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Title: Counterdispositional Conscientiousness and Wellbeing : How Does Acting Out of Character Relate to Positive and Negative Affect At Work?

Year: 2020

Version: Accepted version (Final draft)

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Please cite the original version:

Pickett, J., Hofmans, J., Debusscher, J., & De Fruyt, F. (2020). Counterdispositional Conscientiousness and Wellbeing : How Does Acting Out of Character Relate to Positive and Negative Affect At Work?. *Journal of Happiness Studies*, 21(4), 1463-1485.
<https://doi.org/10.1007/s10902-019-00139-1>

Abstract

Conscientiousness is typically seen as a positive or desired personality trait in the workplace, with the overall assumption being “the more, the better”. Drawing on the behavioral concordance model, we challenge this assumption, expecting that the highest level of positive affect and the lowest level of negative affect will correspond at the point where state and trait conscientiousness converge. Using an experience sampling study and an event reconstruction study, we show that deviations from one’s level of trait conscientiousness relate to variations in positive and negative affect, but not in a straightforward way. While wellbeing was lower when people behaved less conscientiously than they normally do, increases beyond one’s typical conscientiousness level were largely unrelated to wellbeing. Moreover, people high in trait conscientiousness suffered more from negative deviations from their trait level than people low in trait conscientiousness. As a whole, our findings suggest that the interplay of personality states and personality traits is complicated, with both the state level and deviations from the trait level being relevant to wellbeing – calling for an integrative approach to personality.

Introduction

The role of wellbeing in the workplace has been acknowledged since the 1930's, with employee wellbeing initially being used to predict employee turnover rates. However, it fell out of fashion during the Great Depression and laid dormant for nearly 50 years (Wright, 2010) until the advent of positive psychology. Nowadays, employee wellbeing is again on the agenda, with employee wellbeing being used as an umbrella term, encompassing popular and often studied concepts such as job satisfaction, employee engagement and positive and negative affect at work.

Because of its status in the work context, a great number of studies have looked into situational and person-related antecedents of employee wellbeing. Regarding the latter, research has shown that personality in general (DeNeve & Cooper, 1998) and conscientiousness in particular relates to employee wellbeing. That is, trait conscientiousness relates positively to life satisfaction (Heller, Watson, & Ilies, 2004) and overall subjective wellbeing (Carter, et al., 2015).

Employees who are high in trait conscientiousness generally desire order, they obtain satisfaction from achieving goals, view their job as an opportunity to utilize their strengths and incorporate work into their identity (Boyce, Wood, & Brown, 2010; Ilies et al., 2016). However, due to circumstances beyond their control, such as tight deadlines, idle coworkers, or various time constraints, these employees are not always able to sustain their preferred levels of conscientiousness and will often be pressed to work in a lower state of conscientiousness in order to complete their task or job. Similarly, people low in conscientiousness will often also not be able to behave according to their trait level because organizations typically require them to elevate their level of conscientiousness in order to work in an efficient and organized manner. Thus, because throughout their day-to-day work life, people are confronted with varying

environmental demands (e.g., a task that requires one to work fast followed by one that requires one to work very meticulously), people are often required to behave in a way that disagrees with their trait level of conscientiousness, and this is true for both people high and people low on trait conscientiousness. Although the effects of trait conscientiousness on employee wellbeing are often studied and thus well understood, the consequences of such deviations from one's trait level of conscientiousness for employee wellbeing are not. In the present paper, we address this lacuna by presenting two empirical studies that examine the affective consequences of such discrepancies between one's *trait* conscientiousness level and one's *state* conscientiousness level.

Drawing on the behavioral concordance model (Moskowitz & Côté, 1995), which theorizes that people experience positive affect (PA) when their behaviors are concordant with their personality, whereas negative affect (NA) is experienced when behaviors are discordant with one's traits, we test the possibility that people's affective states are impacted by the fit or concordance between one's trait and state level of conscientiousness. Following this idea, high momentary levels of conscientiousness might only be beneficial for people who are also high in trait conscientiousness. For people low in trait conscientiousness, on the contrary, the behavioral concordance model predicts that high momentary levels of conscientiousness will lead to low PA and high NA.

By investigating not only the positive but also the potential negative effects of conscientiousness, this study adds to a growing number of studies that show that constructs that are generally considered adaptive and desirable may have unexpected costs (e.g., Pierce & Aguinis, 2013; Vergauwe, Wille, Hofmans, Kaiser & De Fruyt, 2018). Specifically, for conscientiousness, whereas previous studies have shown that high levels of conscientiousness are desirable in a work setting (e.g., LaHuis, Martin, & Avis, 2005), recent studies found exceptionally high levels of conscientiousness relate to maladaptive obsessive-compulsive

tendencies, which are associated with lower levels of wellbeing (Carter, Guan, Maples, Williamson & Miller, 2015; Roberts, Jackson, Fayard, Edmonds & Meints, 2009). Moreover, Fayard, Roberts, Robins and Watson (2012) found that people who are high in conscientiousness tend to be more guilt ridden when they fail.

In what follows, we first discuss conscientiousness and its relevance in a work context. Subsequently, we argue how within-person and between-person fluctuations in conscientiousness might interact, and finally we draw on the behavioral concordance model to hypothesize how these interactions are expected to relate to positive and negative affect.

1.1 Conscientiousness

Conscientiousness, one of the Big-Five personality traits identified by McCrae and Costa (1996), is defined as the inclination to follow socially prescribed norms for impulse control that facilitates task- and goal-directed behavior, such as prioritizing tasks, planning and organizing, and delaying gratification (DeYoung, 2015; John & Srivastava, 1999; Jackson et al., 2010). Individuals who score high on conscientiousness tend to, for example, work hard, be more organized, follow rules and social norms, possess erect posture, be neat and tidy, and think before acting (Jackson et al., 2010). On the contrary, people low in conscientiousness tend to oversleep, be late or cancel plans altogether, exceed their credit limit and curse more often (Jackson et al., 2010).

In terms of wellbeing, research generally shows that trait conscientiousness is a positive predictor of life satisfaction (Heller et al., 2004) and overall subjective wellbeing (Carter et al. 2015). Regarding one's positive and negative affective experiences, meta-analytic research demonstrates that trait conscientiousness relates positively to PA and negatively to NA (DeNeve & Cooper, 1998; Fayard et al., 2012), which can partly be explained by the relationship between conscientiousness and attentiveness-related emotions, with those

emotions being a facet of positive affect (Watson, 2000). Also, at the momentary state level, research has shown that conscientious behaviors relate positively to positive mood (Leikas & Ilmarinen, 2017). This relation can be explained by the fact that working in a conscientious manner typically means being productive and fulfilling one's responsibilities (Debusscher, Hofmans & De Fruyt, 2016; 2017), which is highly desired and valued by managers and organizations, and hence, associated with positive feelings.

Although the findings of between- and within-person studies on the relation between conscientiousness and wellbeing in general and PA and NA in particular suggest that higher levels of conscientiousness are better, what has not yet been thoroughly tested is whether within-person fluctuations in conscientiousness lead to higher PA and lower NA for everyone, regardless of their trait level of conscientiousness. This is an important omission in the literature since between-person and within-person differences do not exist in isolation. Rather, personality states are always experienced by an individual with a specific set of trait scores. The result of this intertwining of states and traits is that a high momentary level of state conscientiousness can be experienced in a very different manner by someone high in trait conscientiousness than by someone low in trait conscientiousness. Likewise, the outcome of low levels of state conscientiousness can differ as a function of one's trait level of conscientiousness. Thus, although the between-person and the within-person approaches are important and have made major contributions to our understanding of the relation between conscientiousness and PA and NA, in order to achieve a better working understanding of the potential affective consequences of conscientiousness, personality states and traits need to be simultaneously considered (Debusscher et al., 2016; Fleeson, 2004). In the following, we will argue that such a simultaneous consideration might in effect nuance the idea that more conscientiousness is always better.

