00} + \gamma_{10}LS_i + \gamma_{20}C_i + \gamma_{01}U1yr_{it} + \gamma_{02}U2yr_{it} + \gamma_{03}U3yr_{it} + \gamma_{11}C_i \cdot U1yr_{it} + \gamma_{12}C_i \cdot U2yr_{it} + \gamma_{13}C_i \cdot U3yr_{it} + \sigma_{i1}U1yr_{it} + \sigma_{i2}U2yr_{it} + \sigma_{i3}U3yr_{it} + \sigma_{i0} + \varepsilon_{it} \quad (1)$$

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  $\gamma_{01}$ ,  $\gamma_{02}$  and  $\gamma_{03}$ , are interpretable as causal effects at each year of unemployment and  $\gamma_{11}$ ,  $\gamma_{12}$  and  $\gamma_{13}$  represent the conscientiousness–unemployment interaction effects.

### 2.2. Measures

#### 2.2.1. Life satisfaction

Life satisfaction was measured using a one-item scale across all 4 years. Participants were asked “how satisfied are you with your life, all things considered?” and responded to this question on an 11-point scale, from 0 (*complete dissatisfaction*) to 10 (*complete satisfaction*). Across all 4 years participants used the full range of the life satisfaction scale ( $M = 7.09$ ,  $SD = 1.65$ ,  $Mdn = 7$ ). In 2005 individuals who never experience unemployment had higher life satisfaction ( $M = 7.23$ ,  $SD = 1.62$ ,  $Mdn = 8$ ) than those who go onto experience at least 1 year of unemployment ( $M = 6.41$ ,  $SD = 1.89$ ,  $Mdn = 7$ ). Although this difference suggests some selection effect, in subsequent years unemployed individuals exhibit even lower life satisfaction ( $M = 5.96$ ,  $SD = 2.09$ ,  $Mdn = 7$ ). The single item scale, although typical for large data sets, is a limitation of the study and could result in an underestimation of the true effect size. Lucas and Donnellan (2007), however, show that the reliability of this measure in the GSOEP is at least .67.

#### 2.2.2. Conscientiousness

A 3-item scale was used to uncover participants' pre-unemployment levels of conscientiousness in 2005. The questionnaire asked individuals to rate three statements, which concerned whether they saw themselves as someone who “does a thorough job”, “tends to be lazy” or “does things effectively and efficiently”, on 7-point scales, from 1 (*does not apply to them*) to 7 (*applies perfectly to them*). After reverse-coding the score on “tends to be lazy” all three scores were aggregated to obtain the conscientiousness scale. Participants used the full range of the scale ( $M = 17.72$ ,  $SD = 2.74$ ,  $Mdn = 18$ ) with those who never enter unemployment ( $M = 17.74$ ,  $SD = 2.71$ ,  $Mdn = 18$ ) having statistically higher conscientious levels than those that subsequently experience unemployment ( $M = 17.53$ ,  $SD = 3.08$ ,  $Mdn = 18$ ). The scale was standardized with a mean of zero and standard deviation of one across the entire sample. This short-scale was developed specifically for the GSOEP to enable individual conscientiousness levels to be determined with limited questioning. Gerlitz and Schupp (2005) document extensive pre-testing that ensured the 3-item scale replicated established longer conscientiousness scales. Further, Donnellan and Lucas (2008) report that the scale has strong correlations with both the full version of the Big Five Inventory (.88) and those items that were not included in the short-scale (.73). In our sample the conscientiousness scale has a Cronbach's alpha of .63 and an inter-item correlation of .53.

#### 2.2.3. Demographic measures

Certain demographic characteristics such as an individual's age, gender, education and household income are likely to be correlated

with an individual's conscientiousness. It is therefore possible that any conscientiousness–unemployment interaction could be driven by one or more of these factors. For example, older people, who happen to have higher levels of conscientiousness, may be more adversely affected by unemployment. It is important to test such hypotheses and determine whether the inclusion of these factors as controls, as well as additional unemployment variables that interact separately with age, gender, education and household income, suppress the conscientiousness–unemployment interactions. All controls are taken from the pre-unemployment period. We report analyses both with and without controls.

### 3. Results

A multilevel analysis was performed to predict life satisfaction at various stages of unemployment: at 1, 2 and 3 years of unemployment. Conscientiousness, life satisfaction, and the demographic measures were taken when individuals were employed. The conscientiousness scale was standardized prior to analysis, and the interaction terms were a product of the standardized conscientiousness variable and the unemployed variables; following Aiken and West's (1991) recommendations for moderation analysis.

