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The Longitudinal Links of Personality Traits, Values, Well-Being, and Self-Esteem: A Five-Wave Study of a Nationally Representative Sample

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Abstract

The existence of links between personality traits, values, well-being, and self-esteem is well established, but the nature and direction of these links have been less clearly understood. This study examines longitudinally the stability of traits and values, their mutual effects, and their effects on affective and cognitive well-being and self-esteem. We analyzed data from a nationally representative panel in the Netherlands, spanning five time points spread across eight years (n = 5,159 to 7,021 per time point, total N = 11,890). We estimated trait-state-error models and random-intercepts cross-lagged panel models to account for the trait-like, time-invariant stability of the constructs. Traits were more stable than values. The bidirectional effects tended to be significant, but could be distinguished by their relative size. Traits predicted values more strongly than they were predicted by values, and generally predicted well-being and self-esteem more strongly than values did. Traits predicted broad well-being (especially its affective aspects) more strongly than they were predicted by it; values, by contrast, were predicted by well-being (especially its cognitive aspects and self-esteem) more strongly than they predicted it. The findings highlight the central role of traits for personality functioning, while also supporting the mutual constitution of traits and other personality concepts. The results are discussed in the framework of different theoretical approaches to the composition of the broader personality system.

Keywords: personality traits and values; affective and cognitive well-being; self-esteem; stability and predictive power

The Longitudinal Links of Personality Traits, Values, Well-Being, and Self-Esteem: A Five-Wave Study of a Nationally Representative Sample

How are personality traits and values related, and how do they relate to psychological well-being and self-esteem? Although it has been established that these concepts are systematically linked (e.g., Parks-Leduc, Feldman, & Bardi, 2015; Steel, Schmidt, & Shultz, 2008), the nature and direction of these links have remained elusive. Is it possible to assign causal or predictive priority to any of these concepts? Are personality traits or values more stable and stronger in predicting one another? Do they differ in their effects on well-being and self-esteem, and how do these effects come about? These questions are central to understanding the composition of personality, but few direct empirical data exist to address them comprehensively. The present study addresses this gap by examining the interrelations of personality traits, values, well-being, and self-esteem in a nationally representative panel in the Netherlands with data from five time points spanning eight years.

Theoretical Framework

Two broad theoretical perspectives inform the different approaches to the longitudinal relations of personality and values (Bleidorn et al., 2010; Specht et al., 2014). The five-factor theory (FFT: McCrae & Costa, 2008; Mõttus, 2017), on the one hand, places the notion of biologically given personality traits centrally. A distinction is drawn between basic traits and characteristic adaptations, or core and surface personality characteristics (Kandler, Zimmermann, & McAdams, 2014). The basic traits (captured in the Five-Factor Model) are seen as core personality characteristics that are heritable, temporally stable, relatively immune to external influences, and causally prior to surface characteristics. Other aspects of personality, such as values and self-schemata, are seen as surface manifestations of the basic traits. These manifestations, denoted as characteristic adaptations, are jointly influenced by the underlying traits and environmental conditions, and are thus more malleable. The

neosocioanalytic theory (NST: Roberts & Nickel, 2017; Roberts & Wood, 2006), on the other hand, sees traits, values, and affects as elements of personality at the same level of hierarchy, all co-determined by genetic and environmental factors. From this perspective, there is no differentiation between core and surface characteristics; there is no clear causal priority of traits or other aspects of personality; and all characteristics can change in response to environmental demands such as social roles.

Kandler and colleagues (2014) reviewed published studies on the longitudinal stability, causal ordering, heritability, and genetic variance in basic traits, values, attitudes, beliefs, self-schemata, and strivings. Overall, this review argued against a sharp distinction between supposed core and surface characteristics. For example, some attitudes had similar levels of stability as traits, and some of the causal links between traits and the other elements appeared to be reciprocal rather than unidirectional. However, the empirical basis of this review was rather limited. There were only a few studies that directly compared traits to other personality elements in their longitudinal stability and direction of causation, and these studies did not involve values but mostly sociopolitical attitudes. In the following sections, we review several studies that are relevant, firstly, for the stability and causal priority of personality traits and values, and secondly, for their effects on well-being and self-esteem, before introducing the present study.

Personality Traits and Values

Values, representing abstract and enduring concepts about desirable end states and behaviors, constitute an important aspect of the broader system of personality and feature alongside traits both in the FFT and NST perspectives. Similarly to trait models (e.g., McCrae, R. R., Terracciano, A., & 78 Members of the Personality Profiles of Cultures Project, 2005), there is evidence that the underlying structure of values is largely universal (Fischer, 2018; Schwartz, 1992). Personality traits and values have systematic and

meaningful relations, established in two meta-analyses: Openness is negatively related to the higher order value dimension of Conservation and positively to the individual value of Self-Direction; Agreeableness is positively related to the higher order Self-Transcendence and to the individual value of Benevolence; Extraversion is negatively related to higher order Conservation and positively to the individual value of Stimulation; Conscientiousness relates positively to higher order Conservation and to the individual values of Conformity and Security; Neuroticism, capturing variance in emotional and temperamental aspects, is much less strongly related to any value (Fischer & Boer, 2015; Parks-Leduc et al., 2015).

In a further parallel to traits, values are also generally seen as stable constructs (Bardi & Goodwin, 2011). Milfont, Milojev, and Sibley (2016) found three-year retest correlations of value dimensions between .58 and .60. These correlations were lower than retest correlations obtained for traits (e.g., over .70 in Terracciano, Costa, & McCrae, 2006, despite the longer mean retest interval of 10 years); the difference could to an extent be due to differences in the reliability of the measures. Dobewall and Aavik (2016) conducted, to our knowledge, the only study so far to directly compare the longitudinal stability of traits and values. These authors examined the three-year rank-order consistency of personality traits and values in about fifty students and found no significant differences between the stability estimates of traits and values in either self- or other-reports.

How do traits and values influence each other? Two possible mechanisms can be distinguished in value theories (Schwartz, 1992). On the one hand, values motivate action and function as guides for behavior. If a person finds order important, for example, he or she is likely to pursue behaviors such as cleaning or order-preserving activities. A sustained, value-guided shift in behaviors could over time lead to a corresponding shift in trait level. On the other hand, values serve to justify behavior. A person who frequently engages in order-preserving behaviors, for example, is likely to justify this by emphasizing the importance of

order. The relative strength of these two functions can inform theory. While NST predicts no systematic difference in the longitudinal effects of traits and values, FFT predicts stronger effects of traits on values, which would imply that values serve more to justify than to guide behavior. A few studies offer indirect indications on the potential causal ordering of personality and values. Lüdtke, Trautwein, and Husemann (2009) found some small effects (mostly in the range of .05 to .10) of personality traits on life goals in students across two years, but almost no effects in the opposite direction. Differently from the conceptualization of values as global and trans-situational life goals (Schwartz, 1992), the life goals examined in this study were more concrete personal strivings including intrinsic (e.g., learning new things and having committed relationships) and extrinsic (e.g., being famous and rich) goals. In a behavior genetic study on an adult sample using two measurement points about six years apart, Bleidorn et al. (2010) found that traits had higher heritability than the two broad life goals of agency and communion, but the life goals also had some unique heritability variance independent of traits. Furthermore, traits as well as agency and communion had significant although small (around .10) mutual, genetically mediated effects, suggesting the interplay of traits and life goals over time. Finally, Huuskes, Ciarrochi, and Heaven (2013) found small (around .10) effects of religiosity values on Agreeableness and Psychoticism, but no effects in the opposite direction, in high-school students assessed across two years.

Although the reviewed studies provided interesting insights, they have several limitations. The only study that directly compared comprehensive models of traits and values (Dobewall & Aavik, 2016) had a small sample size, reducing power to detect differences. Observations have usually been drawn from only two measurement points, typically two to three years apart, which may reduce the long-term generalizability of the effects. Finally, with the exception of Dobewall and Aavik, the rest of the studies examined various concepts related to values, but did not examine values directly and comprehensively. As a result, the

empirical basis for broader generalizations on the stability and relative predictive power of personality traits and values is rather limited. It is fair to conclude that there has been no direct, comprehensive comparison of the long-term longitudinal stability of traits and values, and no assessment of their relative causal ordering. This has been repeatedly recognized as a major gap in the literature (Kandler et al., 2014; Roberts, Wood, & Caspi, 2008) and is addressed in the present study.

Traits' and Values' Relations to Well-Being and Self-Esteem

An important way to distinguish the position of personality traits and values in the broader personality system is by examining their predictive effects on other elements of that system, such as well-being and self-esteem. Traits, values, well-being, and self-esteem are interrelated components of personality that all exhibit some heritability, stability, and predictive validity (Kandler et al., 2014). Both traits and values are usually seen as predictors of well-being (Sortheix, & Schwartz, 2017; Steel et al., 2008). The different theoretical perspectives assign different causal roles to these personality components. According to FFT, the ultimate source for the covariation in personality components is found in the basic traits. Traits are thus expected to contribute most strongly to the variability in well-being and self-esteem. In NST, on the other hand, no assumption is made about causal priorities, so the mutual effects between traits, values, well-being, and self-esteem can in principle be expected to be similarly strong. Despite the theoretical relevance of comparisons of the predictive power of traits and values, research on the effects of traits and the effects of values has developed largely independent traditions, which we summarize in the following paragraphs.

Trait effects. The associations of personality traits with well-being have been extensively documented. A meta-analysis indicated that 18% to 39% of variance in different well-being aspects can be attributed to the traits of the Big Five model (Steel et al., 2008). The reciprocal relations of traits and well-being have also been examined. Soto (2015), for

example, described several potential mechanisms that could lead to trait–well-being links in both directions. Traits could lead to a change in well-being both directly (e.g., extravert people respond more strongly to positive events) and indirectly through behavior (e.g., extravert people engage in more social interaction, which generates opportunities for inherently rewarding experiences). Well-being, in turn, can also affect personality traits through affecting behavior patterns, for example, by freeing up resources for exploratory behavior or by reinforcing behaviors that lead to increases in well-being. Soto assessed the mutual longitudinal relations of traits and well-being in a representative sample in Australia and found that the effects went in both directions, but the effects of traits on well-being were stronger. Kandler, Kornadt, Hagemeyer, and Neyer (2015), on the other hand, found only longitudinal effects of traits on well-being (not the other way around) in a study of older individuals (64 to 89 years old). Kandler et al. attributed their finding to the use of a state-like measure of well-being, as opposed to more trait-like measures used in other studies.

Self-esteem has been found to correlate with both personality traits and well-being (Gebauer et al., 2015; Marsh, Trautwein, Lüdtke, Köller, & Baumert, 2006; Robins, Tracy, & Trzesniewski, 2001). However, most reported associations are cross-sectional. While a fair amount of evidence has been built up for self-esteem's predictive power for life outcomes (Orth & Robins, 2014), the mutual predictive links of personality traits and self-esteem have received less attention.

Value effects. In contrast to traits, where both direct and indirect effects may be operating, values' associations with well-being may primarily be due to indirect effects, where pursuing behaviors in line with one's values promotes well-being.[1] A distinction is often drawn between "healthy," growth values such as self-direction and benevolence, on the

[1] Another type of indirect effect refers to person–environment fit, where values are associated with well-being when they are in line with normative values in a group (Sagiv & Schwartz, 2000). There is no established model for person–environment fit analyses in longitudinal data, so we do not consider person–environment fit in the present study.

one hand, and "unhealthy," deficiency values such as conformity and power, on the other (Sagiv & Schwartz, 2000; Sortheix & Schwartz, 2017). The "healthy" values are expected to correlate positively, and the "unhealthy" values negatively with well-being. While the findings on the "healthy" values have been consistently in line with predictions, those on the "unhealthy" values have been more varied. Sortheix and Schwartz (2017) found positive correlations of Openness values and negative correlations of Conservation values with well-being across 32 countries; however, these correlations were moderated by the country's egalitarianism, so that Conservation values had a positive association with well-being in more egalitarian countries. Power was the only value consistently negatively correlated with well-being (Sortheix & Schwartz, 2017). Finally, it is conceivable that, just as with traits, values' links with well-being are bidirectional, and well-being may strengthen existing values. The directionality of these effects has not been examined previously.

Values' links with self-esteem have been less explored than those of traits. Lönnqvist et al. (2009) found that self-esteem correlated positively with most values, especially self-enhancement values (e.g., achievement and hedonism), but negatively with universalism and tradition across five European countries. Feather (1991), on the other hand, found only positive correlations of various values with self-esteem in Australian samples. As with well-being, it is not known yet to what extent self-esteem affects values or is affected by them across time.

Traits' and values' associations with well-being have usually been studied separately. Haslam, Whelan, and Bastian's (2009) cross-sectional study of a student sample in Australia is one of the few exceptions. Traits in that study were generally more strongly correlated with well-being, although six of the 10 studied values had correlations with positive affect in the same range as those of Neuroticism, Conscientiousness, and Agreeableness (.20 to .40). No

study to date has directly compared the longitudinal effects of traits and values on well-being or self-esteem.[2]

Aspects of well-being, and self-esteem. Well-being research differentiates between affective and cognitive aspects of well-being (Diener, 1984; Schimmack, Schupp, & Wagner, 2008). Affective well-being reflects the balance of positive and negative affects, and cognitive well-being reflects cognitive evaluations of one's life. Both personality and value studies have independently demonstrated the distinct nature of affective and cognitive well-being. For example, cultural factors moderate the effects of traits (Schimmack, Radhakrishnan, Oishi, Dzokoto, & Ahadi, 2002) as well as values (Sortheix & Schwartz, 2017) on cognitive well-being more than those on affective well-being, suggesting that affective well-being may have a stronger biological basis and be less susceptible to external influences.

Where does self-esteem fit in the distinction between affective and cognitive aspects? On the one hand, self-esteem is substantially correlated with Neuroticism, pointing to overlap in affective content (e.g., Marsh et al., 2006). On the other hand, self-esteem shares an element of cognitive evaluation with life satisfaction (Lucas, Diener, & Suh, 1996), evident in some of the items used to measure the two constructs (e.g., "I am satisfied with my life" from the Satisfaction With Life Scale [Diener, Emmons, Larsen, & Griffin, 1985] and "On the whole, I am satisfied with myself" from Rosenberg's [1965] Self-Esteem Scale). In a meta-analysis, Judge, Erez, Bono, and Thoresen (2002) found that life satisfaction was more strongly associated with self-esteem than with Neuroticism. In that meta-analysis, self-esteem had a higher correlation with happiness (.51) than with life satisfaction (.35); yet, the same pattern was found for the cognitive constructs of locus of control and self-efficacy. In conclusion, self-esteem may include both affective and cognitive elements and is thus worth

[2] Dobewall and Aavik (2016) examined the effects of profile consistency of traits and values across two time points on well-being, and found no systematic differences. Profile consistency represents an alternative approach to personality assessment, which is beyond the scope of the present study.

examining in parallel to purer affective and cognitive measures of well-being. For the purposes of the present study, the common element of the well-being aspects and self-esteem is *feeling well*: in general (positive and negative affect), about one's life (life satisfaction), and about oneself (self-esteem). To simplify the presentation, we alternatively refer further to well-being and self-esteem jointly as *broad well-being*.[3]

In summary, despite the accumulated evidence on the links of personality and values with well-being and self-esteem, there are some important lacunae in this body of research. First, there has been no direct comparison of the long-term effects of traits and values on well-being and self-esteem. Second, the notion of mutual longitudinal effects between personality and well-being (Soto, 2015) has not been extended to values or self-esteem. Finally, no study to date has assessed the relative contribution of traits and values to the affective and cognitive aspects of well-being. The present study aims to fill these gaps.