1.2 Integrating traits and states: The behavioral concordance model

The behavioral concordance model (Moskowitz & Côté, 1995) posits that behaving concordant to one's trait triggers PA while deviating from one's trait level elicits NA. The reasoning is that deviations from the trait level—also referred to as counterdispositional behaviors or contra-trait effort—are effortful to maintain and therefore consume or exhaust limited self-regulatory resources (Vohs, Baumeister, & Ciarocco, 2005). When these self-regulatory resources are taxed or depleted, people experience negative affective states, stress and mental fatigue (Zelenski, Santoro, & Whelan, 2012). In summary, counterdispositional behavior or contra-trait effort triggers resource depletion, which is a state that requires additional efforts of self-regulation and is found to be strenuous, fatiguing or even exhausting (Baumeister, Gailliot, DeWall, & Oaten, 2006; Gallagher, Fleeson, & Hoyle, 2011), which is why counterdispositional behaviors are expected to relate negatively to PA and positively to NA.

Applying the behavioral concordance model to the relationship between conscientiousness and PA and NA, it is expected that when an individual is high in trait conscientiousness, that individual tends to experience decreases in PA and increases in NA when s/he conducts herself/himself in a manner that is low in conscientiousness. An individual low in trait conscientiousness, on the contrary, will experience decreased levels of PA and increased levels of NA when behaving in a high-conscientious state. Although the examples given above pertain to cases in which the trait and state level are opposite, according to the behavioral concordance model, any discrepancy between the trait level and the momentary state level should lead to decreased levels of wellbeing (Moskowitz & Côté, 1995). Hence, for people who are moderately high on trait conscientiousness, behaving in a very conscientious manner is depleting, very much like behaving unconscientiously. Moreover, the greater the deviation between the state and the trait level, the more the individual's positive and negative affect are affected (Moskowitz & Côté, 1995).

In the present study, the impact of counterdispositional conscientiousness on wellbeing is studied by tracking within-person fluctuations in PA and NA (Emmons & Diener, 1985). Subjective wellbeing includes both a cognitive component (i.e., life satisfaction; Diener, Emmons, Larsen, & Griffin, 1985; Ozer & Benet-Martinez, 2006) as well as an affective component that incorporates the presence of positive and absence of negative emotions (Larson, 2000; Ozer & Benet-Martinez, 2006). Because the behavioral concordance model explicitly deals with the affective component as a result of counterdispositional behavior, this article focuses on the emotional aspect of wellbeing. Whereas PA echoes the degree to which an individual feels energetic, alert and enthusiastic, NA, on the other hand, echoes anguish and an unpleasant and apathetic state that encompasses disdain, aversion, anxiety, guilt and fear.

In line with the behavioral concordance model, we hypothesize the highest level of PA and the lowest level of NA to correspond to the point where state and trait conscientiousness converge. Any deviations from this optimal level (either increases or decreases in conscientiousness) are expected to be accompanied by decreases in PA and increases in NA, respectively. In other words, the relationship between deviations from the trait level and PA is hypothesized to follow an inverse U-shaped curve, with both positive and negative deviations from the trait-level resulting in lower levels of PA. For NA, the relationship is hypothesized to be U-shaped, with both positive and negative deviations from the trait-level leading to increases in NA. In the present paper, we tested those predictions based on the behavioral concordance model in two real-life studies: one experience sampling study in which we followed 83 employees for 10 days throughout their day-to-day work life (Study 1), and one event reconstruction study in which 449 employees reported on three recent conscientiousness-related work situations (Study 2).

2 Study 1: Experience Sampling Study

2.1 Methods

2.1.1 Participants

Associates of the researchers contacted 100 full-time employees from their own personal networks. Those employees worked for a variety of Belgian organizations and were all asked to fill out an online baseline questionnaire and partake in an experience sampling study. The baseline questionnaire was completed by 87 individuals of whom 39 were men (44.8%). The average age of the respondents was 27.34 ($SD = 7.61$) and their average organizational tenure was 3.98 years ($SD = 6.27$). In terms of sector, the majority were employed in education (17.2%), banking and finance (13.6%), governmental and non-profit organizations (10.3%), and healthcare (9.2%).

2.1.2 Procedure

Ethical approval was not applied for because at the time of this data collection, our university ethics committee did not deem approval as necessary for studies that are considered non-invasive and harmless. Having said that, we did inform participants about the purpose of the study and the confidentiality, after which participants completed an online baseline questionnaire assessing demographical variables (i.e., age, organizational tenure and sector) as well as a measure of trait conscientiousness. One week later, all participants that filled out the baseline questionnaire enrolled in a ten-day experience sampling study, receiving a daily prompt at 11AM assessing their level of state conscientiousness and PA and NA via an online questionnaire. Of the 87 employees, 82 filled out the questionnaire on at least two days and therefore could be used for further analyses (the minimum of two repeated observations is necessary because with only one observation it is not possible to separate within- from between-person variability; Debusscher et al., 2017). In terms of the number of individual observations, we obtained 731 unique observations out of a maximum of 820 (82 employees $\times$ 10 days) data

points, which equates to an overall response rate of 89.14% or an average of 8.9 observations per participant.

2.1.3 Measures

2.1.3.1 Trait and state conscientiousness

Trait and state conscientiousness were measured using the 8 conscientiousness items (e. g., organized, efficient, systematic, practical, disorganized, sloppy, inefficient and careless) of Saucier's (1994) Mini-Markers scale. These adjectives were rated on a 9-point scale ranging from 'extremely inapplicable' to 'extremely applicable'. To measure state conscientiousness the instructions were slightly adapted, allowing for a momentary measurement of conscientiousness by adding the prefix "At this moment..." to each item. The Cronbach alpha reliability coefficient for trait conscientiousness equaled .80. To test the reliability of our state conscientiousness measure, we relied on the multilevel confirmatory factor analysis approach of Geldhof, Preacher and Zyphur (2014) because our data have a two-level structure with measurements on the first level and persons on the second level. With this technique, the within-person factor model is separated from the between-person factor model and the omega reliability index is calculated for both of the levels independently using the factor loadings and the residuals from the respective level. This resulted in a within-person omega reliability coefficient of .68 and a between-person omega reliability coefficient of .87. The scale scores for trait and state conscientiousness were calculated by taking the average of the individual item scores.

2.1.3.2 Positive affect

PA was measured using the Positive and Negative Affect Schedule (PANAS) of Watson, Clark and Tellegen (1988). Participants rated to what extent they experienced the positive affective states on that particular day (e. g., attentive, interested, alert, excited, enthusiastic, inspired,

proud, determined, strong, and active) on a 5-point scale, ranging from ‘very slightly or not at all’ to ‘extremely’. The PA scale score was computed by taking the average of the individual item scores. The within-person omega reliability coefficient equaled .57 while the between-person omega reliability coefficient was .96.

2.1.3.3 Negative affect

NA was measured also using the Positive and Negative Affect Schedule (PANAS) of Watson et al., (1988). Participants rated to what extent they experienced the 10 negative affective states on that particular day (e. g., distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, and afraid) on a 5-point scale, ranging from ‘very slightly or not at all’ to ‘extremely’. Again, the scale score was computed by averaging the item score. The omega reliability coefficient for NA equaled .54 at the within-person level and .93 at the between-person level.

2.1.4 Analyses

As our data have a nested, two-level structure with daily measurements on the first level and participants on the second level, all hypotheses were tested using two-level regression analyses in the lme4 package for R (Bates, Maechler, Bolker, & Walker, 2015).

First, we derived an index of trait conscientiousness from the daily conscientiousness scores by averaging per individual the daily conscientiousness scores across days. This index of trait conscientiousness strongly correlated with the trait conscientiousness measure participants filled out at the beginning of the study ($r = .68$; 95% CI [.55, .78]), supporting the idea that the average state conscientiousness score taps into stable, inter-individual differences in conscientiousness (Fleeson, 2001; Rauthmann et al., 2018) ³. Next, the daily

³ Research on state-trait homomorphy, or the degree to which traits and aggregated states measure the same construct, shows that extraversion, conscientiousness and agreeableness show higher and openness and neuroticism show lower levels of trait-state homomorphy (Rauthmann, Horstmann and Sherman 2018).

conscientiousness scores were person-centered in order to adhere to the behavioral concordance model's prediction that positive and negative affect are impacted when one's states deviate from one's trait level. That is, by subtracting the person's average conscientious score (representing the person's level of trait conscientiousness) from each individual observation, the person-centered scores represent the extent to which the individual deviates from his or her trait conscientiousness level on each observation. Following these transformations, our hypotheses were tested with multilevel polynomial regression analysis.