Table 1 shows the results from the multilevel analyses. Controlling for pre-unemployment levels of conscientiousness and life satisfaction, becoming unemployed has a negative impact on life satisfaction across all years of unemployment (Regression 1). In the first year of unemployment individuals on average experienced a drop in life satisfaction of 0.60 ( $d = -0.37$ ). In the second and third years of unemployment life satisfaction dropped by 0.83 ( $d = -0.50$ ) and 0.72 ( $d = -0.44$ ) respectively. The interaction terms suggest, however, that the impact of unemployment on life satisfaction depends on an individual's pre-unemployment level of conscientiousness. For example, in the first year of unemployment, people high in conscientiousness (defined as 1 SD above the mean) experienced a life satisfaction decreases of 0.69 ( $d = 0.42$ ). Contrastingly, people low in conscientiousness (defined as 1 SD below the mean) had decreases of 0.52 ( $d = 0.31$ ). This effect continues into the second year of unemployment, where individuals high on conscientiousness show decreases in life satisfaction of 0.93 ( $d = 0.57$ ) compared to individuals low in conscientiousness who have life satisfaction decreases of 0.72 ( $d = 0.44$ ). In the third year this gap widens with life satisfaction losses of 1.00 ( $d = 0.60$ ) for those high

in conscientiousness and 0.45 ( $d = 0.27$ ) for those with low levels. The effect in the third year is particularly strong; suggesting that during prolonged unemployment highly conscientious people experience 120% higher decreases in life satisfaction than those at low levels.

Fig. 1 plots the effect on life satisfaction for each year of unemployment at varying levels of conscientiousness using coefficients from Table 1. There is a significant positive correlation between conscientiousness and life satisfaction ( $r = .03$ ); as a result employed conscientious individuals tend to have a higher life satisfaction. However, during unemployment conscientious individuals experience the greatest declines in their life satisfaction. Fig. 1 illustrates that the reduction in life satisfaction of conscientious individuals does not occur because conscientious individuals have further to fall. People high in conscientiousness exhibit sharp de-

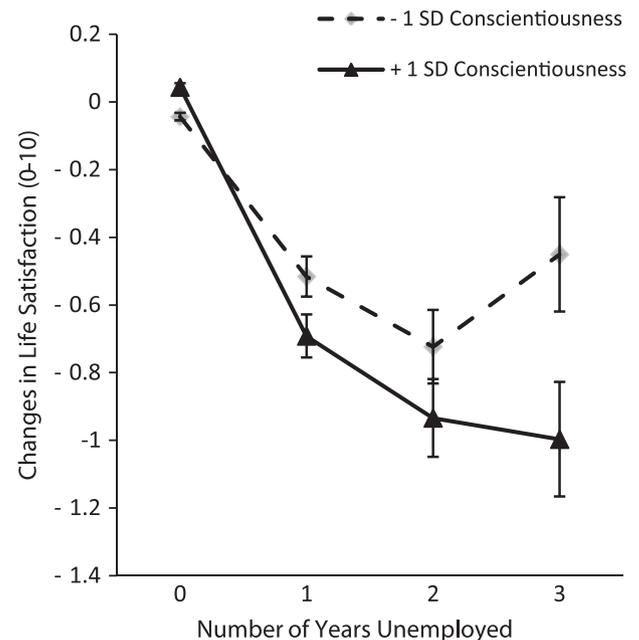


Fig. 1. The change in life satisfaction (0–10) across years of unemployment as moderated by sample-wide conscientiousness levels. Error bars denote standard errors calculated according to Aiken and West (1991) at the appropriate levels of conscientiousness.

Table 1  
Multilevel analyses of the effect of unemployment on life satisfaction.

Dependent variable Independent variables	Regression 1: life satisfaction at T				Regression 2: life satisfaction at T			
	b	SE	$\beta$	d	b	SE	$\beta$	d
Life satisfaction at T = 0	0.53	0.01	.53***		0.50	0.01	.50***	
Conscientiousness at T = 0	0.04	0.01	.03***		0.07	0.01	.04***	
<i>Unemployment dummy variables</i>								
Unemployed for 1 year at T	-0.60	0.05	-.06***	-0.37***	-0.76	0.07	-.07***	-0.46***
Unemployed for 2 years at T	-0.83	0.08	-.04***	-0.50***	-0.79	0.14	-.04***	-0.47***
Unemployed for 3 years at T	-0.72	0.13	-.02***	-0.44***	-1.31	0.21	-.05***	-0.80***
<i>Interaction terms</i>								
Conscientiousness at T = 0 × unemployed for 1 year at T	-0.13	0.04	-.01***	-0.08***	-0.13	0.05	-.01**	-0.08**
Conscientiousness at T = 0 × unemployed for 2 years at T	-0.15	0.07	-.01*	-0.09*	-0.14	0.08	-.01	-0.08
Conscientiousness at T = 0 × unemployed for 3 years at T	-0.32	0.11	-.01**	-0.19**	-0.40	0.11	-.02***	-0.25***