Study Overview

The present study aims to elucidate the relative position of personality traits and values, as well as their links with well-being and self-esteem, within the broader system of personality concepts. Using longitudinal data from five measurement points spanning eight years in a nationally representative panel, we examine four questions that are fundamental to understanding the constitution of personality but which have not been addressed as directly and systematically in previous research.

Research Question 1: Are personality traits or values more stable across time?

FFT would predict higher stability of traits, and NST would predict no systematic differences. The only, probably underpowered, study to compare the stability of traits and values found no differences (Dobewall & Aavik, 2016), but the only other study to estimate

[3] An alternative umbrella term is *self-schemata* (Kandler et al., 2014). We abstain from this term to avoid overlap with other aspects of the self-concept, such as independent/interdependent self-construal, which may be less directly related to well-being.

value stability found somewhat lower estimates than typically found for traits (Milfont et al., 2016). So, the relative stability of the two domains has remained an open question.

Research Question 2: Do traits have stronger predictive effects on values, or values on traits?

FFT would predict stronger effects of traits and weaker or no effects of values, whereas NST would predict no systematic differences. Findings from research on life goals (Bleidorn et al., 2010; Lüdtke et al., 2009) suggest that stronger effects of traits can be expected.

Research Question 3: Do traits or values have stronger effects on broad well-being?

In FFT, traits are the primary source of covariation of the different elements of the personality system, so they can be expected to be a stronger predictor of well-being and self-esteem than values; NST, by contrast, would predict no systematic differences. Both traits and values correlate with broad well-being, and cross-sectional data suggest that traits may play a stronger role (Haslam et al., 2009). Longitudinal effects have remained an open question.

Research Question 4: Is there a pattern of differential relative predictive strength in the bidirectional effects of traits-and-broad-well-being compared to values-and-broad-well-being?

This question subsumes two subquestions:

Research Question 4a: In the bidirectional longitudinal effects of traits and broad well-being, in which direction are the effects stronger?

Research Question 4b: In the bidirectional longitudinal effects of values and broad well-being, in which direction are the effects stronger?

The presence of any bidirectional effects involving traits would be more supportive of NST than of FFT. However, the relative strength of the effects is also informative. If the

effects of traits on broad well-being are stronger than the other way around (as suggested by Kandler et al., 2015, and Soto, 2015), and if this difference is larger than the corresponding difference in values' effects, this would be more in line with FFT than with NST, because NST suggests no systematic differences.

We examine Questions 3 and 4 with respect to positive and negative affects, life satisfaction, and self-esteem, which allows us to distinguish any differential patterns for affective and cognitive aspects of well-being.

Method

According to Victoria University of Wellington's human ethics policy, research involving publicly available data, as in the present study, does not require ethical approval.

Sample and Procedure

We used data from the Longitudinal Internet Studies for the Social Sciences (LISS) panel administered by CentERdata at Tilburg University, the Netherlands. The LISS panel is a representative sample of Dutch individuals who participate in monthly internet surveys. The panel is based on a true probability sample of households drawn from the population register by Statistics Netherlands. Households that could not otherwise participate are provided with a computer and internet connection. A longitudinal survey is fielded in the panel every year, covering many domains.[4]

[4] Different studies have used data from the LISS panel that partially overlap with the present data. We are aware of the following publications: (1) He and Van de Vijver (2015) examined the links between the general factors of personality and values, on the one hand, and response styles, on the other hand; (2) Hounkpatin, Boyce, Dunn, and Wood (in press) compared different statistical models to examine the longitudinal associations of personality and life satisfaction; (3) Schwaba and Bleidorn (in press a) examined individual differences in personality change in 14 age groups; (4) Schwaba and Bleidorn (in press b) assessed development in personality traits in the five years before and after retirement; (5) Schwaba, Luhmann, Denissen, Chung, and Bleidorn (in press) analyzed the life-span development of Openness to Experience and its associations with cultural activities. The present study has some overlap in content with Hounkpatin et al.'s study. Hounkpatin et al.'s analysis of the links of personality and life satisfaction (especially the bivariate autoregressive model, Figure 3) is similar to the analysis of personality and life satisfaction in the present study (Figure 4). However, there are substantial differences between the two studies. First, the present study has a stronger focus on substantive questions, as compared to Hounkpatin et al.'s stronger focus on methodological questions. Second, the present study addresses a substantively different and broader question: the conceptual and empirical interrelations of personality traits, values, and broad well-being. As a consequence, our analysis of personality traits and life satisfaction is part of an extensive set of analyses that include traits, values, and four aspects of broad well-

We used eight waves of data collected from 2008 to 2015. Measures of the same constructs including personality traits, values, affects, life satisfaction, and self-esteem were administered in May of each year. Each year, over 8,000 selected household members were invited to participate. The number of respondents ranged from 5,159 (in 2013) to 6,784 (2008), and the response rates ranged from 70% (in 2009) to 91% (in 2013). In 2010, 2012, and 2015, the complete questionnaire was only administered to non-respondents of the previous year. We hence used data from 2008 as T1; combined data from 2009 and 2010 as T2; 2011 and 2012 as T3; 2013 as T4; and 2014 and 2015 as T5. The demographics of respondents in the consolidated five time points are presented in the upper panel of Table 1.

Respondents who participated at all five time points (n = 3,912) did not differ in gender distribution from those who took part at fewer time points, $\chi^2(1, N = 11{,}890) = 0.29$, *ns*. Those who participated at all time points were slightly older (M = 50.54 years, SD = 17.94) than the partial participants (M = 49.70, SD = 18.00), $F(1, 11{,}888) = 5.72$, $p < .05$, $\eta^2 = .00$. The education level also differed slightly (LR[4, N = 11,890] = 12.33, $p < .05$), but not in a linear fashion; both the "no completed education" (0.1%, standardized residual = –2) and the "university level of education" category (14.3%, standardized residual = –1.57) were somewhat underrepresented in the group of all-wave participants compared with the partial participants (where the two categories had 0.4% and 15.8%, with standardized residuals of 1.40 and 1.10, respectively). To handle the missing data across waves, we used full-information maximum likelihood in our model estimation (Schafer & Graham, 2002), which gave us a total sample size of 11,890.

Measures

being: positive affect, negative affect, life satisfaction, and self-esteem. Finally, the present study uses a different statistical model to estimate cross-lagged effects, the random-intercepts cross-lagged panel model, described in detail in the Analysis Outline subsection.

All instruments were administered in Dutch. We used two parcels for each construct. The Spearman-Brown (split-half) reliability indices per time point are presented in the lower panel of Table 1.

Personality traits. The Big Five model was assessed using 50 items of the International Personality Item Pool (IPIP), where each of the five domains is measured by 10 items (Goldberg et al., 2006). The response scale ranged from 1 (*very inaccurate*) to 5 (*very accurate*). Positively and negatively worded items were assigned to separate parcels per trait.

Values. A rating-format version of the Rokeach Value Survey (RVS), including 18 instrumental values (referring to preferred modes of behavior) and 18 terminal values (referring to desirable end-states of existence; Rokeach, 1973) was administered. The response scale ranged from 1 (*extremely unimportant*) to 7 (*extremely important*). Schwartz and Bilsky (1990) identified a quasi-universal structure of RVS items in seven countries, and we used this structure as a guide for value assignment (similarly to Kasser, Koestner, & Lekes, 2002). Specifically, we assigned the individual items (e.g., helpful) to values (e.g., Prosocial) based on their location in the majority of countries in Schwartz and Bilsky (1990), with ties decided based on the theoretical expectations in that study. We assigned the items (listed in Table S1) to seven values (with number of items and one example): Prosocial (8, helpful), Restrictive Conformity (4, self-controlled), Enjoyment (4, pleasure), Self-Direction (6, creative), Maturity (5, mature love), Security (4, national security), and Achievement (5, a sense of accomplishment). The advantage of this a priori assignment is that it allows a formally direct comparison of our results with other studies that use a structure derived from Schwartz and Bilsky's (1990) structure. The disadvantage is that the empirical applicability of this imposed structure to the data is only partial.[5] Items were assigned to parcels quasi-

[5] We also conducted all analyses reported in the present study with an alternative value structure, derived empirically from factor analysis (cf. Feather, 1991). This empirical structure differed from the a priori structure in that there was no Achievement value, there was a Stimulation rather than an Enjoyment value, and the content of the other values overlapped only partially between the two structures. The cross-model correlations

randomly (based on odd and even numbers) except for the Prosocial value, where items loading on different empirical factors (see Footnote 5) were distributed equally between the two parcels. In line with Schwartz and Bilsky (1990) and Kasser et al. (2002), we used raw rather than ipsatized item scores.

Well-being and self-esteem. We examined positive and negative affects as indicators of affective well-being, life satisfaction as an indicator of cognitive well-being, and self-esteem. Positive and negative affects were measured with the 20-item Positive and Negative Affect Scale (PANAS, Watson, Clark, & Tellegen, 1988). Items were introduced with the question, "Indicate to what extent you feel, right now, that is, at the present moment…", and response options ranged from 1 (*not at all*) to 7 (*extremely*). The item "excited" had ambiguous loadings on both the positive and the negative affect dimensions, possibly owing to cultural specificities of the translated term, and was excluded from the analyses. Life satisfaction was measured with the 5-item Satisfaction With Life Scale (SWLS, Diener et al., 1985), with response options from 1 (*totally disagree*) to 7 (*totally agree*). Self-esteem was assessed with the 10-item Rosenberg Self-Esteem Scale (RSE, Rosenberg, 1965), with response options from 1 (*totally disagree*) to 7 (*totally agree*). The odd- and even-numbered items of the PANAS and the SWLS, and the positively and negatively worded items of the RSE were assigned to separate parcels, respectively.

Analysis Outline

To assess the longitudinal stability of traits and values, we used the univariate trait-state-error model (Kenny & Zautra, 1995). To assess cross-lagged effects, we used an adaptation of the multivariate trait-state-error model and the random-intercepts cross-lagged

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between the corresponding values ranged from .66 (Enjoyment and Stimulation) to .96 (Restrictive Conformity), with a mean of .86. There was one main instance where the results with the empirically derived value structure were more intuitive than those with the a priori assignment: See Footnote 7. The results from this parallel set of analyses with respect to the research questions (trait and value stability, mutual predictive effects, and predictive effects for well-being and self-esteem) were essentially the same, and the conclusions were identical.

panel model (RI-CLPM; Hamaker, Kuiper, & Grasman, 2015). Specifically, our cross-lagged models had the basic structure of the RI-CLPM; in addition, each construct at each time point had a measurement part (i.e., a latent factor measured with two parcels). This approach is more appropriate than the conventional cross-lagged panel model (CLPM) in two ways. First, the measurement part of the model accounts for the measurement errors of the constructs, reducing the possibility that results may be affected by the reliability of the measures. Second, the autoregressions in CLPM, meant to express the stability of the same construct over time, may be inadequate if the construct has a trait-like, time-invariant stability, where every person varies over time around the same group means. This can lead to erroneous conclusions on the presence, direction, and significance of causal effects (Hamaker et al., 2015). The random intercepts in RI-CLPMs account for the trait-like, time-invariant stability through the inclusion of a global factor extracted from the same construct across time points and with all loadings constrained to one. Between-person variance in RI-CLPMs is partialled out in the random intercepts, and subsequently the lagged relationships target only within-person dynamics. Personality traits, values, well-being, and self-esteem are all assumed to be trait-like underlying constructs with stable individual differences, where the stability within each domain should be accounted for. In sum, modeling the measurement part of each construct and the random intercepts affords a more accurate assessment of the longitudinal associations between the trait-like constructs of the present study. In order to avoid multicollinearity problems, and because our focus was on the cross-lagged effects rather than partitioning variance to traits versus states, we did not correlate the time-invariant factors of traits, values, and broad well-being, but we allowed correlations between the error terms of their respective time-specific latent factors.

The model types that we estimated are depicted in Figures 1 to 4. The model in Figure 1 provides factor loadings, denoted as coefficients *a*, of each time-specific latent factor on the

time-invariant latent factor. We refer to these loadings as stability coefficients: Squaring these coefficients gives the amount of variance in the time-specific latent factor attributable to the time-invariant latent factor (e.g., Prenoveau, 2016). The stability coefficients thus represent the long-term stability of personality traits and values (Research Question 1). The model in Figure 2 estimates the mutual effects (cross-lagged effects, coefficients *b* and *c*) of personality traits and values (Research Question 2). The model in Figure 3 estimates the relative effects (cross-lagged effects, coefficients *d* and *f*) of traits and values on well-being and self-esteem (Research Question 3). Although the model in Figure 3 also provides estimates of the relative mutual effects of traits-and-well-being as well as values-and-well-being, we chose to estimate these effects in separate models for traits and for values (Figure 4, coefficients *g* and *h*; Research Question 4). There were three reasons for this choice. First, mutual longitudinal effects with well-being have so far only been studied for personality traits (Kandler et al., 2015; Soto, 2015), so it is informative to examine similar effects for values separately, as a baseline for comparisons. Second, in separate models, the effects of traits are not conditional on those of values (and vice versa), so these separate models represent the most frequent condition in which effects on well-being are studied; at the same time, the parallel study of conditional and unconditional effects allows the identification of suppression effects. Third, the separate models allow us to assess the mean effects across both matched and non-matched traits and values (matching is described in the Baseline Correlations subsection of the Results).

In the analyses of bivariate and trivariate models, each model was estimated separately for matched pairs of traits and values (except for the separate trait and value models of Figure 4), and for each of the four broad well-being aspects, where applicable. For example, the model in Figure 2 encompasses separate models for each of the four trait–value

pairs described in the Baseline Correlations subsection of the Results section and each of the four broad well-being aspects.

We estimated all models in AMOS (Arbuckle, 2014) and evaluated model fit using the comparative fit index (CFI, with values above .90 taken as acceptable and above .95 as good) and root mean square error of approximation (RMSEA, with guideline values of .08 and .06, respectively; Bentler, 1990; Browne & Cudeck, 1993). We present the results on the research questions by listing the means and standard deviations of the effects across the five time points. For example, to assess the effect of a trait on a value in the model of Figure 2, we present the mean and standard deviation of the four cross-lagged effects linking the five time points. The advantage of assessing effects in this way, rather than using only two points or setting equality constraints across lags, is the enhanced generalizability, along with estimates of variability, of the effects derived from multiple time points.

Given the large number of models and estimates, we present summarized information in the main body of the text and tables. In an online supplement, we present the assignment of items to values (Table S1); the means and standard deviations of all parcels (Table S2); and the complete fit (Table S3) and parameter statistics (Tables S4 to S8) for all models.