Because the behavioral concordance model predicts that people's positive (respectively negative) affect decreases (respectively increases) when they deviate from their trait level, we not only introduced the person-centered conscientiousness scores (see C_{ij} in formula 1), but also the squared person-centered conscientiousness scores in our regression model (see C_{ij}^2 in formula 1). Introducing the squared person-centered conscientiousness scores allowed testing whether momentary deviations from the trait level relate negatively to PA and positively to NA. That is, in case our hypotheses based on the behavioral concordance model are supported, C_{ij}^2 should be statistically significant and positive for NA and statistically significant and negative for PA.

Moreover, we also introduced the average conscientiousness scores (see C_i in formula 1), the interaction between the average conscientiousness scores and the person-centered conscientiousness scores (see $C_{ij}C_i$ in formula 1), and the interaction between the average conscientiousness scores and the squared person-centered conscientiousness scores (see $C_{ij}^2C_i$ in formula 1). These interactions allow testing whether the relationships implied by the behavioral concordance model do apply across different trait levels.

$$PA_{ij} = \beta_{0j} + \beta_{1j}C_{ij} + \beta_{2j}C_{ij}^2 + \beta_3C_i + \beta_4C_{ij}C_i + \beta_5C_{ij}^2C_i + e_{ij} \quad (1)$$

As can be seen in formula 1, the effect of the person-centered conscientiousness scores might differ across individuals (i.e., β_{1j} has a subscript j). To test whether or not this was the case, we tested if a model with a random slope for the person-centered conscientiousness scores fitted our data significantly better than a model without a random slope for the person-centered conscientiousness scores. To compare these models, we performed a log-likelihood difference test. Statistically significant random effects ($p < .05$) were included in the model while non-significant random slopes were removed (Sieracki, Leon, Miller and Lyons 2008). We also tested whether the effect of the squared person-centered conscientiousness scores varied across individuals. However, including a random slope for the squared person-centered conscientiousness scores led to model non-converge, which is why a random slope for the squared effect was never included in our models. To test for statistical significance, we calculated bootstrap confidence intervals for the multilevel polynomial regression parameters using the `confint.merMod` function in R (using 10,000 bootstrap samples)⁴.

In terms of statistical power, the number of observations at the person- and day-level is in line with the recommendations of recent studies showing that with 30 or more level-2 units cross-level interactions are estimates in an unbiased way (Gonzales-Roma & Hernandez, 2017), and that 50 level-2 units, each having 10 level-1 units usually suffice to detect small cross-level interactions and variance components (LaHuis & Ferguson, 2009).

⁴ Polynomial regression has been shown to be well suited for testing congruence hypotheses (see Humberg, Nestler and Back 2018). Our approach differs from the traditional use of polynomial regression analysis in two important ways. First, in a typical polynomial regression analysis, one models measures from two separate dimensions (e.g., perceived promises and perceived obligations) and/or from two different sources (e.g., a self-view measure and a reputation measure). We instead collected repeated measures on one dimension (i.e., Conscientiousness) from a single source, after which we modelled the between- and the within-person variability in those scores. This approach makes sense from a conceptual point of view because the person's average state Conscientiousness score has been shown to be a good indicator of trait Conscientiousness (Fleeson 2001; Rauthmann et al. 2018), while the person-centered state Conscientiousness scores capture momentary deviations from one's level of trait Conscientiousness (thus representing counterdispositional behavior). By using this approach, we circumvented the issue of high multicollinearity that would have shown up when testing congruence effects using the raw trait and state scores. A second important consequence of our atypical use of polynomial regression is that, unlike in traditional polynomial regression, the congruence effect directly corresponds to one of the parameters in the model, being the quadratic effect for the person-centered Conscientiousness scores.

2.1.5 Results and Discussion

Means, standard deviations, between-person and within-person correlations between conscientiousness, PA and NA are shown in Table 1. Conscientiousness positively related to PA, both at the between-person ($r = .27$; 95% CI [.05, .46]) and within-person level ($r = .36$; 95% CI [.30, .42]). Moreover, conscientiousness related negatively to NA at the within-person level ($r = -.20$; 95% CI [-.27, -.13]), while no between-person relationship was found between conscientiousness and NA ($r = -.04$; 95% CI [-.25, .18]).

Table 1.

Means, standard deviations, within-person correlations (below the diagonal) and between-person correlations (above the diagonal) for all study variables

	<i>M</i>	<i>SD</i>	<i>C</i>	<i>PA</i>	<i>NA</i>
Conscientiousness (C)	6.59	1.07	1	.27*	-.04
Positive Affect (PA)	3.20	.72	.36***	1	-.20
Negative Affect (NA)	1.57	.53	-.20***	-.26***	1

Notes: *** $p < .001$; ** $p < .01$; * $p < .05$

We tested our hypotheses using multilevel polynomial regression analysis (see Table 2 for the full results, including the bootstrapped confidence intervals). For PA, we found that the person-centered conscientiousness scores (Figure 1 shows that the person-centered conscientiousness scores related positively to PA, both for people high and for people low in trait conscientiousness. At the same time, the positive relationship appeared to be an upward concave for people low on trait conscientiousness and downward convex for people high on trait conscientiousness. That is, for people low on trait conscientiousness, increases in PA are associated with behaving more conscientiously than usual, whereas behaving less conscientiously than usual had little to no impact on their PA. On the contrary, people high on trait conscientiousness experienced decreases in PA when they behaved less conscientiously

than normal, while their PA was relatively unaffected when behaving more conscientiously than normal. Together, these findings suggest that higher levels of conscientiousness benefit PA, but that the mechanism underlying this relationship differs for people depending on whether they are high or low in trait conscientiousness. For people low in trait conscientiousness, acting more conscientiously than usual is beneficial for their PA, while for people high in trait conscientiousness, acting less conscientiously than usual depletes their PA.

For NA (see Table 2 for the full results) we found a negative relationship with the person-centered conscientiousness scores ($\beta = -.12$; 95% CI $[-.17, -.06]$). Similar to PA, we failed to support our hypothesis of a relation between NA and the squared person-centered conscientiousness scores ($\beta = .01$; 95% CI $[-.04, .06]$). However—and again similar to our findings for PA—the interaction between trait conscientiousness and the squared person-centered conscientiousness scores approached conventional levels of significance ($\beta = .07$; 90% CI $[-.01, .12]$). We interpreted this interaction using a surface plot relating trait conscientiousness (on the X-axis) and the person-centered conscientiousness scores (on the Y-axis) to NA (on the Z-axis) (see Figure 2). $\beta = .26$; 95% CI $[-.20, .32]$) and the trait conscientiousness scores ($\beta = .27$; 95% CI $[-.15, .39]$) related positively to PA. As opposed to our expectations, we found no statistically significant effect of the squared person-centered conscientiousness scores ($\beta = -.04$; 95% CI $[-.10, .02]$). However, the interaction effect between trait conscientiousness and the squared person-centered conscientiousness scores turned out to be statistically significant ($\beta = -.09$; 95% CI $[-.17, -.01]$). To further interpret this interaction, we examined the surface plot relating trait conscientiousness (on the X-axis) and the person-centered conscientiousness scores (on the Y-axis) to PA (on the Z-axis). Response surface analysis (RSA) and polynomial regression analysis go hand in hand, with RSA concerning the graphical interpretation of the coefficients resulting from the polynomial regression analysis. RSA is often used to help interpret the estimated regression coefficients of a polynomial

regression model, which is otherwise very challenging given the complicated regression equation that includes quadratic and interaction effects (Humberg et al., 2018).

Table 2.