Notes: No controls were included in Regression 1 –  $\chi^2(8) = 5261.43$  ( $p < .001$ ); Regression 2 used pre-unemployment age, gender and household income controls; this included both the level and interaction terms (the individual's education level and the relevant interaction terms are not included as controls here since the education level of some participants is not reported. However, the inclusion of education controls, although reducing the sample size, did not change the results substantively) –  $\chi^2(20) = 5515.88$  ( $p < .001$ ); d-scores were obtained by conducting a regression on life satisfaction standardized across all individuals and all years analyzed (2006–2008).

\*  $p < .05$ .  
\*\*  $p < .01$ .  
\*\*\*  $p < .001$ .

creases in life satisfaction across all time periods. The figure suggests that people with low levels of conscientiousness may even begin to adapt to unemployment.

As a robustness check we include pre-unemployment levels of age, gender, education and household income, alongside their corresponding unemployment interaction terms as controls (Regression 2). Although the interaction term on the second year of unemployment loses significance at the 5% level, the effect on the third year becomes larger, suggesting our overall result is generally robust. Additionally it is possible that our result could be driven by conscientious individuals being more or less likely to experience unemployment. A logistic regression showed that although conscientiousness predicted unemployment with no controls ( $\beta = 0.07, p < 0.05$ ), it was not predictive when controlling for age, gender and household income ( $\beta = -0.02, p > 0.10$ ).

#### 4. Discussion

We show that the personality trait conscientiousness is not always beneficial for well-being. Whilst conscientious individuals may achieve more throughout their lives (Barrick et al., 1993), resulting in higher levels of well-being, we show that during times of failure being conscientious can be detrimental. In a longitudinal study of 9570 individuals we show that on average unemployment has a causal impact on life satisfaction. We then illustrate, using pre-unemployment levels of conscientiousness, that the consequences to life satisfaction are significantly greater for those that are conscientious. Thus, the normal positive relationship between conscientiousness and well-being is reversed.<sup>2</sup>

We propose a number of possible explanations. Firstly, unemployment represents a failure to achieve. Conscientious individuals care more about achieving their goals and so any failure could be more detrimental to their well-being. Secondly, there is evidence to suggest that conscientious individuals tend to value wealth accumulation (Ameriks et al., 2003; Boyce & Wood, submitted for publication). Unemployment prevents them from achieving this goal. Third, the work environment allows conscientious individuals to work to their strengths and they are more likely to see work as a central part of their identity. The loss of a job may therefore erode a conscientious individual's core sense of purpose to a greater extent than someone less conscientious. It is also possible that a conscientious individual will attribute their job loss to their lack of ability as opposed to a lack of effort. Lastly, conscientious individuals may carry out a more efficient job search and, although they may find re-employment quicker, there is evidence that individuals who are more motivated to find work also have higher levels of depressive affect (Feather & Davenport, 1981). In accordance with this, job search effort during unemployment is negatively related to well-being (McKee-Ryan et al., 2005).

Our analysis cannot unpick the extent to which these mechanisms drive conscientious individuals to experience greater distress during unemployment. However, we provide strong evidence that conscientiousness is not always beneficial for well-being. Whilst conscientious individuals may on the whole have higher well-being, there are some circumstances that cause them to have lower well-being. More research is needed around this area.

The psychological consequences of unemployment have been researched extensively. However, previous research into unemployment has not been looked at in relation to individual differences. Our research provides further evidence that personality traits should be considered when trying to understand economic behavior (Ameriks et al., 2003; Borghans, Duckworth, Heckman, & ter Weel,

2008; Bowles, Gintis, & Osborne, 2001; Boyce, 2010; Boyce & Wood, submitted for publication). Our study also has important practical implications. Conscientious individuals are a risk group psychologically during unemployment and these individuals may benefit the most from extra support during unemployment.

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<sup>2</sup> Our model implies a negative correlation between life satisfaction and conscientiousness among the unemployed. Although there is a negative correlation in our sample this is non-significant, owing to this simple test having limited power.

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