Results

Personality Traits and Values

Stability. The univariate stability models of the five traits and seven values all had CFIs of 1 and RMSEAs of .04 or lower, supporting the fit of the models (see Table S3 for details).

The standardized stability estimates averaged across the five time points (Figure 1's coefficients *a*) are presented in the left panel of Table 2 (for the individual estimates at each time point, see Table S4). The stability coefficients were consistently higher for traits (M = .86, SD = .03) than for values (M = .72, SD = .01). When converted into variance explained,

these coefficients indicate that, on average, 74% ($.86^2$) of the variance in the time-specific latent factors of traits was attributable to the time-invariant factors, whereas the corresponding variance in values was 52% ($.72^2$). In response to Research Question 1, traits displayed higher long-term stability than values.

Baseline correlations. To match personality traits and values, we analyzed their correlations at T1.[6] Agreeableness correlated with Prosocial at .38 ($p < .001$) and with the other values between .08 and .29 ($M = .18$). Conscientiousness correlated with Restrictive Conformity at .39 ($p < .001$) and with the other values between .13 and .26 ($M = .19$). Extraversion correlated with Enjoyment at .22 ($p < .001$) and with the other values between .03 and .19 ($M = .13$). Openness correlated with Self-Direction at .27 ($p < .001$) and with the other values between –.09 and .14 (mean of absolute values = .06). Neuroticism's correlations with values ranged from –.01 to –.10, with a mean of –.05. These correlations were in line with the previous literature on personality and values (Fischer & Boer, 2015; Parks-Leduc et al., 2015). We hence matched Agreeableness with Prosocial, Conscientiousness with Restrictive Conformity, Extraversion with Enjoyment, and Openness with Self-Direction for direct comparisons. Neuroticism and the values of Maturity, Security, and Achievement were not part of matched pairs, but were examined separately in the univariate stability models (Figure 1) and the bidirectional models with well-being and self-esteem (Figure 4).

Bidirectional effects. The four cross-lagged models of matched traits and values (Figure 2) had CFIs of .97 or higher and RMSEAs of .05 or lower, supporting the fit of the models (see Table S3 for details).

The mean cross-lagged effects of traits and values (Figure 2's coefficients *b* and *c*) are presented in the right panel of Table 2 (for the individual cross-lags, see Table S5). There

[6] The obtained patterns were consistent across time points.

were significant and sizable effects in both directions. The differences in cross-lagged effects between traits and values were more pronounced than the differences in stability. The mean effects of traits on values were nearly thrice as large as those of values on traits. To formally assess the effect size difference, we used a Wilcoxon test, entering the estimates of all four trait–value pairs for all four cross-lags. The value of the Wilcoxon test was –3.52, $p < .001$. In response to Research Question 2, traits had stronger predictive effects on values than values on traits.

Traits, Values, Well-Being, and Self-Esteem

Effects of trait–value pairs on broad well-being. There were 16 models estimating the relative effects of traits and values on broad well-being (four individual trait–value pairs by four broad well-being aspects). With the exception of the model for Openness, Self-Direction, and self-esteem (CFI = .91), CFIs were at .96 and higher; RMSEAs were .04 or lower (see Table S3 for details). These indices supported the model fit.

The mean cross-lagged effects of the matched trait–value pairs on the four broad well-being aspects (Figure 3's coefficients *d* and *f*) are presented in Table 3 (for the individual cross-lags, see Table S6). Both traits and values had significant effects on broad well-being, but the effects were most consistent for traits. The Prosocial and Self-Direction values had stronger effects on positive affect than the corresponding traits of Agreeableness and Openness. In all other comparisons, traits had stronger mean effects than values. Somewhat counterintuitively, the Prosocial and Conformity values had a positive effect on both positive and negative affect.[7] The distinction of broad well-being aspects showed a complex pattern. Traits had sizable effects on all four aspects of broad well-being, whereas values had most noted effects on positive affect. We compared the size of the effects of traits and values using separate Wilcoxon tests per broad well-being aspect, entering the estimates of all four trait–

[7] In this instance, the empirically derived Prosocial value (also defined by 8 items, four of which overlapped with the Schwartz & Bilsky [1990] assignment; see Footnote 5) had a more intuitive pattern, with mean effects of .08 on positive affect, –.02 on negative affect, and .02 on both life satisfaction and self-esteem.

value pairs for all four cross-lags. The tests (displayed at the bottom of Table 3) were significant at .01 or lower for negative affect, life satisfaction, and self-esteem. In response to Research Question 3, on average traits and values had similar effects on positive affect, but traits had stronger effects on the other aspects of well-being and on self-esteem.

Traits' and values' bidirectional effects with broad well-being. For traits, there were 20 models on the bidirectional effects with well-being (five traits by four broad well-being aspects). For values, there were 28 models (seven values by four broad well-being aspects). The model for Neuroticism and self-esteem was statistically nonadmissible due to negative covariances among error components, even after fixing all variances of the error components of the two parcels of each time-specific latent factor to be identical, so we report results from a model using observed scores instead (CFI = .97, RMSEA = .08). (For the model specification, see Figure S1. Neuroticism had Cronbach's alpha across the five time points from .87 to .89, and self-esteem, from .89 to .90. Disregarding this model would not affect the overall conclusions.) The models for the other four traits had CFIs of .98 or higher and RMSEAs of .04 or lower. The models for values had CFIs of .98 or higher and RMSEAs of .03 or lower. (See Table S3 for details.) These indices supported model fit for both groups of models.

The mean bidirectional effects of personality traits and broad well-being are presented in Table 4, and those of values and broad well-being, in Table 5; both correspond to Figure 4's coefficients *g* and *h*, with either traits or values represented by coefficients *g*. (For the individual cross-lags of traits and broad well-being, see Table S7; for values and broad well-being, see Table S8.) For traits, it was consistently the case that the mean trait → broad well-being effects were stronger than the corresponding broad well-being → trait effects, with the exception of Openness, which had more balanced mutual links with positive affect, life satisfaction, and self-esteem. We computed Wilcoxon tests per broad well-being aspect,

entering the estimates for all five traits across all four cross-lags. The Wilcoxon tests (bottom of Table 4) were significant at .01 or lower for all broad well-being aspects. The differences between the absolute values of the trait → broad well-being effects and the broad well-being → trait effects were positive (Difference row of Table 4), indicating that overall, personality traits had a stronger effect on broad well-being than the other way around (Research Question 4a).

The general pattern for values was the opposite of that for traits. That is, the mean value → broad well-being effects tended to be smaller than the corresponding broad well-being → values effects. The Prosocial and Conformity values now had a coherent pattern of positive links with broad well-being, indicating that their links with negative aspects in the trivariate analysis with traits may be due to suppression effects. Achievement, on the other hand, had a positive effect on both positive and negative affects. The Wilcoxon tests, computed per broad well-being aspect for all seven values across the four cross-lags (bottom of Table 5), were significant at .01 or lower for negative affect, life satisfaction, and self-esteem. For these three aspects of broad well-being, the differences between the absolute values of value → broad well-being effects and broad well-being → value effects were negative (Difference row of Table 5). In sum, with the exception of positive affect, where the effects were balanced, values changed in response to broad well-being more than the other way around (Research Question 4b).

It is interesting to note that the differences were larger for the combination of traits and affective well-being, and for the combination of values and cognitive well-being and self-esteem (cf. Difference rows of Tables 4 and 5). Thus, traits predicted affective well-being more strongly than they were predicted by it, and values were predicted by cognitive well-being and self-esteem more strongly than these broad well-being aspects were predicted by values. In summary, in response to Research Question 4, personality traits predicted broad

well-being more strongly than they were predicted by it, whereas the opposite was generally true for values.

Discussion

We examined the interrelations of personality traits, values, well-being, and self-esteem in a nationally representative panel assessed at five time points spanning eight years. Both traits and values had considerable stability, but traits were more stable longitudinally than values (Research Question 1). Traits and values affected each other over time, but the effects of traits on values were stronger (Research Question 2). Both traits and values predicted well-being and self-esteem; while their mean effects on positive affect were similar, traits had stronger effects than values on negative affect, life satisfaction, and self-esteem (Research Question 3). The longitudinal links of traits, as well as those of values, with broad well-being were bidirectional. However, the balance of strength was the opposite for traits and values: Traits predicted broad well-being more strongly than they were predicted by it, whereas broad well-being generally predicted values more strongly than values predicted it (Research Question 4).

The overall results are more in line with FFT (McCrae & Costa, 2008) than with NST (Roberts et al., 2008): Traits were more stable than values and were, on average, consistently the strongest predictor of the various other elements of the personality system. However, the results would not support a strong version of either FFT (which does not allow for external effects on traits) or NST (which sees traits, values, well-being, and self-esteem as equally basic elements of personality). Our findings are in line with studies that called for the integration of the two perspectives (Bleidorn et al., 2010; Fischer, 2018; Kandler et al., 2014). In integrative models, traits, values, beliefs, narratives, well-being, and other personality-relevant concepts are related across time and form elements of a complex system

(e.g., McAdams & Pals, 2006). Our findings suggest that traits are a primary driving force, but they are embedded in networks that allow for ongoing mutual effects.

Our results cast light on the nature of the relations between personality and values. The two domains have historically developed separately, yet the evidence for their links has been mounting (Fischer & Boer, 2015; Parks-Leduc et al., 2015) and there have been proposals for their integration into higher order overarching domains (e.g., Strus & Cieciuch, 2017). The nature and direction of these links, however, have so far been open to conjectures. The present findings argue for an unequivocal position on this debate. Although traits and values influence each other and may share common motivational bases such as approach and cooperation (Fischer & Boer, 2015) or stability and plasticity (Strus & Cieciuch, 2017), traits clearly have the leading role in this relationship. The consistent patterns of individuals' thoughts, feelings, and behaviors (captured in the Big Five traits) shape what individuals find important in life (their values) much more than values shape their traits.

Mechanisms

How can we interpret the observed differences in predictive power of traits and values? To start with some methodological explanations, firstly, the similar reliability levels in our study, combined with our latent modeling approach, rule out an artifact of measurement accuracy. A second possibility is that the instruments differed in their coverage of the respective domains (as reflected by their different length), leaving less room for values to unfold their predictive potential. Three points argue against this interpretation: (a) the 36-item RVS has a similar length as the 40-item Portrait Value Questionnaire which provides a comprehensive measure of values (Schwartz et al., 2001); (b) the 8-item Prosocial value scale is of similar length as the 10-item IPIP trait scales, yet did not exhibit similar predictive power; (c) in the bidirectional models of values and life satisfaction, life satisfaction was the stronger predictor despite being measured on a short, 5-item scale. A related interpretation for

the stronger effects of traits than values on broad well-being is that trait measures may include more affect-related content than value measures. However, the measures of different traits vary in their affective, behavioral, and cognitive content. Conscientiousness measures, for example, have a minimal coverage of affective content (on average about 6% according to Pytlik Zillig et al., 2002), yet Conscientiousness was one of the strongest predictors of broad well-being in the present study. As a final methodological explanation, the different effects of traits and values could be attributable to ceiling effects in values and a reduced variance of value measures. However, the standard deviations of values were similar and actually slightly larger than those of traits relative to scale range (Table S2), so variance effects seem unlikely.

For an interpretation combining methodological and substantive elements, it is interesting to consider the role of temporal stability for predictive power. More stable variables can be expected in principle to be stronger longitudinal predictors. Our findings on the relations of traits and values are clearly in line with this principle. However, the findings on values and broad well-being did not follow such a simple pattern. The mean long-term stability coefficients of affects and life satisfaction (.68) were slightly lower, and those of self-esteem (.74) slightly higher than those of values (.72; see Table S9 for broad well-being and Table 2 for values). Yet, broad well-being tended to predict values longitudinally even when a well-being aspect had lower long-term stability than a value, as, for example, in the case of life satisfaction (with a mean stability coefficient of .68) and the values of Restrictive Conformity (mean stability coefficient of .79) and Maturity (mean stability coefficient of .73) (see Table 5 for the corresponding cross-lagged effects). Thus, although the long-term stability of concepts may make them more likely to be stronger predictors, other factors are clearly involved.

Turning to more substantive interpretations, the differences in the predictive power of traits and values could be due to cognitive accessibility. People may be less aware of their

values than of their behavior patterns, and may infer their values from their traits. The endorsement of this interpretation depends on the conceptualization of traits. While some theorists equate traits with behavior patterns (Pervin, 1994), in FFT traits are the abstract, hypothetical underlying causes of these behavior patterns (McCrae & Costa, 2008). The underlying traits are only inferred from the observed behaviors, and are thus similarly inaccessible as values. An alternative interpretation involves the different functions of values as guides versus justifications for behavior (Schwartz, 1992). The finding that values are predicted by traits suggests that, although values may indeed fulfill both functions, the justifying function is stronger than the guiding function.

As evident from the preceding discussion, our data cannot unequivocally support a single mechanism. Furthermore, longitudinal predictive links cannot uniquely identify causation. Third variables may be involved, such as common genetic factors. It is worthwhile to consider some different types of causation analyses. McCrae and Sutin (in press) distinguished between explanatory causes that identify the mechanisms by which two phenomena are linked, and practical causes that allow the prediction of a phenomenon. Longitudinal models are limited in their ability to identify explanatory causes, but are useful for practical prediction within the confines of the examined variables. Despite advances in research on volitional personality change (e.g., Hudson & Fraley, 2015), the experimental manipulation of traits is difficult at best, or impossible in the FFT framework (McCrae & Sutin, in press). As recognized in research on self-esteem, depression, and anxiety, the limits of the experimental approach underscore the usefulness of longitudinal data for testing the direction of mutual effects between variables (Sowislo & Orth, 2013).

Well-Being and Self-Esteem as Elements of Personality

The results on well-being and self-esteem were in line with conceptualizations of broad well-being as an integral part of personality, displaying trait-like features and mutual

relations with the other personality elements (Roberts et al., 2008; Soto, 2015). The effects of traits on well-being were fairly consistent across traits and across affective and cognitive well-being and self-esteem (Tables 3 and 4). Well-being research has usually focused on Extraversion and Neuroticism and found smaller associations for Agreeableness and Conscientiousness, and the smallest for Openness (Soto, 2015; Steel et al., 2009). Our findings show that all five traits contribute to broad well-being across time. The significant effects in both directions are in line with Soto's (2015) findings and differ from Kandler et al.'s (2015) findings, where only traits predicted well-being. Although Kandler et al. attributed the lack of effects of well-being to their state-like operationalization of well-being, this does not seem to be the critical factor as the measures of positive and negative affects in the present study were even more state-focused. Furthermore, Soto's (2015) study contained an unexpected finding that well-being tended to lead to decreases in Extraversion. This was not replicated in our data, where the mutual effects of traits and well-being maintained the same sign. In sum, it appears that well-being's effects on traits are less consistent across measures and populations than traits' effects on well-being.