Regression parameters relating trait conscientiousness (C_{TR}) and the person-centered conscientiousness scores (C_{PC}) to positive affect

	estimate	S.E.	95 % CI
Intercept	3.19	.06	[3.08, 3.31]
C_{PC}	.26	.03	[.20, .32]
C_{PC}^2	-.04	.03	[-.10, .02]
C_{TR}	.27	.06	[.15, .39]
$C_{PC}C_{TR}$	-.01	.04	[-.08, .07]
$C_{PC}^2C_{TR}$	-.09	.04	[-.17, -.01]

Figure 1 shows that the person-centered conscientiousness scores related positively to PA, both for people high and for people low in trait conscientiousness. At the same time, the positive relationship appeared to be an upward concave for people low on trait conscientiousness and downward convex for people high on trait conscientiousness. That is, for people low on trait conscientiousness, increases in PA are associated with behaving more conscientiously than usual, whereas behaving less conscientiously than usual had little to no impact on their PA. On the contrary, people high on trait conscientiousness experienced decreases in PA when they behaved less conscientiously than normal, while their PA was relatively unaffected when behaving more conscientiously than normal. Together, these findings suggest that higher levels of conscientiousness benefit PA, but that the mechanism underlying this relationship differs for people depending on whether they are high or low in trait conscientiousness. For people low in trait conscientiousness, acting more conscientiously

than usual is beneficial for their PA, while for people high in trait conscientiousness, acting less conscientiously than usual depletes their PA.

Figure 1.

Surface plot relating trait conscientiousness (on the X-axis) and the person-centered conscientiousness scores (on the Y-axis) to positive affect (on the Z-axis)

For NA (see Table 2 for the full results) we found a negative relationship with the person-centered conscientiousness scores ($\beta = -.12$; 95% CI $[-.17, -.06]$). Similar to PA, we failed to support our hypothesis of a relation between NA and the squared person-centered conscientiousness scores ($\beta = .01$; 95% CI $[-.04, .06]$). However—and again similar to our

findings for PA—, the interaction between trait conscientiousness and the squared person-centered conscientiousness scores approached conventional levels of significance ($\beta = .07$; 90% CI [.01, .12]). We interpreted this interaction using a surface plot relating trait conscientiousness (on the X-axis) and the person-centered conscientiousness scores (on the Y-axis) to NA (on the Z-axis) (see Figure 2). (Table 3.)

Figure 2.

Surface plot relating trait conscientiousness (on the X-axis) and the person-centered conscientiousness scores (on the Y-axis) to negative affect (on the Z-axis)

Table 3.

Regression parameters relating trait conscientiousness (C_{TR}) and the person-centered conscientiousness scores (C_{PC}) to negative affect

	estimate	S.E.	95 % CI
Intercept	1.56	.04	[1.48, 1.64]
C_{PC}	-.12	.03	[-.17, -.06]
C_{PC}^2	.01	.03	[-.04, .06]
C_{TR}	-.07	.05	[-.16, .02]
$C_{PC}C_{TR}$	-.04	.03	[-.11, .02]
$C_{PC}^2C_{TR}$	.07	.03	[-.00, .13]

Figure 2 shows that the person-centered conscientiousness scores related in a negative way to NA, however not for everyone. For people low in trait conscientiousness, within-person fluctuations in conscientiousness were unrelated to the within-person fluctuations in NA. On the other hand, for people high in trait conscientiousness, the relationship between NA and the person-centered conscientiousness scores was negative, which can be seen from the downward convex curve. This means that these people experienced increases in NA especially when they behaved less conscientiously than typically, while behaving more conscientiously than usual had little effect.

Taken together, the majority of our findings are not in line with the behavioral concordance model (Moskowitz & Côté, 1995), nor with a “more is better” principle. First, as opposed to the expectations put forth by the behavioral concordance model, we found that deviations from one’s trait conscientiousness level do not always impact PA and NA. When people high on trait conscientiousness behave more conscientious than usual, this has little effect on their level of PA and NA and the same goes for people low on trait conscientiousness

who behave less conscientiously than normal. Moreover, when people low on trait conscientiousness behave more conscientiously than normal, they experience an increase in PA, which is in direct contradiction to the behavioral concordance model that expects deviations from the trait level to always deplete levels of wellbeing. At the same time, the findings of this study also nuance the idea that higher levels of conscientiousness are always better. That is, people high on trait conscientiousness appear to be particularly sensitive to momentary reductions in their usual levels of conscientiousness, while their wellbeing does not respond to momentary increases of their typical levels. This suggests that for people high in trait conscientiousness, the claim “less is worse” applies, opposed to “more is better”. For people low in trait conscientiousness, “more is better” rather than “less is worse” applies as these people’s PA increases when they behave more conscientiously than usual, whereas they experience little NA when behaving less conscientiously than normally.

Despite its strengths, such as its ability to demonstrate the effects of counterdispositional conscientiousness in a real-life setting, this study is subject to a number of limitations. The most important one is undoubtedly the relatively small number of participants. Moreover, participants were recruited by associates of the researchers, which may have resulted in a fairly homogeneous sample and associated generalizability issues. Whereas the small number of participants is not problematic for the within-person relationships, since they take into consideration not only the number of participants, but also the number of repeated measurements, it might have affected the interaction results. Because of this reason and to replicate the findings of our first study, we performed a second study with a larger, more diverse sample of employees.

3 Study 2: Event Reconstruction Study

3.1 Methods

3.1.1 Participants

502 employees were recruited via Amazon Mechanical Turk (MTurk), which allows sampling a large, vocationally diverse set of participants. Based on the recommendations of Peer, Vosgerau and Acquisti (2014), only participants with a quality approval rating of 95% or higher were allowed to participate in our study. Moreover, we used attention check questions to increase the quality of the data and truthful responding (Woo, Keith and Thornton 2015) as they help safeguard against participants' inattentively responding (i.e., randomly answering) (Peer et al., 2014). For a full review of using MTurk (mturk.com) for data collection, see Brawley and Pury (2016) and Woo et al., (2015).

Of the 502 participants, we filtered out 53 because they failed to pass at least one of the four control questions in which we asked the participants to select a particular response option (e.g., "select moderately"). Of the remaining 449 individuals, 232 (51.7%) were male. The average age of the respondents was 34.73 ($SD = 9.58$) and their average organizational tenure was 5.40 years ($SD = 5.06$), with 1 year being the minimum and 36 years the maximum. Participants were employed in a wide range of sectors, including IT (16.6%), healthcare (11.4%), education (10.8%), sales (9.4%), banking & finance (7.4%), engineering & manufacturing (7.2%), government & non-profit (6.5%), foodservice & hospitality (4.3%) and "Other" (i.e., administration, design, insurance, legal services, etc.) (26.5%).

3.1.2 Procedure

Participants first completed a baseline questionnaire measuring their level of trait conscientiousness, after which they proceeded to an event reconstruction study (Grube, Schroer, Hentzschel, & Hertel, 2008). In this event reconstruction study, participants were asked to recall three different episodes or job experiences from their current place of employment. These

episodes were defined by the level of state conscientiousness that was shown by the participant during the episode. That is, we asked the participants to recall one episode in which they behaved in a low state of conscientiousness, one in which they behaved in a moderate state of conscientiousness and one in a high state of conscientiousness (the order of the episodes was randomized across participants). To aid the recall of these episodes and to minimize memory biases, we each time asked them to describe the task they were working on, when the episode happened and where they were during said episode (see Grube et al., 2008 for guidelines on how to conduct such a study). Each query was then followed by the Positive and Negative Affect Schedule (PANAS), which measured how participants felt during these episodes (i.e., excited, proud, ashamed, nervous, etc.). After completing the event reconstruction study, participants completed a questionnaire assessing demographical variables (i.e., age, gender, organizational tenure, and sector).

3.1.3 Measures

3.1.3.1 Trait conscientiousness

Trait conscientiousness was measured using the 8 conscientiousness items of Saucier's (1994) Mini-Markers scale (i.e., organized, efficient, systematic, practical, disorganized, sloppy, inefficient, and careless). These adjectives were rated on 9-point scale ranging from 'extremely inapplicable' to 'extremely applicable'. The Cronbach alpha reliability coefficient was .85. Scale scores were computed by averaging the item scores.