Values' links with well-being and self-esteem varied more depending on the specific value and specific aspect of broad well-being (Tables 3 and 5), in line with the notion that values have a complex relationship with well-being in interaction with contextual factors (Sortheix & Schwartz, 2017). The findings included a few counterintuitive effects in the same direction for both positive and negative affects. In the case of Restrictive Conformity, it appeared that its predictive effects on negative well-being are especially manifested when the common variance with Conscientiousness is taken into account. In the case of Achievement, the links in the same direction with positive and negative affects could have to do with the combination of more intrinsic (a sense of accomplishment) and more extrinsic (social recognition) elements, which have opposite associations with well-being (Ryan & Deci,

2000). Further research with alternative value operationalizations would help to disentangle the effects of these value elements. The main conclusion of interest to the present study is that, overall, values had less pronounced effects than traits on broad well-being.

Areas of distinction between affective and cognitive well-being. Our study furthers the understanding of broad well-being by highlighting the differential relations of its affective and cognitive aspects, as well as of self-esteem, with traits and values. Traits' effects did not vary systematically between affective and cognitive well-being, underscoring the overall consistent predictive role of traits. Values' effects, on the other hand, were concentrated in affective well-being, in line with the value studies that compared affective and cognitive well-being (Sagiv & Schwarz, 2000; Sortheix & Schwartz, 2017).

The most systematic distinction of affective versus cognitive well-being (and self-esteem, whose pattern here was closer to cognitive than to affective well-being) was observed in traits' and values' bidirectional links with broad well-being (see Difference rows of Tables 4 and 5). The patterns for traits and values mirrored each other: The net balance of *traits'* and *affective* well-being's reciprocal effects was larger and positive, whereas the net balance of *values'* and *cognitive* well-being's (as well as self-esteem's) effects was larger and negative, with the other combinations being closer to neutral. This result raises some interesting implications. First, in the domain of traits, the relative contribution of traits to well-being over time may be stronger for affective well-being (although a similar pattern was not as clearly evident in Soto, 2015). Second, in the domain of values, the overall relation is in the direction of values changing in response to well-being, and this effect can be located primarily in cognitive well-being and self-esteem. This is in line with the conceptualization of values as cognitive constructs that facilitate adjustment to environmental demands (Schwartz, 1992). This finding suggests that, rather than concluding that there are limited associations between values and cognitive well-being (Sagiv & Schwartz, 2000), it would be

productive to examine effects in the opposite direction, from broad well-being to values. Finally, it is interesting to speculate about the long-term associations of all three domains (traits, values, and broad well-being). While traits appear to be a primary driver for changes in the other personality elements, it is conceivable that values, theorized to serve societally adaptive functions (Schwartz & Bardi, 2001), drive behavior changes in response to external demands, partly channeled through cognitive appraisals of well-being; these changes may in turn lead to shifts in trait levels, setting in motion feedback loops between the personality elements. It would be interesting for future research to examine such more complex models especially in response to important life events and role transitions (e.g., Anusic & Schimmack, 2016; Bardi, Lee, Hofmann-Towfigh, & Soutar, 2009).

In conclusion, the distinction between affective and cognitive aspects of well-being can be substantiated on different levels, but one systematic pattern seems to be that over time, traits influence affective well-being more than they are influenced by it, whereas values are influenced by cognitive well-being and self-esteem more than they influence these aspects of well-being. This is an intriguing result highlighting the distinct links of the various components of personality, values, and broad well-being. Although the finding was obtained in a large, nationally representative sample across five time points and various measures of broad well-being, the novelty of the result implies that it will be important for future research to replicate and extend the observed patterns.

Limitations and Future Research

Rokeach's (1973) operationalization of values is widely established and formed the basis for the currently dominant operationalization in Schwartz's (1992) model. Still, more recent measures based directly on Schwartz's model have become more prevalent in recent years and have often been used in research on personality and values (Fischer & Boer, 2015;

Parks-Leduc et al., 2015). It would be informative to examine to what extent the patterns found in our study replicate when using direct measures of Schwartz's model.

Our study is based on a sample, albeit large and representative, from a single culture. To generalize broadly on the interrelations of traits, values, and broad well-being, cross-cultural research is needed. The relations between personality and values, as well as their effects on well-being, are known to be moderated by culture-level factors such as contextual threat, individualism, and egalitarianism (Fischer & Boer, 2015; Schimmack et al., 2002; Sortheix & Schwartz, 2017). The importance of extending the longitudinal study of these elements to cross-cultural comparisons cannot be overstated.

The impact of life events is another area that has been gaining attention in recent research on both personality traits and values (Anusic & Schimmack, 2016; Bardi, 2009). A comparison between the two domains in their flexibility in reacting to life events would further clarify their respective roles in the broader personality system. Finally, it would be interesting to examine to what extent the observed patterns hold across different age groups.

Conclusion

Using an eight-year longitudinal, nationally representative sample, we found that personality traits were more stable than values; predicted values more strongly than they were predicted by them; offered a generally stronger prediction than values of broad well-being; and influenced broad well-being more than they were influenced by it, whereas the opposite was true for values. Across the board, these results support theories, such as FFT, that place traits centrally in the broader personality system. At the same time, the links between traits, values, and broad well-being were bidirectional in line with theories, such as NST, that view traits and other personality elements as adaptable and mutually constitutive. The balance of results calls for new theoretical approaches that accommodate both the central position of traits and their reciprocal links with other elements of personality.

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Table 1
Demographics and Scale Reliabilities Across Time Points

	T1	T2	T3	T4	T5
Demographics					
Number of Participants	6,784	7,021	6,738	5,159	6,918
Mean Age in Years (*SD*)	45.84 (15.96)	46.75 (17.37)	48.29 (17.60)	50.81 (17.72)	48.58 (18.22)
Age Range in Years	16–94	14–95	15–97	15–93	15–96
Education (Percentage)					
None Completed	1	0	0	0	0
Primary	4	4	3	4	3
Secondary	59	58	58	58	53
Higher vocational	26	25	25	26	28
University	11	12	13	13	16
Females (Percentage)	54	54	54	54	54
Reliability (Spearman-Brown)					
Personality Traits					
Agreeableness	.71	.72	.73	.73	.74
Conscientiousness	.67	.68	.67	.67	.68
Extraversion	.83	.82	.83	.84	.84
Openness	.65	.63	.64	.63	.65
Neuroticism	.75	.74	.75	.75	.77
Values					
Prosocial	.83	.83	.83	.82	.82
Restrictive Conformity	.79	.79	.78	.77	.78
Enjoyment	.77	.77	.78	.78	.77
Self-Direction	.79	.80	.80	.79	.79
Maturity	.70	.68	.69	.68	.69
Security	.72	.71	.71	.67	.71
Achievement	.66	.66	.67	.67	.68
Well-Being					
Positive Affect	.91	.91	.91	.91	.92
Negative Affect	.93	.94	.94	.95	.94
Life Satisfaction	.89	.90	.91	.90	.91
Self-Esteem	.78	.77	.80	.81	.81

Table 2
Mean Standardized Stability Coefficients and Cross-Lagged Effects of Personality Traits and Values Across Time Points

	Stability Coefficients				Cross-Lagged Effects			
	Trait		Value		Trait → Value		Value → Trait	
Trait—Value	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Agreeableness—Prosocial	.80	.04	.71	.01	$.35^{(4/-/-)}$	.02	$.11^{(4/-/-)}$	.04
Conscientiousness—Conformity	.85	.02	.79	.01	$.28^{(4/-/-)}$	.02	$.12^{(4/-/-)}$	.05
Extraversion—Enjoyment	.86	.04	.69	.01	$.16^{(4/-/-)}$	.01	$.05^{(4/-/-)}$	.02
Openness—Self-Direction	.94	.01	.67	.01	$.22^{(4/-/-)}$	.02	$.07^{(3/1/-)}$	.03
Neuroticism—	.83	.03						
—Maturity			.73	.01				
—Security			.71	.02				
—Achievement			.72	.03				
Mean	.86	.03	.72	.01	.25	.02	.09	.04

Note. Conformity = Restrictive Conformity. Stability coefficients are from univariate trait-state-error models computed separately for each trait and value (Figure 1, paths *a*). Cross-lagged effects are from random-intercepts cross-lagged panel models computed separately for each trait–value pair (Figure 2, paths *b* and *c*). The superscript numbers indicate number of significant effects at .001, .01, and .05, respectively, across the four cross-lagged effects.

Table 3
Mean Standardized Cross-Lagged Effects of Matched Personality Traits and Values on Well-Being/Self-Esteem Across Time Points

	Positive Affect		Negative Affect		Life Satisfaction		Self-Esteem	
Dimension	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Agreeableness	$.07^{(4/-/-)}$	.01	$-.15^{(4/-/-)}$	.02	$.07^{(4/-/-)}$	.02	$.10^{(4/-/-)}$	.02
Prosocial	$.09^{(4/-/-)}$	.02	$.03^{(-/3/-)}$	.01	$.01^{(-/-/1)}$	.01	$.00^{(-/-/-)}$	.01
Conscientiousness	$.15^{(4/-/-)}$	.03	$-.25^{(4/-/-)}$	.02	$.10^{(4/-/-)}$	.00	$.24^{(4/-/-)}$	.03
Conformity	$.10^{(4/-/-)}$	.01	$.08^{(4/-/-)}$	.02	$-.01^{(-/-/-)}$	.01	$-.04^{(3/1/-)}$	.01
Extraversion	$.14^{(4/-/-)}$	.02	$-.05^{(3/1/-)}$	.01	$.10^{(4/-/-)}$	.01	$.12^{(4/-/-)}$	.02
Enjoyment	$.06^{(4/-/-)}$	.01	$-.02^{(-/-/-)}$	.01	$.01^{(-/1/-)}$	.01	$.02^{(-/-/1)}$	.03
Openness	$.04^{(2/-/1)}$	.02	$-.13^{(4/-/-)}$	.01	$.03^{(2/1/-)}$	.01	$.12^{(4/-/-)}$	.02
Self-Direction	$.12^{(4/-/-)}$	.03	$.00^{(-/-/-)}$	.01	$.01^{(-/1/-)}$	.01	$.01^{(-/1/-)}$	.02
Mean (Absolute)								
Traits	.10	.02	.14	.02	.07	.01	.15	.02
Values	.09	.02	.03	.01	.01	.01	.02	.01
Wilcoxon Test	-0.65		-3.52***		-3.47**		-3.52***	

Note. Conformity = Restrictive Conformity. The table presents the mean effects *d* and *f* from the model in Figure 3. The superscript numbers indicate number of significant effects at .001, .01, and .05, respectively, across the four cross-lags. The "Mean (Absolute)" rows display the means of the absolute values of mean effects and standard deviations across the four traits and values, respectively. The Wilcoxon Signed Ranked Tests were computed using the coefficients for all four cross-lags per trait–value pair.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 4
Mean Standardized Cross-Lagged Effects of Personality Traits and Well-Being/Self-Esteem Across Time Points

	Positive Affect		Negative Affect		Life Satisfaction		Self-Esteem	
Dimension	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Agreeableness								
Trait → W/S	$.11^{(4/-/-)}$	.01	$-.13^{(4/-/-)}$	.02	$.08^{(4/-/-)}$	.02	$.12^{(4/-/-)}$	.02
W/S → Trait	$.08^{(4/-/-)}$	.03	$-.07^{(4/-/-)}$	.00	$.05^{(4/-/-)}$	.01	$.10^{(4/-/-)}$	.00
Conscientiousness								
Trait → W/S	$.18^{(4/-/-)}$	.02	$-.22^{(4/-/-)}$	.02	$.11^{(4/-/-)}$	.01	$.23^{(4/-/-)}$	.02
W/S → Trait	$.08^{(4/-/-)}$	.03	$-.10^{(4/-/-)}$	.01	$.08^{(4/-/-)}$	.01	$.19^{(4/-/-)}$	.02
Extraversion								
Trait → W/S	$.16^{(4/-/-)}$	.02	$-.06^{(4/-/-)}$	.01	$.10^{(4/-/-)}$	.01	$.15^{(4/-/-)}$	.01
W/S → Trait	$.06^{(4/-/-)}$	.02	$-.03^{(3/1/-)}$	.01	$.06^{(4/-/-)}$	.01	$.12^{(4/-/-)}$	.02
Openness								
Trait → W/S	$.06^{(3/1/-)}$	.02	$-.13^{(4/-/-)}$	.01	$.04^{(2/2/-)}$	.01	$.13^{(4/-/-)}$	.02
W/S → Trait	$.06^{(4/-/-)}$	.02	$-.05^{(4/-/-)}$	.01	$.05^{(2/1/-)}$	.02	$.13^{(4/-/-)}$	.02
Neuroticism								
Trait → W/S	$-.15^{(4/-/-)}$	.01	$.31^{(4/-/-)}$	.01	$-.26^{(4/-/-)}$	.02	$-.25^{(4/-/-)a}$	$.02^{a}$
W/S → Trait	$-.09^{(4/-/-)}$	.01	$.12^{(4/-/-)}$	.02	$-.17^{(4/-/-)}$	.04	$-.21^{(4/-/-)a}$	$.01^{a}$
Mean (Absolute)								
Trait → W/S	.13	.01	.17	.01	.12	.01	.17	.02
W/S → Trait	.07	.02	.07	.01	.08	.02	.15	.01
Difference	.06		.09		.04		.02	
Wilcoxon Test	-3.57***		-3.92***		-3.49***		-3.27**	

Note. W/S = Well-Being/Self-Esteem. The table presents the mean effects *g* and *h* from the model in Figure 4 (for traits–well-being/self-esteem models). The superscript numbers indicate number of significant effects at .001, .01, and .05, respectively, across the four cross-lags. The "Mean (Absolute)" rows display the means of the absolute values of mean effects and standard deviations across the five traits. The Wilcoxon Signed Ranked Tests were computed using the coefficients for all four cross-lags per trait–well-being/self-esteem pair.
[a]The estimates for the Neuroticism–Self Esteem model are from analyses of observed scores because the model using latent scores was nonadmissible (see text).
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 5
Mean Standardized Cross-Lagged Effects of Values and Well-Being/Self-Esteem Across Time Points

	Positive Affect		Negative Affect		Life Satisfaction		Self-Esteem	
Dimension	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Prosocial								
Value → W/S	$.12^{(4/-/-)}$	.02	$-.05^{(4/-/-)}$	.01	$.04^{(2/1/1)}$	.02	$.05^{(3/1/-)}$	.01
W/S → Value	$.13^{(4/-/-)}$	.01	$-.07^{(4/-/-)}$	.01	$.08^{(4/-/-)}$	.01	$.14^{(4/-/-)}$	.03
Conformity								
Value → W/S	$.16^{(4/-/-)}$	.02	$-.01^{(-/-/-)}$	.01	$.03^{(1/1/1)}$	.01	$.04^{(3/1/-)}$	.01
W/S → Value	$.13^{(4/-/-)}$	.02	$-.02^{(-/1/1)}$	.01	$.07^{(4/-/-)}$	.01	$.10^{(4/-/-)}$	.03
Enjoyment								
Value → W/S	$.10^{(4/-/-)}$	.01	$-.04^{(2/2/-)}$	.01	$.05^{(4/-/-)}$	.01	$.06^{(3/-/-)}$	.03
W/S → Value	$.13^{(4/-/-)}$	.02	$-.06^{(4/-/-)}$	.01	$.12^{(4/-/-)}$	.01	$.19^{(4/-/-)}$	.01
Self-Direction								
Value → W/S	$.15^{(4/-/-)}$	.03	$-.04^{(2/1/1)}$	.01	$.03^{(2/-/-)}$	.02	$.06^{(3/1/-)}$	.02
W/S → Value	$.17^{(4/-/-)}$	.03	$-.06^{(4/-/-)}$	.01	$.08^{(4/-/-)}$	.01	$.19^{(4/-/-)}$	.03
Maturity								
Value → W/S	$.15^{(4/-/-)}$	.03	$-.02^{(-/1/-)}$	.02	$.03^{(2/-/-)}$	.02	$.06^{(3/-/-)}$	.03
W/S → Value	$.16^{(4/-/-)}$	.02	$-.04^{(2/1/-)}$	.02	$.10^{(4/-/-)}$	.01	$.20^{(4/-/-)}$	.02
Security								
Value → W/S	$.15^{(4/-/-)}$	.02	$-.08^{(4/-/-)}$	.01	$.05^{(2/2/-)}$	.01	$.08^{(3/1/-)}$	.03
W/S → Value	$.17^{(4/-/-)}$	.04	$-.10^{(4/-/-)}$	.02	$.12^{(4/-/-)}$	.01	$.21^{(4/-/-)}$	.05
Achievement								
Value → W/S	$.16^{(4/-/-)}$	.03	$.05^{(3/1/-)}$	.01	$.03^{(1/1/1)}$	.02	$.03^{(1/-/2)}$	.02
W/S → Value	$.12^{(4/-/-)}$	.03	$.03^{(1/1/1)}$	.02	$.06^{(4/-/-)}$	.01	$.08^{(4/-/-)}$	.02
Mean (Absolute)								
Value → W/S	.14	.02	.04	.01	.04	.01	.05	.02
W/S → Value	.14	.02	.05	.02	.09	.01	.16	.03
Difference	.00		-.01		-.05		-.10	
Wilcoxon Test	0.34		2.64**		4.62***		4.62***	

Note. Conformity = Restrictive Conformity; W/S = Well-Being/Self-Esteem. The table presents the mean effects *g* and *h* from the model in Figure 4 (for values–well-being/self-esteem models). The superscript numbers indicate number of significant effects at .001, .01, and .05, respectively, across the four cross-lags. The "Mean (Absolute)" rows display the means of the absolute values of mean effects and standard deviations across the seven values. The Wilcoxon Signed Ranked Tests were computed using the coefficients for all four cross-lags per value–well-being/self-esteem pair.
*$p < .05$. **$p < .01$. ***$p < .001$.

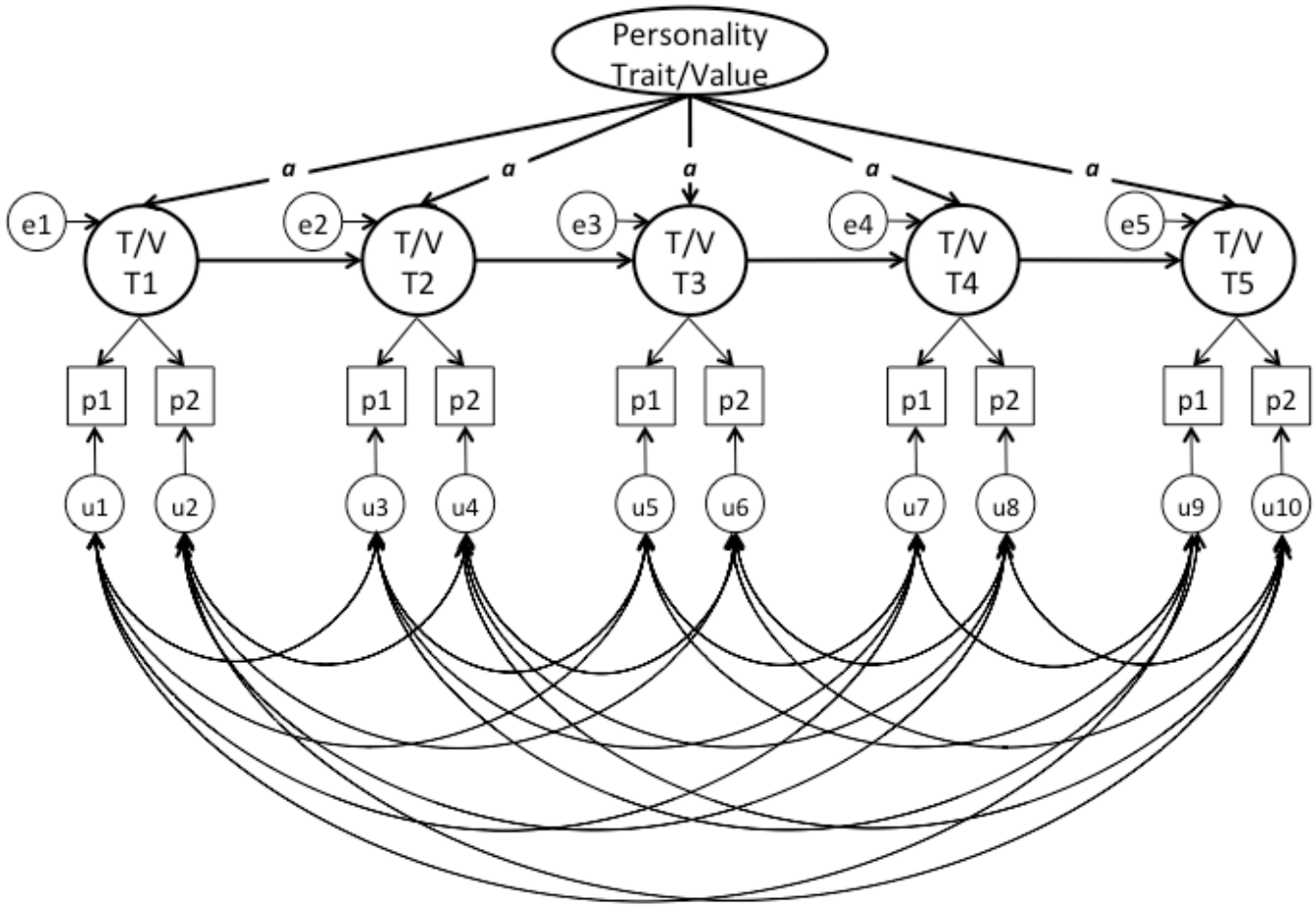

Figure 1. Stability model of personality traits/values. The T/V circles denote the latent factors of individual traits and values per time point; p1 and p2 denote parcels; paths *a* denote the loadings of the time-specific latent factor on the time-invariant latent factor, interpreted as long-term stability coefficients. Variances of the error components of the two parcels of each time-specific latent factor (e.g., u1 and u2, etc.) were fixed to be identical for model identification.

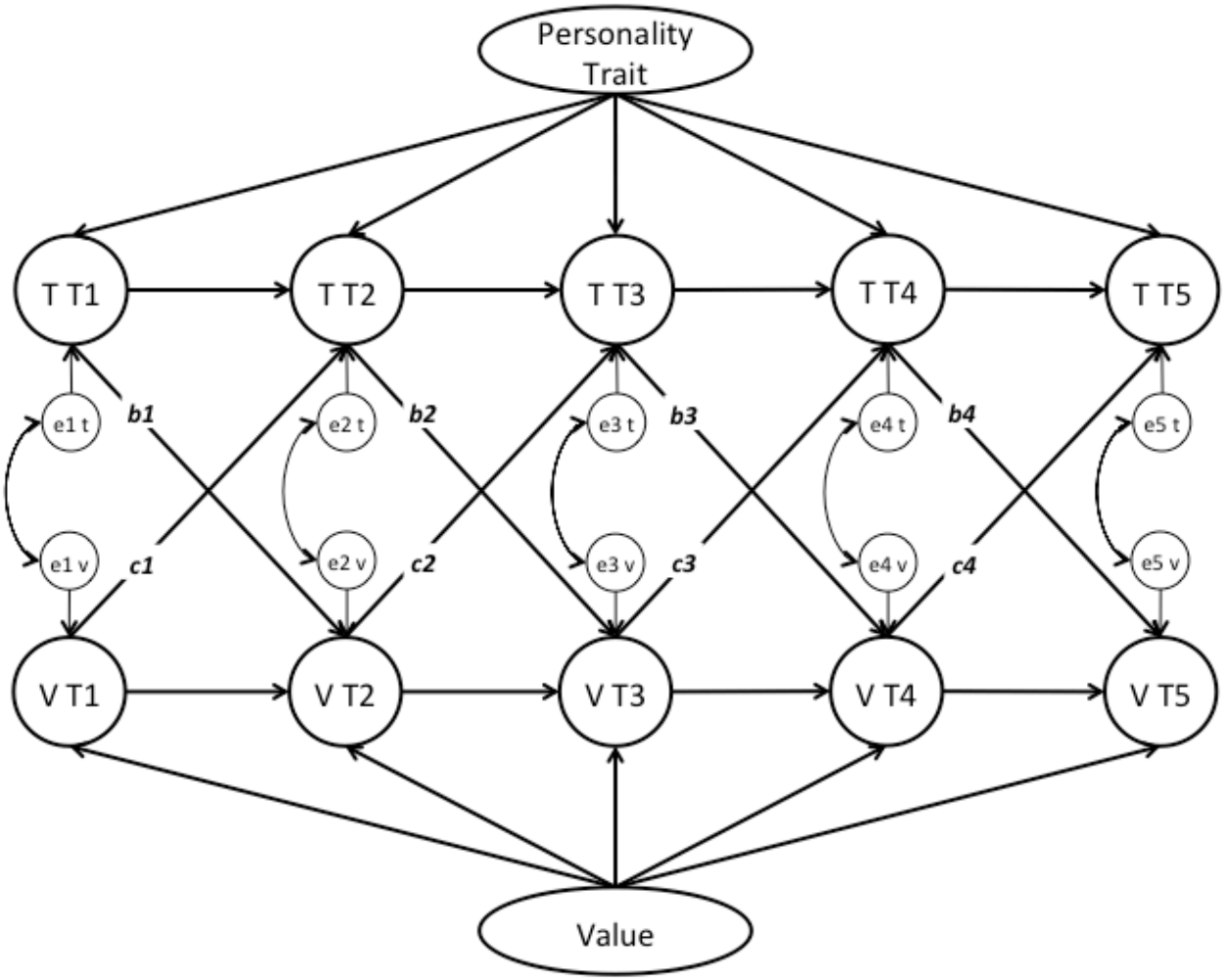

Figure 2. Personality traits and values. For simplicity, the parcels are omitted (cf. Figure 1). Paths *b* and *c* denote the cross-lagged effects of traits and values, respectively, in each trait–value pair. In cases of nonadmissible solutions due to negative covariance among error components, variances of the error components of the two parcels of each time-specific latent factor were fixed to be identical.

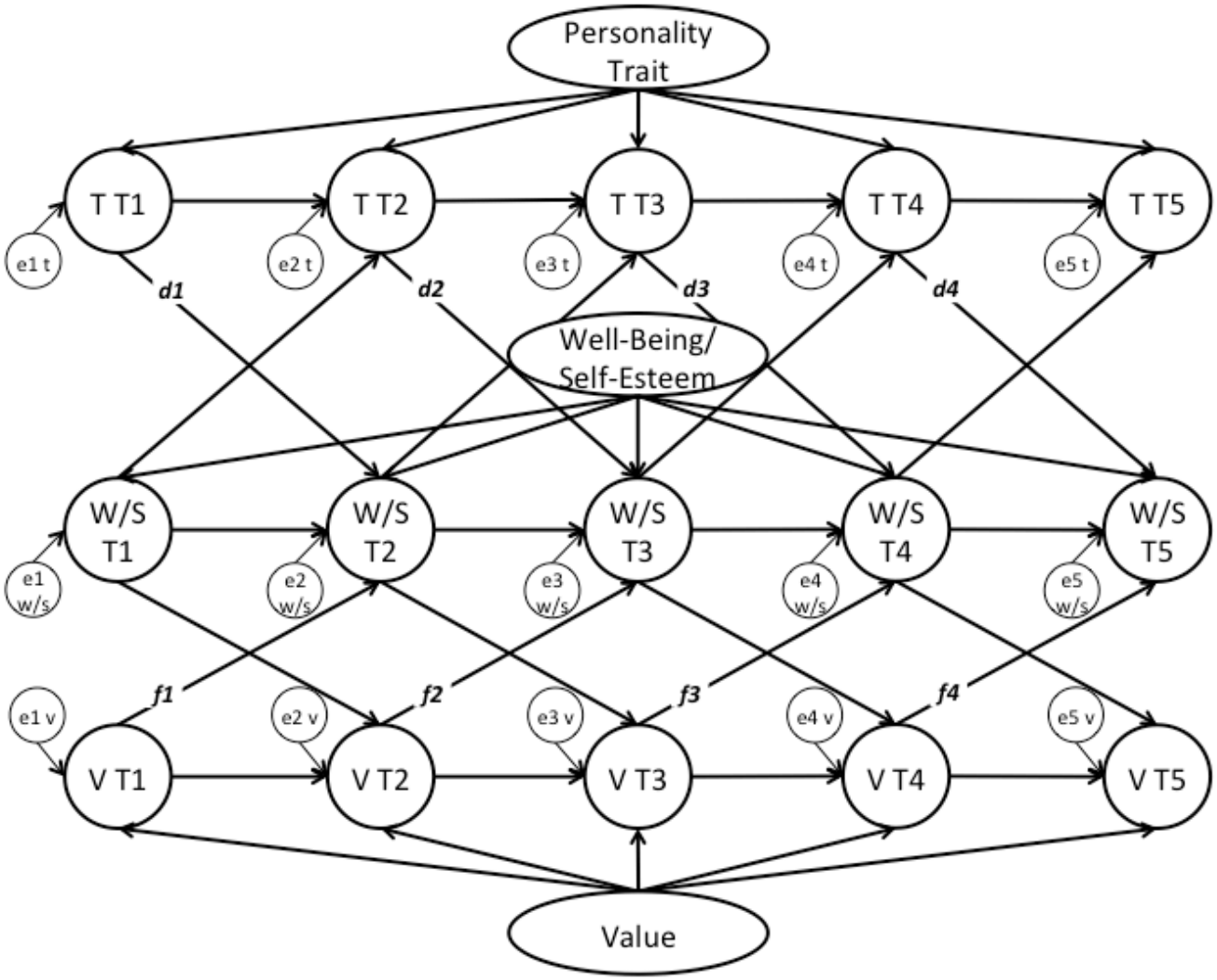

Figure 3. Personality traits, values, and well-being/self-esteem. For simplicity, the parcels and the correlations of the error terms of the latent traits per time point are omitted (cf. Figures 1 and 2). Paths *d* and *f* denote the cross-lagged effects of traits and values, respectively, in each trait–value pair on well-being or self-esteem. In cases of nonadmissible solutions due to negative covariance among error components, variances of the error components of the two parcels of each time-specific latent factor were fixed to be identical.