3.1.3.2 Positive affect

PA was measured using the Positive and Negative Affect Schedule (PANAS) of Watson et al. (1988). More specifically, participants rated to what extent they experienced 10 positive emotions (e. g., attentive, interested, alert, excited, enthusiastic, inspired, proud, determined, strong, and active) on a 5-point scale ranging from 'very slightly or not at all' to 'extremely'.

The omega reliability coefficient for PA equaled .96 at the within-person level and .94 at the between-person level. The PA scale score equaled the average of the PA item scores.

3.1.3.3 Negative affect

NA was measured using the Positive and Negative Affect Schedule (PANAS) of Watson et al. (1988). More specifically, participants rated to what extent they experienced 10 negative emotions (e. g., distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, and afraid) on a 5-point scale, ranging from ‘very slightly or not at all’ to ‘extremely’. The omega reliability coefficient for NA equaled .90 at the within-person level and .96 at the between-person level. The NA scale score was computed by averaging the NA items.

3.1.4 Results and Discussion

Means, standard deviations and correlations between trait conscientiousness and PA and NA are shown in Table 4 for the three conscientiousness episodes (i.e., low, moderate, and high state conscientiousness). Firstly, simple paired samples t-tests showed that, both for PA (all $p < .001$) and NA (all $p < .010$), the differences between the three conscientiousness episodes are all statistically significant. Second, inspection of the means shows that the differences in PA (respectively NA) between the moderate and the low conscientiousness episode are substantially larger than the differences in PA (respectively NA) between the moderate and the high conscientiousness episode (see Table 4). This pattern of findings is also mirrored in the correlation coefficients, which show that the levels of PA (respectively NA) in the high and the moderate conscientiousness episode are more similar than the levels of PA (respectively NA) in the high and the low, or than in the moderate and the low conscientiousness episode. As a set, these findings suggest that, relative to a moderate state of conscientiousness, decreasing

one's level of state conscientiousness more strongly impacts PA and NA than increasing one's level of state conscientiousness.

Table 4.

Means, standard deviations and between-person correlations for all study variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Trait conscientiousness	7.18	1.12						
2. PA (high C condition)	3.84	.78	.31**					
3. PA (moderate C condition)	3.60	.88	.26**	.71**				
4. PA (low C condition)	2.42	1.00	.04	.30**	.45**			
5. NA (high C condition)	1.49	.65	-.28**	-.03	.11*	.29**		
6. NA (moderate C condition)	1.42	.61	-.29**	.00	.08	.27**	.74**	
7. NA (low C condition)	2.07	.83	-.13**	.20**	.23**	.06	.41**	.43**

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; PA = Positive Affect; NA = Negative Affect; C = Conscientiousness

Next, we more systematically tested whether within-person variation in state conscientiousness related to within-person variation in PA and NA and whether this relationship was impacted by one's level of trait conscientiousness. To do so, we conducted two repeated measures ANCOVAs: one for PA and one for NA. In these repeated measures ANCOVAs, the three conscientiousness episodes (low, moderate, and high level of state conscientiousness) served as the repeated categorical independent variable, while the centered trait conscientiousness scores served as the covariate. Note that by centering the trait conscientiousness scores, a conscientiousness value of zero becomes meaningful because it

now represents a trait conscientiousness score equaling the average trait conscientiousness score in our sample.

For PA, the ANCOVA analysis showed that the level of state conscientiousness was related to PA ($F(2,447)=638.71; p < .001$)³. Moreover, PA did relate to trait conscientiousness ($F(1,447)=28.34; p < .001$), and the effect of state conscientiousness on PA differed for people with different levels of trait conscientiousness ($F(2,447)=15.05; p < .001$)⁵. Because of the presence of a statistically significant interaction, we inspected the exact nature of the relationships in Figure 3.

⁵ We used the Greenhouse-Geisser correction to account for non-sphericity in the data.

Figure 3.

Surface plot relating trait conscientiousness (on the X-axis) and the person-centered conscientiousness scores (on the Y-axis) to positive affect (on the Z-axis)

Firstly, Figure 3 shows that PA substantially decreases when one behaves less conscientiously than one normally does. This is true for people low ($-1\ SD$) (from 3.36 to 2.38 (95% CI of mean difference $[-1.10, -.85]$), average (from 3.60 to 2.42 (95% CI of mean difference $[-1.09, -1.27]$), and high ($+1\ SD$) on trait conscientiousness (from 3.84 to 2.46 (95% CI of mean difference $[-1.51, -1.25]$)). These findings also show that behaving less

conscientiously than normal had a stronger negative impact on PA for people high opposed to people low in trait conscientiousness. Secondly, behaving more conscientiously than one normally does leads to a rather small increase in PA. This is again true for people low (from 3.36 to 3.60 (95% CI of mean difference [.15, .32])), average (i.e., from 3.60 to 3.84 (95% CI of mean difference [.18, .30])), and high on trait conscientiousness (from 3.84 to 4.08 (95% CI of mean difference [.16, .33])). The fact that the increase in PA is about equally large for people low, moderate and high on trait conscientiousness suggests that trait conscientiousness did not moderate the effects of behaving more conscientiously than normal.

Similar to PA, both within-person differences in state conscientiousness ($F(2,447)=223.66; p < .001$)³ and between-person differences in trait conscientiousness related to NA ($F(1,447)=32.49; p < .001$). Moreover, and similar to our findings for PA, the impact of state conscientiousness on NA was different for people with different levels of trait conscientiousness ($F(2,447)=3.46; p=.045$)³. Due to the presence of the interaction effect, we again plotted the interaction effect to interpret it further (see Figure 4).

Figure 4.

Surface plot relating trait conscientiousness (on the X-axis) and the person-centered conscientiousness scores (on the Y-axis) to negative affect (on the Z-axis)

Figure 4 shows the exact nature of the relationship between conscientiousness and NA. First, NA increases substantially when going from one's typical level of state conscientiousness to a low level of state conscientiousness. This is true for people low ($-1\ SD$) (from 1.60 to 2.17 (95% CI of mean difference [.47, .67])), average (i.e., from 1.42 to 2.07 (95% CI of mean

difference [.57, .72])), and high (+1 *SD*) on trait conscientiousness (from 1.25 to 1.96 (95% CI of mean difference [.61, .82])). Similar to the findings for PA, these findings also reveal that, when behaving less conscientiously than they typically do, people high in trait conscientiousness experience a stronger increase in NA than people low in trait conscientiousness. Second, going from one's typical to a high level of state conscientiousness had little effect on NA. This was again true for people low (-1 *SD*) (from 1.60 to 1.68 (95% CI of mean difference [.02, .13])), average (from 1.42 to 1.49 (95% CI of mean difference [.03, .11])), and high (+1 *SD*) on trait conscientiousness (from 1.25 to 1.31 (95% CI of mean difference [.01, .13])). The fact that these increases in NA are about equally large for people low, moderate and high on trait conscientiousness suggests that, also for NA, trait conscientiousness did not moderate the effects of behaving more conscientiously than normal.

In summary, the results of our second study showed that deviating from one's typical level of conscientiousness triggers variation in both PA and NA. At the same time, we also found that this was not equally true for all types of deviations. Behaving less conscientiously than one typically does increases NA and decreases PA substantially, while behaving more conscientiously than one typically does had a much smaller effect on PA and NA. Finally, we also found that the effect of behaving less conscientiously was stronger for people high on trait conscientiousness than for people low on trait conscientiousness.

4. General discussion

In the present paper, we challenged the idea that higher levels of conscientiousness are always beneficial for wellbeing. Building on the behavioral concordance model, we hypothesized that conscientiousness-related states that disagree with one's level of trait conscientiousness would result in depleted levels of PA and increased levels of NA. However, contrary to our expectations, we found that not all deviations (e.g., counterdispositional behaviors) from one's

trait level matter. Whereas PA and NA were clearly impacted by negative deviations from the trait level (i.e., behaving less conscientiously than normally), positive deviations (i.e., behaving more conscientiously than normally) had little to no effect. Apart from challenging the behavioral concordance model, these findings also nuance the idea that behaving in a more conscientious way is always better. In fact, the finding that people's levels of PA and NA appear to be particularly sensitive to momentary reductions in their typical level of conscientiousness, implies that "less is worse" rather than "more is better" applies here. While statistically speaking, both phenomena give rise to a similar, positive within-person relationship, psychologically speaking the "less is worse" principle is vastly different from the "more is better" principle.

The finding that behaving less conscientiously than normal has more bearing on PA and NA than behaving more conscientiously than normally is consistent with previous research. For example, Gallagher et al., (2011)—in their study on counterdispositional extraversion—showed that counterdispositional behaviors below one's typical trait level were more effortful than trait-typical behavior, while this was not the case for counterdispositional behaviors above one's typical trait level. In a similar vein, Zelenski et al., (2012) demonstrated that counterdispositional extraversion resulted in poor Stroop performance, but only for extraverts who had to act introverted. One reason for the observed asymmetry might be a *negativity bias*. Negativity bias refers to the phenomenon that negative subjects are more persuasive than positive subjects of the same equivalence (Rozin & Royzman, 2001). In other words, when occurrences of equal measure are negatively valenced, such as receiving criticism, the effect will be greater than that of a positively valenced occurrence, such as receiving praise (Baumeister, Bratslavsky, Finkenauer and Vohs 2001). This is because negative information is processed more thoroughly than positive information (Baumeister et al., 2001), and therefore causing it to become more significant and prevailing (Rozin & Royzman, 2001). As

conscientiousness is highly valued in organizations and society in general, dropping below one's typical level might be perceived as negative and therefore it might carry more weight than going beyond one's typical level of conscientiousness. Moreover, Fleeson, and Wilt, (2010) demonstrated that people experience higher levels of subjective authenticity—being the judgment that one's current actions express one's true self—when they act in a more conscientious manner. Their results thus imply that people should feel less true to themselves when they show counterdispositional behaviors below one's typical trait level but not when showing counterdispositional behaviors above one's typical trait level, and these feelings of authenticity might make such behaviors less effortful and impactful. Finally, Fayard et al. (2012) showed that the asymmetry underlying the “less is worse” principle might actually be an adaptive mechanism in the sense that the feelings of NA associated with failure activate reparative tendencies that lead the individual to re-engage in conscientious behaviors. In other words, the increased NA and decreased PA following lower levels of conscientiousness might stimulate people to again achieve higher levels of conscientiousness.

A second contribution of this study is that it looks at the affective consequences of the *interplay* between personality states and personality traits. Although rich literature exists on the correlates of personality traits, studies on the momentary expression of these traits – referred to as personality states—are less frequent. This is somewhat remarkable since research shows that behaviors, feelings and cognitions vary at least as much within an individual as they vary between individuals (e.g., Fleeson, 2001). This implies that both between-person as well as within-person fluctuations in behaviors, thoughts and feelings should be considered equally in order to facilitate a comprehensive understanding of personality and its effects on wellbeing. In this paper, we explicitly adopt an integrative approach to personality, studying the effects of momentary deviations from one's trait level on PA and NA. By doing so, we contributed to a better understanding of personality and its affective consequences at the workplace.

Interestingly, we found that the integration of states and traits mattered as negative deviations from one's trait conscientiousness level impacted PA and NA to a different extent for people with different trait conscientiousness levels. In particular, people high on trait conscientiousness suffered more from decreases in state conscientiousness below their trait level than people low on trait conscientiousness. Although we did not anticipate this effect based on the behavioral concordance model, it is in line with research on counterdispositional extraversion showing that counterdispositional behavior is perceived as effortful and is associated to cognitive deficits, but only for extraverts and not for introverts (Gallagher et al., 2011; Zelenski et al., 2012). Moreover, it aligns with the observation that people high on trait conscientiousness react more strongly to negative events, such as negative performance feedback (Cianci, Klein & Seijts, 2010) or negative life events (Boyce, Wood & Brown, 2010). Finally, it also corresponds with recent neurobiological research that demonstrated that people high on trait conscientiousness react more strongly to uncontrollable psychosocial stressors than people low trait conscientious (Dahm et al., 2017). Our findings add to the literature by showing that high trait conscientious individuals not only react more strongly to negative external events, but also do so to negative internal ones. One reason for this effect might be that, because conscientiousness is characterized by rigidity of thoughts (Carter et al., 2015), people scoring high on this trait might have more difficulties deviating from their optimal conscientiousness level, especially because for people high on trait conscientiousness, low levels of state conscientiousness are opposite to one's trait and are therefore more salient (Smith, Ryan & Röcke, 2013).

In addition to the findings that replicated across both studies, we also found study-specific results. Whereas we generally found that people reacted more strongly to decreases rather than to increases from their trait conscientiousness level, we found in Study 1 that people low on trait conscientiousness experienced more PA when they behaved more conscientiously than usual, whereas behaving less conscientiously than usual did not impact their PA.

Moreover, these individual's NA showed little reactivity to within-person fluctuations in state conscientiousness. This study-specific finding has two important implications. First, although we failed to replicate the exact relationship between state conscientiousness and wellbeing for people low on trait conscientiousness, the findings from both Study 1 and Study 2—although slightly different—both fail to support the behavioral concordance model. That is, across both studies, the data show that deviations from the trait level do not only necessarily lead to decreases in wellbeing but can even be beneficial. Second, the finding that people react more strongly to decreases than to increases from their trait conscientiousness level was replicated for people high on trait conscientiousness but not for people low on conscientiousness (for whom this pattern of findings was only found in Study 2). In each case, the failure to replicate the relationship between state conscientiousness and PA and NA for people low on trait conscientiousness highlights the need for future research on this topic, especially among people low in trait conscientiousness.

5. Practical Implications

By revealing that people experience decreased levels of wellbeing when they behave less conscientiously than normal, our findings point to promising paths for interventions in the workplace. That is, our findings suggest that in order to nurture employee wellbeing, organizations should try to create conditions that stimulate people to work in an organized, neat and tidy way, and that allow them to think before acting (Jackson et al., 2010). As Minbashian, Wood, and Beckmann (2010) demonstrated, this might be done by assuring that the tasks one is working on have a high enough level of difficulty and urgency. However, two important nuances are in place here. First, Minbashian et al., (2010) demonstrated that there are substantial individual differences to the extent to which one's level of state conscientiousness depends upon the difficulty and urgency of the task, with some people showing strong increases in state

conscientiousness while others showed no reaction or even slight decreases in state conscientiousness. Because increasing difficulty and urgency of the task increases state conscientiousness for some but decreases it for others, offering tasks with a high enough level of difficulty and urgency will not work for everyone. Second, whereas offering tasks with a high level of difficulty and task urgency seems to be a straightforward solution to the problem, this might be challenging in contemporary organizations where, in order to deal with stiffer deadlines, employees are often required to work under increasing time pressure and with tighter deadlines (Kim, Nembhard & Kim, 2016). Such practices might easily lead to extreme levels of time pressure and task urgency, which might come at the expense of employee wellbeing because imposing extensive challenges upon employees will in fact imply that they need to decrease their level of conscientiousness to meet the requirements. In other words, there is probably a (person-specific) optimal level of task urgency and difficulty that, when exceeded, leads to lower rather than higher levels of state conscientiousness (see Hofmans, Debusscher, Dóci, Spanouli, & De Fruyt, 2015 for a similar mechanism regarding work pressure and employee core-self evaluations).