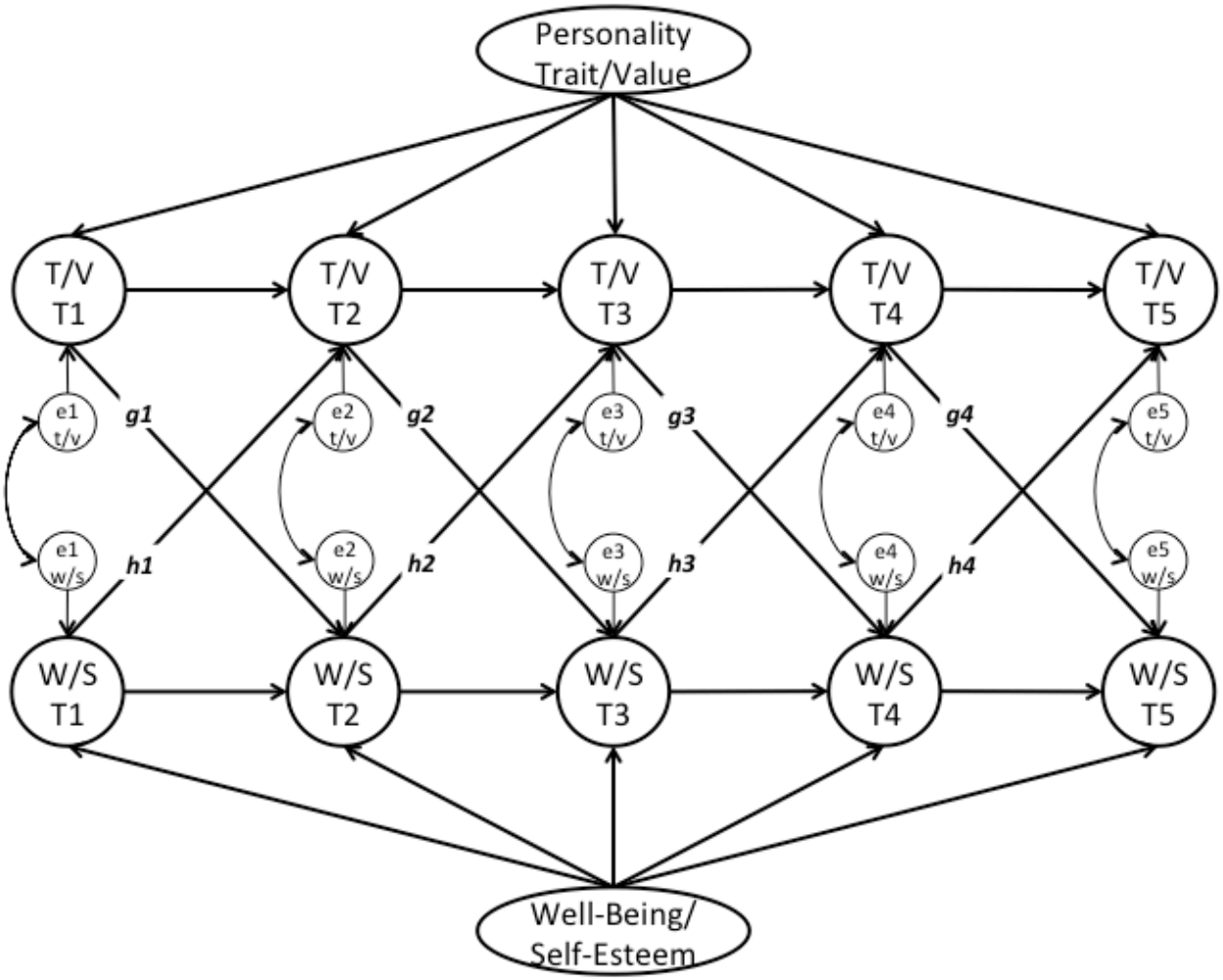

Figure 4. Personality traits/values and well-being/self-esteem. For simplicity, the parcels are omitted (cf. Figure 1). Paths *g* and *h* denote the cross-lagged effects of traits or values, and well-being or self-esteem, respectively. In cases of nonadmissible solutions due to negative covariance among error components, variances of the error components of the two parcels of each time-specific latent factor were fixed to be identical.

Table S1
Value Assignment Based on Majority Results From Schwartz and Bilsky (1990)

Value	Item
Prosocial	A world at peace
	Equality
	Forgiving
	Helpful
	Honest (Sincere and truthful)
	Loving
	Salvation
	True friendship
Restrictive Conformity	Clean
	Obedient
	Polite
	Self-controlled
Enjoyment	Cheerful (Happy)
	Comfortable life
	Happiness
	Pleasure
Self-Direction	Broadminded (Open-minded)
	Freedom
	Imaginative (Creative)
	Independent
	Intellectual
	Logical
Maturity	A world of beauty
	Courageous
	Mature love
	Self-respect
	Wisdom
Security	Family security
	Inner harmony
	National security
	Responsible
Achievement	A sense of accomplishment
	Ambitious (Hardworking)
	Capable
	Exciting life
	Social recognition

Note. The English back-translation is presented in parentheses, where it did not match the original wording exactly.

Table S2
Means and Standard Deviations of the Parcels Used for Each Variable per Time Point

	Time 1		Time 2		Time 3		Time 4		Time 5	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Traits	3.80	0.51	3.77	0.51	3.73	0.51	3.72	0.53	3.75	0.53
Agreeableness 1	4.06	0.62	4.04	0.61	4.04	0.61	4.04	0.63	4.06	0.64
Agreeableness 2	3.58	0.53	3.56	0.54	3.55	0.54	3.55	0.55	3.57	0.54
Conscientiousness 1	3.92	0.72	3.88	0.73	3.89	0.72	3.95	0.71	3.92	0.73
Conscientiousness 2	3.46	0.66	3.43	0.66	3.41	0.67	3.38	0.69	3.39	0.69
Extraversion 1	3.14	0.71	3.13	0.71	3.11	0.71	3.10	0.72	3.10	0.73
Extraversion 2	3.51	0.51	3.49	0.51	3.46	0.51	3.44	0.52	3.48	0.52
Openness 1	3.51	0.70	3.48	0.70	3.48	0.70	3.48	0.70	3.52	0.71
Openness 2	2.60	0.71	2.60	0.70	2.56	0.70	2.51	0.73	2.55	0.73
Neuroticism 1	2.53	0.80	2.56	0.79	2.55	0.81	2.52	0.83	2.57	0.83
Neuroticism 2	3.80	0.51	3.77	0.51	3.73	0.51	3.72	0.53	3.75	0.53
Mean	3.41	0.65	3.39	0.65	3.38	0.65	3.37	0.66	3.39	0.67
Values										
Prosocial 1	6.07	0.84	6.02	0.85	5.92	0.87	5.94	0.86	5.96	0.85
Prosocial 2	5.77	0.89	5.68	0.90	5.59	0.91	5.57	0.90	5.62	0.91
Conformity 1	5.33	1.21	5.27	1.20	5.22	1.20	5.26	1.17	5.25	1.19
Conformity 2	5.44	1.09	5.38	1.09	5.28	1.07	5.30	1.09	5.31	1.10
Enjoyment 1	6.11	0.87	6.04	0.88	5.96	0.90	5.92	0.89	5.95	0.90
Enjoyment 2	5.80	0.90	5.74	0.92	5.68	0.93	5.63	0.93	5.72	0.93
Self-Direction 1	5.45	0.92	5.40	0.92	5.34	0.92	5.34	0.92	5.38	0.93
Self-Direction 2	5.64	0.85	5.56	0.86	5.50	0.85	5.50	0.86	5.53	0.85
Maturity 1	5.80	0.87	5.75	0.87	5.69	0.88	5.68	0.88	5.70	0.88
Maturity 2	5.51	0.97	5.45	0.99	5.37	1.00	5.32	1.01	5.37	1.00
Security 1	6.36	0.87	6.29	0.89	6.23	0.91	6.24	0.89	6.24	0.89
Security 2	5.85	1.02	5.81	1.02	5.68	1.06	5.71	1.03	5.75	1.04
Achievement 1	5.44	0.92	5.39	0.92	5.31	0.95	5.29	0.96	5.34	0.95
Achievement 2	4.77	1.18	4.72	1.20	4.64	1.20	4.52	1.23	4.58	1.25
Mean	5.67	0.96	5.61	0.96	5.53	0.97	5.52	0.97	5.55	0.98
Broad Well-Being										
Positive Affect 1	4.83	1.08	4.70	1.09	4.62	1.10	4.62	1.13	4.62	1.13
Positive Affect 2	4.64	1.13	4.52	1.12	4.43	1.12	4.43	1.14	4.47	1.16
Negative Affect 1	2.10	1.05	2.13	1.08	2.13	1.11	2.07	1.09	2.14	1.11
Negative Affect 2	2.01	1.14	2.04	1.14	2.07	1.18	2.02	1.16	2.09	1.21
Life Satisfaction 1	5.05	1.10	5.00	1.13	4.99	1.15	4.99	1.16	4.91	1.18
Life Satisfaction 2	5.23	1.10	5.17	1.13	5.15	1.14	5.15	1.15	5.08	1.20
Self-Esteem 1	5.74	0.90	5.68	0.90	5.59	0.92	5.60	0.94	5.58	0.94
Self-Esteem 2	5.58	1.24	5.53	1.23	5.49	1.23	5.54	1.24	5.50	1.27
Mean	4.40	1.09	4.35	1.10	4.31	1.12	4.30	1.13	4.30	1.15

Note. Conformity = Restrictive Conformity.

Table S3
Model Fit of All Models Presented in the Study

	χ^2	*df*	TLI	CFI	RMSEA
Univariate Stability (Figure 1)					
Agreeableness	141.353	15	.987	.996	.027
Conscientiousness	86.541	15	.993	.998	.020
Extraversion	227.834	15	.986	.996	.035
Openness	73.158	15	.994	.998	.018
Neuroticism	170.801	15	.985	.996	.030
Prosocial	39.164	15	.998	.999	.012
Restrictive Conformity	31.325	15	.998	1.000	.010
Enjoyment	52.856	15	.995	.999	.015
Self-Direction	37.531	15	.997	.999	.011
Maturity	13.608	15	1.000	1.000	.000
Security	22.170	15	.999	1.000	.006
Achievement	32.500	15	.998	.999	.010
Traits and Values (Figure 2)					
Agreeableness & Prosocial	954.909	107	.979	.989	.026
Conscientiousness & Conformity	2373.862	113	.946	.971	.046
Extraversion & Enjoyment	1062.455	112	.979	.989	.027
Openness & Self-Direction	553.994	107	.987	.993	.019
Traits, Values, and Well-Being/Self-Esteem (Figure 3)					
Agreeableness, Prosocial, & Positive Affect	4213.398	302	.954	.970	.033
Agreeableness, Prosocial, & Negative Affect	5093.417	304	.948	.966	.036
Agreeableness, Prosocial, & Life Satisfaction	4095.356	303	.957	.972	.032
Agreeableness, Prosocial, & Self-Esteem	5508.001	302	.934	.957	.038
Conscientiousness, Conformity, & Positive Affect	4973.409	301	.945	.965	.036
Conscientiousness, Conformity, & Negative Affect	5331.760	301	.945	.964	.037
Conscientiousness, Conformity, & Life Satisfaction	4693.725	298	.949	.967	.035
Conscientiousness, Conformity, & Self-Esteem	5836.770	298	.930	.955	.040
Extraversion, Enjoyment, & Positive Affect	2746.110	300	.973	.982	.026
Extraversion, Enjoyment, & Negative Affect	2231.809	300	.979	.987	.023
Extraversion, Enjoyment, & Life Satisfaction	2452.031	299	.976	.985	.025
Extraversion, Enjoyment, & Self-Esteem	3612.850	300	.960	.974	.030
Openness, Self-Direction, & Positive Affect	2609.644	299	.971	.981	.025
Openness, Self-Direction, & Negative Affect	2016.177	299	.979	.987	.022
Openness, Self-Direction, & Life Satisfaction	1899.677	298	.980	.987	.021
Openness, Self-Direction, & Self-Esteem	3574.638	300	.955	.911	.030
Traits and Well-Being/Self-Esteem (Figure 4)					
Agreeableness & Positive Affect	764.736	112	.986	.993	.022
Agreeableness & Negative Affect	1194.869	117	.980	.989	.028
Agreeableness & Life Satisfaction	612.514	112	.990	.995	.019
Agreeableness & Self-Esteem	1682.154	112	.962	.980	.034
Conscientiousness & Positive Affect	671.969	112	.988	.994	.021
Conscientiousness & Negative Affect	968.884	117	.985	.992	.025
Conscientiousness & Life Satisfaction	515.330	107	.992	.996	.018
Conscientiousness & Self-Esteem	1571.335	112	.967	.982	.033
Extraversion & Positive Affect	1279.835	112	.980	.989	.030
Extraversion & Negative Affect	440.127	117	.995	.997	.015
Extraversion & Life Satisfaction	895.950	112	.987	.993	.024
Extraversion & Self-Esteem	2192.381	117	.962	.979	.039

Table S3 (Continued)

	χ^2	*df*	TLI	CFI	RMSEA
Openness & Positive Affect	1013.472	107	.982	.990	.025
Openness & Negative Affect	1998.792	117	.968	.982	.037
Openness & Life Satisfaction	430.287	112	.993	.997	.015
Openness & Self-Esteem	1914.334	112	.957	.977	.037
Neuroticism & Positive Affect	577.578	107	.990	.995	.019
Neuroticism & Negative Affect	411.553	117	.994	.997	.015
Neuroticism & Life Satisfaction	998.136	107	.982	.991	.026
Neuroticism & Self-Esteem (Observed Scores)	1512.882	22	.921	.969	.075
Values and Well-Being/Self-Esteem (Figure 4)					
Prosocial & Positive Affect	968.298	112	.983	.991	.025
Prosocial & Negative Affect	767.714	109	.987	.993	.023
Prosocial & Life Satisfaction	454.961	107	.993	.996	.017
Prosocial & Self-Esteem	953.556	109	.980	.990	.026
Conformity & Positive Affect	724.911	108	.986	.993	.022
Conformity & Negative Affect	210.511	109	.998	.999	.009
Conformity & Life Satisfaction	409.007	108	.994	.997	.015
Conformity & Self-Esteem	573.096	108	.988	.994	.019
Enjoyment & Positive Affect	672.963	113	.987	.993	.020
Enjoyment & Negative Affect	419.505	112	.994	.997	.015
Enjoyment & Life Satisfaction	605.159	112	.989	.994	.019
Enjoyment & Self-Esteem	1237.368	113	.970	.984	.029
Self-Direction & Positive Affect	729.068	109	.986	.993	.022
Self-Direction & Negative Affect	230.877	109	.997	.999	.010
Self-Direction & Life Satisfaction	402.435	109	.993	.997	.015
Self-Direction & Self-Esteem	1080.633	109	.974	.987	.027
Maturity & Positive Affect	683.446	107	.986	.993	.021
Maturity & Negative Affect	359.505	113	.995	.997	.014
Maturity & Life Satisfaction	364.747	107	.994	.997	.014
Maturity & Self-Esteem	1079.485	108	.972	.986	.028
Security & Positive Affect	885.193	109	.981	.990	.024
Security & Negative Affect	349.634	109	.995	.997	.014
Security & Life Satisfaction	527.890	109	.990	.995	.018
Security & Self-Esteem	860.468	109	.978	.989	.024
Achievement & Positive Affect	1273.208	112	.973	.986	.030
Achievement & Negative Affect	750.244	113	.987	.993	.022
Achievement & Life Satisfaction	568.769	112	.990	.995	.019
Achievement & Self-Esteem	1529.254	113	.962	.980	.032

Note. Conformity = Restrictive Conformity.