6. Limitations and Future Research Directions

Notwithstanding the contributions of this paper, some limitations should be considered. First in Study 1, participants were recruited by associates of the researchers. This way of recruiting participants may have resulted in rather a homogeneous, unrepresentative sample that potentially limits generalizability of the study results. To address this concern, we recruited a bigger and more heterogeneous sample in our second study. A second limitation is that, although one of the by-products of person-centering the data is that it removes individual differences in response biases from the data (Beal & Weiss, 2003), the sole utilization of self-reported data makes the findings susceptible to common-method bias. However, we do not

believe this to be a major issue in this particular study. First, as Table 1 shows, the correlations between the study variables were small to moderate at best (with some correlations even being nonsignificant), and suggest that common-method variance is not a major issue. Second, our models include both quadratic effects (in Study 1) as well as the interaction effects (Study 1 and Study 2), and it has been shown that quadratic effects and interaction effects cannot be artifacts of common-method variance (Siemsen, Roth and Oliveira 2010). Thirdly, at this point in time, there does not appear to be a better or more practical way to measure variations in state levels of personality and affect other than with self-reported measures. Fourthly, in Study 1, participants received prompts to report their *daily* level of PA and NA while they were asked to rate their *momentary* level of conscientiousness. This difference in temporal framing complicates finding associations between the study variables as, for example, a person may work hard at the moment, however report high NA as a result of an occurrence that happened earlier in the day. In Study 2, we addressed this limitation because, in our event reconstruction study, all measurements pertained to specific events. Finally, although we convincingly showed that fluctuations in state conscientiousness relate to fluctuations in PA and NA in two studies in a real-life setting, this setting does not allow drawing causal conclusions. In fact, one alternative explanation for our findings is that both state conscientiousness and PA and NA were influenced by the nature of the tasks people were working on, rather than state conscientiousness influencing PA and NA. To rule out such alternative explanations, one would need to perform a lab experiment in which one can manipulate task state conscientiousness while measuring PA and NA.

In summary, although our results suggest that the interplay of state and trait conscientiousness is a complex matter, it is important to underscore that there is still much more to learn in regards to the mechanisms that drive the relationship between personality and wellbeing. Linking the two together as we did with these two studies on conscientiousness, PA

and NA is only one step. Future research might develop from this study by examining other Big Five dimensions to investigate if similar findings hold true for other trait domains. This might be particularly relevant for traits that are less valued by society, such as neuroticism. For such traits, the pattern of relationships might be different as for these traits decreases below one's typical level tend to be perceived as positive by one's environment. Thus, for such traits particularly increases beyond one's typical level might relate to increases in PA and increases in NA. Moreover, future research would also benefit from explicitly studying the mechanisms that are at play when people behave in a counterdispositional manner. This can, for example, be done by measuring the extent to which counterdispositional conscientiousness leads to the depletion of self-regulatory resources and hence to lower wellbeing.

7. Conclusion

Our study demonstrates that people showed increased levels of NA and decreased levels of PA when they behaved less conscientiously than they typically do. Acting more conscientiously, however, had little effect on their PA and NA. Moreover, people high on trait conscientiousness suffered more from drops in their level of conscientiousness than people low on trait conscientiousness. Collectively, these results suggest that the conscientiousness-wellbeing relationship can better be described by “less is worse” rather than by “more is better”. By revealing this important dynamic, our findings suggest that the interplay of personality states and personality traits is a complicated issue, with both the trait level and deviations from the trait level being relevant to people's wellbeing.

References

- Barrick, M. R., Mount, M. K., & Strauss, J. P. (1993). Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. *Journal of Applied Psychology, 78*, 715-722. <http://dx.doi.org/10.1037/0021-9010.78.5.715>
- Bates, D., Maechler, M., Bolker, B., & Walker S. (2015). Fitting Linear Mixed-Effects Models Using lme4. *Journal of Statistical Software, 67*(1), 1-48. <http://dx.doi.org/10.18637/jss.v067.i01>
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology, 5*, 323-369. <http://dx.doi.org/10.1037//1089-2680.5.4.323>
- Baumeister, R. F., Gailliot, M., DeWall, C. N., & Oaten, M. (2006). Self-Regulation and personality: How interventions increase regulatory success, and how depletion moderates the effects of traits on behavior. *Journal of Personality, 74*, 1773-1802. <http://dx.doi.org/10.1177/1094428103257361>
- Beal, D. J., & Weiss, H. M. (2003). Methods of ecological momentary assessment in organizational research. *Organizational Research Methods, 6*, 440-464. <http://dx.doi.org/10.1177/1094428103257361>
- Boyce, C. J., Wood, A. M., & Brown, G. D. (2010). The dark side of conscientiousness: Conscientious people experience greater drops in life satisfaction following unemployment. *Journal of Research in Personality, 44*(4), 535-539. <http://dx.doi.org/10.1016/j.jrp.2010.05.001>
- Brawley, A. M., & Pury, C. L. (2016). Work experiences on MTurk: Job satisfaction, turnover, and information sharing. *Computers in Human Behavior, 54*, 531-546. <http://dx.doi.org/10.1016/j.chb.2015.08.031>

- Carter, N. T., Guan, L., Maples, J., Williamson, R., & Miller, J. (2015). The Downsides of extreme conscientiousness for psychological wellbeing: The role of obsessive-compulsive tendencies. *Journal of Personality*, 1-13.
<http://dx.doi.org/10.1016/j.chb.2015.08.0311111/jopy.12177>
- Cianci, A. M., Klein, H. J., & Seijts, G. H. (2010). The effect of negative feedback on tension and subsequent performance: the main and interactive effects of goal content and conscientiousness. *Journal of Applied Psychology*, 95, 618-630.
<http://dx.doi.org/10.1016/j.chb.2015.08.03110.1037/a0019130>
- Dahm, A. S., Schmierer, P., Veer, I. M., Streit, F., Grger, A., Kruschwitz, J., ... & Erk, S. (2017). The burden of conscientiousness? Examining brain activation and cortisol response during social evaluative stress. *Psychoneuroendocrinology*, 78, 48-56.
Retrieved from <http://dx.doi.org/10.1016/j.psyneuen.2017.01.019>
- Debusscher, J., Hofmans, J., & De Fruyt, F. (2016). Do personality states predict momentary task performance? The moderating role of personality variability. *Journal of Occupational and Organizational Psychology*, 52, 330-351.
<http://dx.doi.org/j.chb.2015.08.03110.1111/joop.12126>
- Debusscher, J., Hofmans, J., & De Fruyt, F. (2017). The multiple face (t) s of state conscientiousness: Predicting task performance and organizational citizenship behavior. *Journal of Research in Personality*, 69, 78-85.
<http://dx.doi.org/j.chb.2015.08.03110.1016/j.jrp.2016.06.009>
- DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological bulletin*, 124(2), 197-229.
- DeYoung, C. G. (2015). Cybernetic big five theory. *Journal of Research in Personality*, 56, 33-58. <http://dx.doi.org/10.1016/j.jrp.2014.07.004>

- Diener, E., & Emmons, R. A. (1985). The independence of positive and negative affect. *Journal of Personality and Social Psychology*, 47(5), 1105-1117.
<http://dx.doi.org/10.1037/0022-3514.47.5.1105>
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75.
http://dx.doi.org/10.1207/s15327752jpa4901_13
- Emmons, R. A., & Diener, E. (1985). Personality correlates of subjective well-being. *Personality and Social Psychology Bulletin*, 11(1), 89-97.
- Fayard, J. V., Roberts, B. W., Robins, R. W., & Watson, D. (2012). Uncovering the affective core of conscientiousness: The role of self-conscious emotions. *Journal of Personality*, 80, 1-32. <http://dx.doi.org/10.1111/j.1467-6494.2011.00720.x>
- Fleeson, W. (2001). Toward a structure- and process-integrated view of personality traits as density distributions of states. *Journal of Personality and Social Psychology*, 80, 1011-1027. <http://dx.doi.org/10.1037/0022-3514.80.6.1011>
- Fleeson, W. (2004). Moving personality beyond the person-situation debate the challenge and the opportunity of within-person variability. *Current Directions in Psychological Science*, 13, 83-87. <http://dx.doi.org/10.1111/j.0963.7214.2004.00280.x>
- Fleeson, W., & Wilt, J. (2010). The relevance of Big Five trait content in behavior to subjective authenticity: Do high levels of within) person behavioral variability undermine or enable authenticity achievement? *Journal of Personality*, 78, 1353-1382.
<http://dx.doi.org/10.1111/j.1467-6494.2010.00653.x>
- Gallagher, P., Fleeson, W., & Hoyle, R. H. (2011). A self-regulatory mechanism for personality trait stability: Contra-trait effort. *Social Psychological and Personality Science*, 2, 335-342. <http://dx.doi.org/1948550610390701>