Table S4
Univariate Stability Coefficients for Personality Traits and Values (cf. Figure 1, Paths a*, and Table 2, Left Panel)*

	Time 1	Time 2	Time 3	Time 4	Time 5
Traits					
Agreeableness	.87	.82	.79	.76	.76
Conscientiousness	.89	.84	.86	.84	.84
Extraversion	.92	.88	.85	.82	.82
Openness	.94	.94	.94	.94	.92
Neuroticism	.86	.85	.83	.80	.80
Values					
Prosocial	.71	.71	.70	.71	.71
Restrictive Conformity	.79	.77	.78	.81	.79
Enjoyment	.71	.70	.68	.68	.68
Self-Direction	.67	.68	.67	.68	.67
Maturity	.72	.74	.73	.74	.73
Security	.71	.70	.69	.73	.71
Achievement	.77	.73	.70	.71	.70

Table S5
Cross-Lagged Parameter Estimates for Personality Traits and Values (cf. Figure 2, Paths b *and* c*, and Table 2, Right Panel)*

	Trait → Value				Value → Trait			
Trait–Value Pair	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.
Agreeableness & Prosocial								
Cross-Lag 1	.59	.03	< .001	.32	.10	.01	< .001	.18
Cross-Lag 2	.65	.03	< .001	.36	.06	.01	< .001	.09
Cross-Lag 3	.58	.03	< .001	.35	.06	.01	< .001	.10
Cross-Lag 4	.61	.03	< .001	.38	.06	.01	< .001	.09
Conscientiousness & Conformity								
Cross-Lag 1	.56	.04	< .001	.25	.09	.01	< .001	.19
Cross-Lag 2	.60	.04	< .001	.28	.05	.01	< .001	.11
Cross-Lag 3	.59	.04	< .001	.29	.04	.01	< .001	.07
Cross-Lag 4	.60	.03	< .001	.30	.05	.01	< .001	.10
Extraversion & Enjoyment								
Cross-Lag 1	.25	.02	< .001	.17	.05	.01	< .001	.07
Cross-Lag 2	.24	.02	< .001	.16	.03	.01	< .001	.05
Cross-Lag 3	.24	.02	< .001	.16	.03	.01	< .001	.04
Cross-Lag 4	.25	.02	< .001	.18	.03	.01	< .001	.04
Openness & Self-Direction								
Cross-Lag 1	.29	.02	< .001	.19	.08	.01	< .001	.12
Cross-Lag 2	.33	.03	< .001	.21	.05	.01	< .001	.07
Cross-Lag 3	.35	.03	< .001	.23	.02	.01	.003	.04
Cross-Lag 4	.36	.03	< .001	.24	.05	.01	< .001	.07

Note. Conformity = Restrictive Conformity, SE = Standard error, Unst. = Unstandardized, St. = Standardized.

Table S6

Cross-Lagged Parameter Estimates for Personality Traits, Values, and Well-Being/Self-Esteem (cf. Figure 3, Paths d *and* f*, and Table 3)*

	Positive Affect				Negative Affect				Life Satisfaction				Self-Esteem			
Trait–Value Pair	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.
Agreeableness & Prosocial																
Trait → W/S CL1	.23	.04	< .001	.08	-.50	.04	< .001	-.15	.17	.04	< .001	.05	.26	.03	< .001	.12
Trait → W/S CL2	.22	.04	< .001	.08	-.50	.04	< .001	-.16	.19	.03	< .001	.06	.26	.03	< .001	.12
Trait → W/S CL3	.21	.04	< .001	.08	-.33	.04	< .001	-.11	.18	.04	< .001	.06	.15	.03	< .001	.07
Trait → W/S CL4	.14	.04	< .001	.05	-.48	.04	< .001	-.16	.26	.03	< .001	.09	.23	.03	< .001	.10
Value → W/S CL1	.15	.02	< .001	.10	.06	.02	.001	.04	.00	.02	.949	.00	.01	.01	.619	.01
Value → W/S CL2	.09	.02	< .001	.06	.05	.02	.003	.04	.03	.02	.033	.02	.00	.01	.978	.00
Value → W/S CL3	.13	.02	< .001	.08	.02	.02	.226	.02	-.01	.02	.676	-.01	-.01	.01	.660	-.01
Value → W/S CL4	.17	.02	< .001	.11	.05	.02	.009	.03	.01	.02	.584	.01	-.01	.01	.274	-.01
Conscientiousness & Conformity																
Trait → W/S CL1	.41	.05	< .001	.13	-.95	.05	< .001	-.27	.28	.04	< .001	.10	.58	.04	< .001	.25
Trait → W/S CL2	.36	.04	< .001	.13	-.83	.05	< .001	-.25	.24	.03	< .001	.10	.58	.04	< .001	.26
Trait → W/S CL3	.50	.04	< .001	.18	-.76	.05	< .001	-.23	.23	.03	< .001	.09	.49	.04	< .001	.21
Trait → W/S CL4	.42	.04	< .001	.16	-.88	.05	< .001	-.26	.25	.03	< .001	.10	.59	.04	< .001	.26
Value → W/S CL1	.13	.02	< .001	.11	.12	.01	< .001	.11	-.02	.01	.073	-.02	-.02	.01	.005	-.03
Value → W/S CL2	.08	.01	< .001	.08	.08	.01	< .001	.07	.01	.01	.465	.01	-.04	.01	< .001	-.05
Value → W/S CL3	.12	.02	< .001	.10	.06	.01	< .001	.06	-.01	.01	.374	-.01	-.03	.01	< .001	-.04
Value → W/S CL4	.12	.02	< .001	.10	.08	.02	< .001	.07	-.01	.01	.604	-.01	-.04	.01	< .001	-.05
Extraversion & Enjoyment																
Trait → W/S CL1	.25	.02	< .001	.13	-.10	.02	< .001	-.05	.21	.02	< .001	.11	.21	.02	< .001	.15
Trait → W/S CL2	.26	.02	< .001	.15	-.11	.02	< .001	-.06	.19	.02	< .001	.10	.16	.02	< .001	.11
Trait → W/S CL3	.21	.02	< .001	.13	-.07	.02	.001	-.04	.16	.02	< .001	.09	.15	.02	< .001	.11
Trait → W/S CL4	.27	.02	< .001	.17	-.10	.02	< .001	-.06	.21	.02	< .001	.11	.18	.02	< .001	.13
Value → W/S CL1	.10	.02	< .001	.06	-.02	.02	.409	-.01	.02	.02	.242	.01	.05	.01	< .001	.05
Value → W/S CL2	.07	.02	< .001	.05	-.02	.02	.250	-.01	.05	.02	.007	.03	.02	.01	.101	.02
Value → W/S CL3	.10	.02	< .001	.06	-.03	.02	.196	-.02	.02	.02	.280	.01	-.02	.01	.202	-.02
Value → W/S CL4	.09	.02	< .001	.06	-.04	.02	.059	-.02	.01	.02	.783	.00	.01	.01	.361	.01
Openness & Self-Direction																
Trait → W/S CL1	.18	.04	< .001	.06	-.48	.05	< .001	-.14	.08	.03	< .001	.04	.22	.03	< .001	.12
Trait → W/S CL2	.18	.04	< .001	.06	-.43	.05	< .001	-.13	.04	.02	.082	.02	.28	.03	< .001	.14
Trait → W/S CL3	.10	.04	.025	.03	-.39	.05	< .001	-.12	.07	.03	.007	.03	.22	.03	< .001	.10
Trait → W/S CL4	.05	.04	.231	.02	-.40	.05	< .001	-.12	.10	.03	< .001	.05	.29	.03	< .001	.13

Table S6 (Continued)

	Positive Affect				Negative Affect				Life Satisfaction				Self-Esteem			
Trait–Value Pair	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.
Value → W/S CL1	.20	.02	< .001	.14	.00	.02	.974	.00	-.01	.02	.636	-.01	.00	.01	.790	.00
Value → W/S CL2	.13	.02	< .001	.09	.00	.02	.892	.00	.05	.02	.006	.03	.04	.01	.001	.04
Value → W/S CL3	.16	.02	< .001	.10	.00	.02	.847	.00	.00	.02	.871	.00	.01	.01	.713	.00
Value → W/S CL4	.23	.02	< .001	.15	-.02	.02	.246	-.01	.02	.02	.315	.01	.01	.01	.375	.01

Note. CL = Cross-lag, Conformity = Restrictive Conformity, SE = Standard error, Unst. = Unstandardized, St. = Standardized, W/S = Well-Being/Self-Esteem.

Table S7

Cross-Lagged Parameter Estimates for Personality Traits and Well-Being/Self-Esteem (cf. Figure 4, Paths g *and* h*, and Table 4)*

	Positive Affect				Negative Affect				Life Satisfaction				Self-Esteem			
Trait	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.
Agreeableness																
Trait → W/S CL1	.30	.03	< .001	.13	-.40	.04	< .001	-.13	.18	.04	< .001	.06	.29	.03	< .001	.12
Trait → W/S CL2	.25	.03	< .001	.11	-.43	.04	< .001	-.14	.24	.04	< .001	.08	.32	.03	< .001	.14
Trait → W/S CL3	.23	.03	< .001	.11	-.27	.04	< .001	-.10	.21	.04	< .001	.07	.20	.03	< .001	.09
Trait → W/S CL4	.23	.03	< .001	.11	-.39	.04	< .001	-.14	.31	.03	< .001	.10	.27	.03	< .001	.12
W/S → Trait CL1	.06	.01	< .001	.12	-.03	.00	< .001	-.07	.02	.00	< .001	.07	.04	.01	< .001	.10
W/S → Trait CL2	.03	.01	< .001	.06	-.03	.00	< .001	-.08	.01	.00	< .001	.04	.04	.01	< .001	.09
W/S → Trait CL3	.03	.01	< .001	.07	-.02	.00	< .001	-.07	.01	.00	< .001	.04	.05	.01	< .001	.10
W/S → Trait CL4	.03	.01	< .001	.07	-.02	.00	< .001	-.07	.02	.00	< .001	.04	.04	.01	< .001	.10
Conscientiousness																
Trait → W/S CL1	.38	.03	< .001	.17	-.71	.05	< .001	-.21	.28	.04	< .001	.10	.51	.03	< .001	.23
Trait → W/S CL2	.33	.03	< .001	.16	-.72	.05	< .001	-.23	.31	.03	< .001	.11	.52	.03	< .001	.24
Trait → W/S CL3	.44	.04	< .001	.20	-.64	.05	< .001	-.20	.29	.04	< .001	.10	.44	.04	< .001	.19
Trait → W/S CL4	.39	.03	< .001	.18	-.77	.05	< .001	-.24	.32	.04	< .001	.11	.54	.04	< .001	.24
W/S → Trait CL1	.05	.01	< .001	.11	-.04	.00	< .001	-.12	.04	.00	< .001	.09	.09	.01	< .001	.19
W/S → Trait CL2	.03	.01	< .001	.06	-.03	.00	< .001	-.08	.02	.00	< .001	.07	.08	.01	< .001	.17
W/S → Trait CL3	.02	.01	< .001	.05	-.03	.00	< .001	-.09	.03	.00	< .001	.07	.09	.01	< .001	.20
W/S → Trait CL4	.04	.01	< .001	.08	-.03	.00	< .001	-.10	.03	.00	< .001	.09	.09	.01	< .001	.20
Extraversion																
Trait → W/S CL1	.28	.02	< .001	.15	-.12	.02	< .001	-.06	.22	.02	< .001	.11	.21	.02	< .001	.16
Trait → W/S CL2	.29	.02	< .001	.16	-.12	.02	< .001	-.07	.21	.02	< .001	.10	.18	.02	< .001	.14
Trait → W/S CL3	.24	.03	< .001	.14	-.09	.02	< .001	-.05	.17	.02	< .001	.09	.18	.02	< .001	.13
Trait → W/S CL4	.31	.02	< .001	.18	-.12	.02	< .001	-.07	.21	.02	< .001	.11	.19	.02	< .001	.15
W/S → Trait CL1	.05	.01	< .001	.08	-.02	.01	< .001	-.03	.04	.01	< .001	.08	.13	.01	< .001	.15
W/S → Trait CL2	.03	.01	< .001	.05	-.02	.01	< .001	-.04	.03	.01	< .001	.06	.10	.01	< .001	.12
W/S → Trait CL3	.02	.01	< .001	.04	-.02	.01	.002	-.03	.03	.01	< .001	.05	.09	.01	< .001	.11
W/S → Trait CL4	.04	.01	< .001	.07	-.02	.01	< .001	-.03	.04	.01	< .001	.07	.08	.01	< .001	.11
Openness																
Trait → W/S CL1	.23	.04	< .001	.07	-.47	.04	< .001	-.14	.11	.03	< .001	.04	.26	.03	< .001	.13
Trait → W/S CL2	.22	.04	< .001	.07	-.45	.05	< .001	-.13	.09	.03	.002	.04	.28	.03	< .001	.14
Trait → W/S CL3	.14	.05	.002	.04	-.40	.05	< .001	-.12	.10	.03	.002	.04	.23	.03	< .001	.11
Trait → W/S CL4	.15	.04	< .001	.04	-.42	.05	< .001	-.12	.15	.03	< .001	.06	.32	.03	< .001	.15

Table S7 (Continued)

	Positive Affect				Negative Affect				Life Satisfaction				Self-Esteem			
Trait	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.
W/S → Trait CL1	.03	.00	< .001	.09	-.02	.00	< .001	-.06	.03	.01	< .001	.06	.08	.01	< .001	.15
W/S → Trait CL2	.02	.00	< .001	.05	-.02	.00	< .001	-.05	.01	.00	.102	.02	.05	.01	< .001	.10
W/S → Trait CL3	.02	.00	< .001	.05	-.01	.00	< .001	-.04	.01	.00	.005	.03	.06	.01	< .001	.13
W/S → Trait CL4	.02	.00	< .001	.07	-.01	.00	< .001	-.05	.03	.01	< .001	.07	.07	.01	< .001	.15
Neuroticism																
Trait → W/S CL1	-.27	.03	< .001	-.14	.67	.03	< .001	.33	-.63	.03	< .001	-.28	-4.08	.17	< .001	-.27
Trait → W/S CL2	-.29	.03	< .001	-.15	.64	.03	< .001	.31	-.63	.03	< .001	-.27	-3.91	.18	< .001	-.26
Trait → W/S CL3	-.27	.03	< .001	-.14	.58	.03	< .001	.30	-.53	.03	< .001	-.24	-3.60	.18	< .001	-.24
Trait → W/S CL4	-.27	.02	< .001	-.15	.60	.03	< .001	.32	-.55	.03	< .001	-.25	-3.52	.17	< .001	-.24
W/S → Trait CL1	-.06	.01	< .001	-.10	.07	.01	< .001	.14	-.10	.01	< .001	-.23	-.02	.00	< .001	-.22
W/S → Trait CL2	-.04	.01	< .001	-.08	.04	.01	< .001	.08	-.06	.01	< .001	-.13	-.02	.00	< .001	-.22
W/S → Trait CL3	-.05	.01	< .001	-.08	.07	.01	< .001	.13	-.07	.01	< .001	-.15	-.02	.00	< .001	-.21
W/S → Trait CL4	-.05	.01	< .001	-.10	.07	.01	< .001	.13	-.08	.01	< .001	-.16	-.01	.00	< .001	-.20

Note. CL = Cross-lag, SE = Standard error, Unst. = Unstandardized, St. = Standardized, W/S = Well-Being/Self-Esteem. The estimates for the Neuroticism–Self Esteem model are from analyses of observed scores because the model using latent scores was non-admissible (see text and Figure S1).