- Geldhof, G. J., Preacher, K. J., & Zyphur, M. J. (2014). Reliability estimation in a multilevel confirmatory factor analysis framework. *Psychological Methods*, 19, 72-91. <http://dx.doi.org/10.1037/a0032138>
- González-Romá, V., & Hernández, A. (2017). Multilevel modeling: Research-based lessons for substantive researchers. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 183–210. <http://dx.doi.org/10.1146/annurev-orgpsych-041015-062407>
- Grube, A., Schroer, J., Hentzschel, C., & Hertel, G. (2008). The event reconstruction method: An efficient measure of experience-based job satisfaction. *Journal of Occupational and Organizational Psychology*, 81, 669-689. <http://dx.doi.org/10.1348/096317907X251578>
- Humberg, S., Nestler, S., & Back, M. D. (2018). Response surface analysis in personality and social psychology: Checklist and clarifications for the case of congruence hypotheses. *Social Psychological and Personality Science*. doi: 10.1177/1948550618757600
- Heller, D., Watson, D., & Ilies, R. (2004). The role of person versus situation in life satisfaction: A critical examination. *Psychological Bulletin*, 130(4), 574-600.
- Hofmans, J., Debusscher, J., Dóci, E., Spanouli, A., & De Fruyt, F. (2015). The curvilinear relationship between work pressure and momentary task performance: the role of state and trait core self-evaluations. *Frontiers in Psychology*, 6, 1680. <http://dx.doi.org/10.3389/fpsyg.2015.01680>
- Humberg, S., Nestler, S., & Back, M. D. (2018). Response Surface Analysis in personality and social psychology: Checklist and clarifications for the case of congruence hypotheses. *Social Psychological and Personality Science*. Advance online publication. <http://dx.doi.org/10.1177/1948550618757600>

- Ilies, R., Wagner, D., Wilson, K., Ceja, L., Johnson, M., DeRue, S., & Ilgen, D. (2017). Flow at work and basic psychological needs: Effects on well-being. *Applied Psychology*, 66, 3-24. <http://dx.doi.org/10.1111/apps.12075>
- Jackson, J. J., Wood, D., Bogg, T., Walton, K. E., Harms, P. D., & Roberts, B. W. (2010). What do conscientious people do? Development and validation of the Behavioral Indicators of Conscientiousness (BIC). *Journal of Research in Personality*, 44, 501-511. <http://dx.doi.org/10.1016/j.jrp.2010.06.005>
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In *Handbook of personality: Theory and research*, 2, 102-138.
- Kim, J. E., Nembhard, D. A., & Kim, J. H. (2016). The effects of group size and task complexity on deadline reactivity. *International Journal of Industrial Ergonomics*, 56, 106-114. Retrieved from <http://dx.doi.org/10.1016/j.ergon.2016.09.011>
- Larson, R. W. (2000). Toward a psychology of positive youth development. *American Psychologist*, 55(1), 170-183. doi: 10.1037//0003-066X.55.1.170
- LaHuis, D. M., Martin, N. R., & Avis, J. M. (2005). Investigating nonlinear conscientiousness-job performance relations for clerical employees. *Human Performance*, 18, 199-212. http://dx.doi.org/10.1207/s15327043hup1803_1
- Leikas, S., & Ilmarinen, V. J. (2016). Happy now, tired later? Extraverted and conscientious behavior are related to immediate mood gains, but to later fatigue. *Journal of Personality* 97, 533-545. <http://dx.doi.org/10.1111/jopy.12264>
- McCrae, R. R., & Costa, P. T., Jr. (1996). Toward a new generation of personality theories: Theoretical contexts for the Five-Factor Model. In J. S. Wiggins (Ed.), *The Five-Factor Model of personality: Theoretical perspectives* (pp. 51–87). New York: Guilford Press.

- McCrae, R. R., & John, O. P. (1998). An introduction to the five-factor model and its applications. *Personality: critical concepts in psychology*, 60, 175-215. Retrieved from: <http://doi.org/10.1111/j.1467-6494.1992.tb00970.x>
- Minbashian, A., Wood, R. E., & Beckmann, N. (2010). Task-contingent conscientiousness as a unit of personality at work. *Journal of Applied Psychology*, 95, 793-806. Retrieved from: <http://dx.doi.org/10.1037/a0020016>
- Moskowitz, D. S., & Côté, S. (1995). Do interpersonal traits predict affect? A comparison of three models. *Journal of Personality and Social Psychology*, 69, 915–924. <http://dx.doi.org/10.1037/0022-3514.69.5.915>
- Ozer, D. J., & Benet-Martinez, V. (2006). Personality and the prediction of consequential outcomes. *Annual Review of Psychology*, 57, 401-421. doi:10.1146/annurev.psych.57.102904.190127
- Peer, E., Vosgerau, J., & Acquisti, A. (2014). Reputation as a sufficient condition for data quality on Amazon Mechanical Turk. *Behavior Research Methods*, 46, 1023-1031. <http://dx.doi.org/10.3758/s13428-013-0434-y>
- Pierce, J. R., & Aguinis, H. (2013). The too-much-of-a-good-thing effect in management. *Journal of Management*, 39, 313-338. <http://dx.doi.org/10.1177/0149206311410060>
- Roberts, B. W., Jackson, J. J., Fayard, J. V., Edmonds, G., & Meints, J. (2009). Conscientiousness. In M.R. Leary & R.H. Hoyle (Eds.), *Handbook of Individual Differences in Social Behavior* (pp. 369-381). New York, USA: Guilford.
- Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review*, 5, 296-320. http://dx.doi.org/10.1207/S15327957PSPR0504_2

- Saucier, G. (1994). Mini-markers: A brief version of Goldberg's unipolar Big-Five markers. *Journal of Personality Assessment*, 63, 506-516. http://dx.doi.org/10.1207/s15327752jpa6303_8
- Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods*, 13, 456-476. <http://dx.doi.org/10.1177/1094428109351241>
- Sieracki, J. H., Leon, S. C., Miller, S. A., & Lyons, J. S. (2008). Individual and provider effects on mental health outcomes in child welfare: A three level growth curve approach. *Children and Youth Services Review*, 30, 800-808. <http://dx.doi.org/10.1016/j.childyouth.2007.12.008>
- Smith, J., Ryan, L. H., & Röcke, C. (2013). The day-to-day effects of conscientiousness on wellbeing. *Research in Human Development*, 10(1), 9-25. <http://dx.doi.org/10.1080/15427609.2013.760257>
- Vergauwe, J., Wille, B., Hofmans, J., Kaiser, R. B., & De Fruyt, F. (2018). The double-edged sword of leader charisma: Understanding the curvilinear relationship between charismatic personality and leader effectiveness. *Journal of Personality and Social Psychology*, 114(1), 110. <http://dx.doi.org/10.1037/pspp0000147>
- Vohs, K. D., Baumeister, R. F., & Ciarocco, N. J. (2005). Self-regulation and self-presentation: regulatory resource depletion impairs impression management and effortful self-presentation depletes regulatory resources. *Journal of Personality and Social Psychology*, 88, 632-657. <http://dx.doi.org/10.1037/0022-3514.88.4.632>
- Watson, D. (2000). Basic problems in positive mood regulation. *Psychological Inquiry*, 11(3), 205-209.

- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070. <http://dx.doi.org/10.1037/0022-3514.54.6.1063>
- Woo, S. E., Keith, M., & Thornton, M. A. (2015). Amazon Mechanical Turk for industrial and organizational psychology: Advantages, challenges, and practical recommendations. *Industrial and Organizational Psychology*, 8, 171-179. <http://dx.doi.org/10.1017/iop.2015.21>
- Wright, T. A. (2010). More than meets the eye: The role of employee well-being in organizational research. In *Oxford Handbook of Positive Psychology and Work*. (p.143-154)
- Zelenski, J. M., Santoro, M. S., & Whelan, D. C. (2012). Would introverts be better off if they acted more like extraverts? Exploring emotional and cognitive consequences of counterdispositional behavior. *Emotion*, 12, 290-303. <http://dx.doi.org/10.1037/a002516>