Table S8

Cross-Lagged Parameter Estimates for Values and Well-Being/Self-Esteem (cf. Figure 4, Paths g *and* h*, and Table 5)*

	Positive Affect				Negative Affect				Life Satisfaction				Self-Esteem			
Value	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.
Prosocial																
Value → W/S CL1	.19	.02	< .001	.13	-.06	.02	< .001	-.04	.04	.01	.009	.03	.06	.01	< .001	.06
Value → W/S CL2	.14	.02	< .001	.09	-.08	.02	< .001	-.06	.08	.02	< .001	.06	.06	.01	< .001	.06
Value → W/S CL3	.16	.02	< .001	.11	-.07	.02	< .001	-.05	.04	.02	.017	.03	.04	.01	.003	.04
Value → W/S CL4	.21	.02	< .001	.13	-.08	.02	< .001	-.06	.08	.02	< .001	.05	.05	.01	< .001	.04
W/S → Value CL1	.09	.01	< .001	.14	-.04	.01	< .001	-.05	.07	.01	< .001	.09	.12	.02	< .001	.10
W/S → Value CL2	.08	.01	< .001	.11	-.06	.01	< .001	-.07	.06	.01	< .001	.08	.15	.01	< .001	.14
W/S → Value CL3	.08	.01	< .001	.13	-.07	.01	< .001	-.09	.05	.01	< .001	.07	.14	.01	< .001	.14
W/S → Value CL4	.09	.01	< .001	.15	-.05	.01	< .001	-.07	.06	.01	< .001	.09	.16	.01	< .001	.17
Restrictive Conformity																
Value → W/S CL1	.18	.01	< .001	.18	.00	.01	.876	.00	.03	.01	.026	.02	.03	.01	< .001	.05
Value → W/S CL2	.13	.01	< .001	.13	-.02	.01	.079	-.02	.05	.01	< .001	.05	.03	.01	< .001	.04
Value → W/S CL3	.17	.02	< .001	.16	-.02	.01	.248	-.02	.02	.01	.087	.02	.02	.01	.009	.03
Value → W/S CL4	.19	.02	< .001	.18	-.02	.01	.115	-.02	.04	.01	.003	.03	.03	.01	< .001	.04
W/S → Value CL1	.14	.01	< .001	.13	-.02	.01	.206	-.01	.06	.01	< .001	.07	.13	.02	< .001	.08
W/S → Value CL2	.10	.01	< .001	.10	-.01	.01	.479	-.01	.04	.01	< .001	.05	.13	.02	< .001	.08
W/S → Value CL3	.11	.01	< .001	.12	-.03	.01	.019	-.03	.07	.01	< .001	.08	.15	.02	< .001	.10
W/S → Value CL4	.14	.01	< .001	.15	-.04	.01	.002	-.04	.07	.01	< .001	.08	.19	.02	< .001	.14
Enjoyment																
Value → W/S CL1	.16	.02	< .001	.11	-.05	.02	.009	-.03	.07	.02	< .001	.05	.12	.01	< .001	.11
Value → W/S CL2	.13	.02	< .001	.09	-.07	.02	< .001	-.04	.10	.02	< .001	.07	.07	.02	< .001	.06
Value → W/S CL3	.15	.02	< .001	.11	-.06	.02	.003	-.04	.07	.02	< .001	.04	.02	.02	.100	.02
Value → W/S CL4	.15	.02	< .001	.11	-.07	.02	< .001	-.05	.06	.02	< .001	.04	.06	.01	< .001	.06
W/S → Value CL1	.11	.01	< .001	.15	-.03	.01	< .001	-.05	.09	.01	< .001	.13	.18	.02	< .001	.18
W/S → Value CL2	.08	.01	< .001	.11	-.05	.01	< .001	-.07	.07	.01	< .001	.11	.18	.01	< .001	.19
W/S → Value CL3	.09	.01	< .001	.12	-.03	.01	< .001	-.05	.07	.01	< .001	.10	.16	.01	< .001	.18
W/S → Value CL4	.10	.01	< .001	.14	-.05	.01	< .001	-.07	.08	.01	< .001	.12	.18	.01	< .001	.21
Self-Direction																
Value → W/S CL1	.23	.02	< .001	.17	-.06	.02	< .001	-.04	.02	.02	.280	.01	.09	.01	< .001	.09
Value → W/S CL2	.16	.02	< .001	.12	-.06	.02	.001	-.04	.06	.02	< .001	.04	.08	.01	< .001	.08
Value → W/S CL3	.17	.02	< .001	.12	-.04	.02	.021	-.03	.02	.02	.256	.01	.04	.01	.006	.03
Value → W/S CL4	.25	.02	< .001	.18	-.07	.02	< .001	-.05	.06	.02	< .001	.04	.06	.01	< .001	.05

Table S8 (Continued)

	Positive Affect				Negative Affect				Life Satisfaction				Self-Esteem			
Value	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.	Unst.	*SE*	*p*	St.
W/S → Value CL1	.14	.01	< .001	.19	-.03	.01	< .001	-.04	.06	.01	< .001	.08	.17	.02	< .001	.16
W/S → Value CL2	.10	.01	< .001	.14	-.04	.01	< .001	-.06	.04	.01	< .001	.06	.17	.02	< .001	.17
W/S → Value CL3	.12	.01	< .001	.17	-.05	.01	< .001	-.07	.05	.01	< .001	.08	.18	.01	< .001	.20
W/S → Value CL4	.14	.01	< .001	.20	-.06	.01	< .001	-.08	.07	.01	< .001	.09	.20	.01	< .001	.22
Maturity																
Value → W/S CL1	.23	.02	< .001	.17	-.02	.02	.347	-.01	.03	.02	.109	.02	.09	.01	< .001	.10
Value → W/S CL2	.18	.02	< .001	.13	-.02	.02	.352	-.01	.07	.02	< .001	.04	.06	.01	< .001	.06
Value → W/S CL3	.18	.02	< .001	.12	-.01	.02	.818	.00	.02	.02	.298	.01	.02	.01	.182	.02
Value → W/S CL4	.27	.02	< .001	.19	-.08	.02	.001	-.04	.07	.02	< .001	.04	.07	.01	< .001	.07
W/S → Value CL1	.13	.01	< .001	.19	.00	.01	.590	-.01	.07	.01	< .001	.10	.20	.02	< .001	.17
W/S → Value CL2	.10	.01	< .001	.13	-.03	.01	< .001	-.05	.07	.01	< .001	.11	.21	.02	< .001	.19
W/S → Value CL3	.10	.01	< .001	.14	-.03	.01	< .001	-.06	.06	.01	< .001	.09	.20	.02	< .001	.20
W/S → Value CL4	.12	.01	< .001	.16	-.03	.01	.002	-.04	.06	.01	< .001	.09	.22	.02	< .001	.22
Security																
Value → W/S CL1	.25	.02	< .001	.14	-.11	.02	< .001	-.07	.06	.02	.002	.04	.11	.02	< .001	.10
Value → W/S CL2	.21	.02	< .001	.13	-.13	.02	< .001	-.09	.10	.02	< .001	.06	.10	.02	< .001	.08
Value → W/S CL3	.24	.03	< .001	.14	-.09	.02	< .001	-.07	.05	.02	.005	.04	.04	.01	.005	.04
Value → W/S CL4	.31	.03	< .001	.17	-.14	.02	< .001	-.09	.09	.02	< .001	.05	.10	.02	< .001	.08
W/S → Value CL1	.11	.01	< .001	.17	-.05	.01	< .001	-.07	.08	.01	< .001	.12	.16	.02	< .001	.16
W/S → Value CL2	.08	.01	< .001	.13	-.06	.01	< .001	-.09	.08	.01	< .001	.12	.18	.02	< .001	.18
W/S → Value CL3	.09	.01	< .001	.15	-.08	.01	< .001	-.13	.08	.01	< .001	.13	.19	.02	< .001	.22
W/S → Value CL4	.12	.01	< .001	.22	-.05	.01	< .001	-.09	.06	.01	< .001	.12	.20	.01	< .001	.26
Achievement																
Value → W/S CL1	.32	.03	< .001	.19	.12	.03	< .001	.06	.07	.02	.003	.04	.08	.02	< .001	.06
Value → W/S CL2	.22	.03	< .001	.13	.09	.02	< .001	.05	.07	.02	< .001	.04	.03	.02	.033	.03
Value → W/S CL3	.24	.03	< .001	.15	.09	.02	< .001	.05	.01	.02	.763	.00	.01	.02	.680	.01
Value → W/S CL4	.31	.03	< .001	.19	.07	.02	.002	.04	.05	.02	.038	.02	.04	.02	.012	.03
W/S → Value CL1	.09	.01	< .001	.15	.03	.01	< .001	.06	.03	.01	< .001	.06	.06	.01	< .001	.07
W/S → Value CL2	.06	.01	< .001	.10	.01	.01	.460	.01	.03	.01	< .001	.06	.07	.01	< .001	.08
W/S → Value CL3	.07	.01	< .001	.11	.02	.01	.002	.04	.03	.01	< .001	.05	.06	.01	< .001	.07
W/S → Value CL4	.09	.01	< .001	.14	.02	.01	.030	.03	.04	.01	< .001	.07	.08	.01	< .001	.10

Note. CL = Cross-lag, SE = Standard error, Unst. = Unstandardized, St. = Standardized, W/S = Well-Being/Self-Esteem.

Table S9
Univariate Stability Models of Well-Being and Self-Esteem (Estimated as in Figure 1)

	Model Fit					Stability Coefficients				
	χ^2	*df*	TLI	CFI	RMSEA	T1	T2	T3	T4	T5
Positive Affect	39.650	15	.998	1	.012	.71	.68	.69	.66	.66
Negative Affect	46.413	15	.998	.999	.013	.70	.67	.66	.66	.65
Life Satisfaction	201.714	15	.988	.997	.032	.73	.68	.68	.66	.65
Self-Esteem	141.353	15	.989	.997	.026	.80	.76	.73	.69	.70

Note. T1 to T5 = Measurement time points.

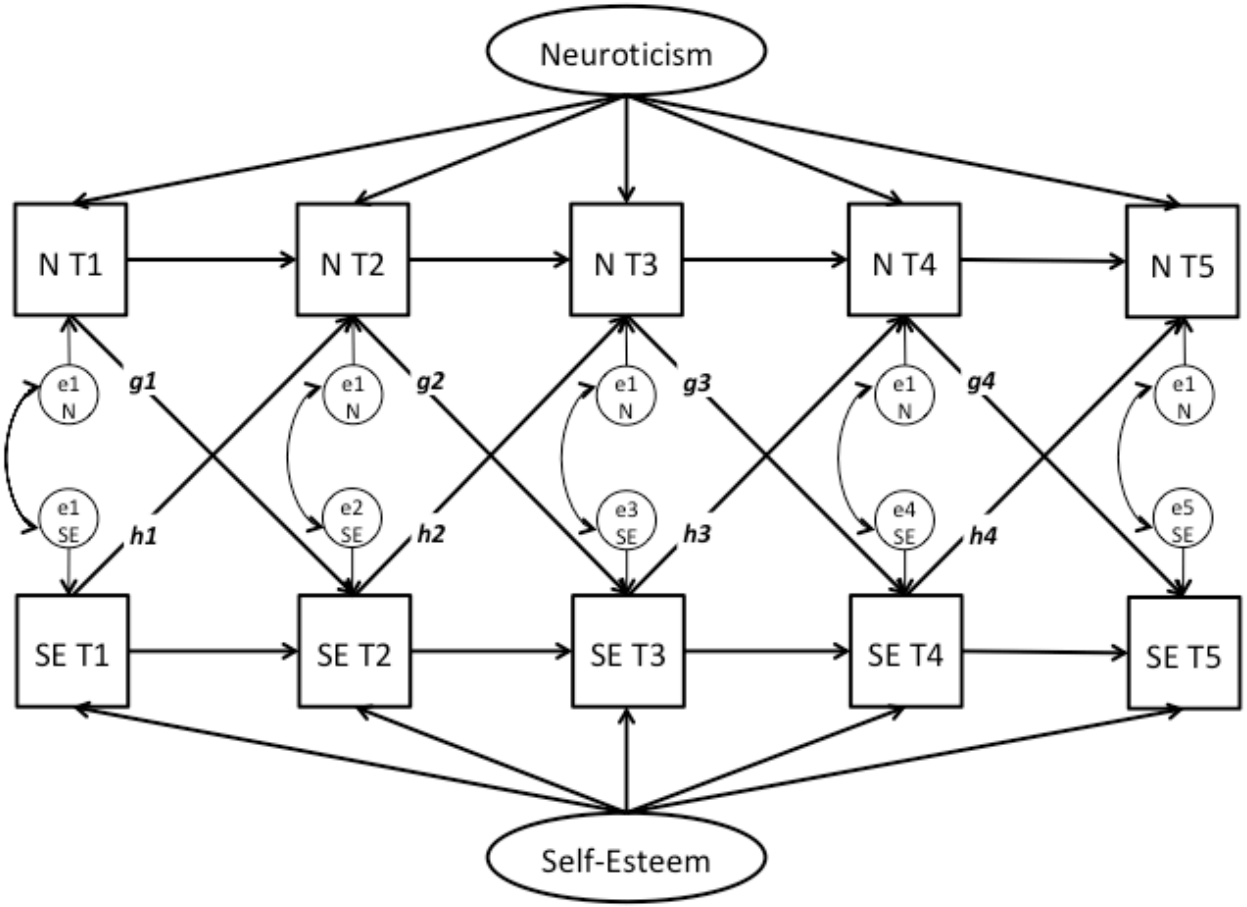

Figure S1. Model for Neuroticism and self-esteem in observed scores. Paths *g* and *h* denote the cross-lagged effects of Neuroticism and self-esteem, respectively.

[Correction Notice: An Erratum for this article was reported online in Journal of Personality and Social Psychology on Apr 4 2019 (see record 2019-18472-001). In the article, the stability model is referred to incorrectly as trait-state error model in the abstract, twice in the main body of the article, and in the Table 2 Note. Corrected versions of the fourth sentence in the abstract, the first sentence of the Analysis Outline section, and the first sentence of the Table 2 Note are provided in the erratum. The Kenny & Zautra (1995) reference has been deleted from the text and References list, and Steyer & Schmitt (1994) was added to the text and References list. All versions of this article have been corrected.]