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OF PERSONALITY: IMPLICATIONS FOR WELL-BEING

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INDIVIDUAL DIFFERENCES IN WITHIN-PERSON VARIABILITY
OF PERSONALITY: IMPLICATIONS FOR WELL-BEING

By

Brendan Michael Baird

A THESIS

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ABSTRACT

INDIVIDUAL DIFFERENCES IN WITHIN-PERSON VARIABILITY OF PERSONALITY: IMPLICATIONS FOR WELL-BEING

By

Brendan Michael Baird

Although many researchers consider personality variability to be an individual difference, there is disagreement about the implications of inconsistency for the individual. Some believe that inconsistency is maladaptive, whereas others believe that variability may provide a social advantage. In addition, similar measures of consistency often fail to converge. This paper addresses these issues by measuring variability using two assessment strategies: a standard self-concept differentiation (SCD) scale across several social role contexts and an experience sampling measure of self-perceived personality over actual situations. Across two studies, SCD was related to higher levels of negative affect and lower levels of positive affect and life satisfaction. However, factor-analytic SCD scores are confounded by theoretically irrelevant sources of response variance. Calculating alternative indexes of cross-role variability yielded very different patterns of relationships with well-being. In addition, only one of those indexes was able to predict actual changes in self-perceptions from experience sampling methods in Study 2. These momentary changes in self-perceptions were not significantly associated with any well-being measures.

To my parents, Mary Pat and Greg Baird.

ACKNOWLEDGEMENTS

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INTRODUCTION

Although there has been some evidence that variability in individual differences may be adaptive (Snyder, 1974, 1979; Paulhus & Martin, 1988), many argue that personality, by definition, must maintain some degree of stability. Researchers search for consistent patterns in peoples' behavior that may be attributable to some stable underlying disposition. As such, many theorists view inconsistency as abnormal or as a sign of maladjustment (Lecky, 1945; Block, 1961; Donahue, Robins, Roberts, & John, 1993; McReynolds, Altrocchi, & House, 2000; Diehl, Hastings, & Stanton, 2001). Assumptions about the consistent nature of personality predate modern trait theories. Lecky (1945) argued for a theory of personality that was based on the notion that self-consistency is the most basic and universal human motive. In direct response to other motive-based theories of psychosexual drives that were popular at the time, Lecky suggested that all of an individual's values are organized into a single system, and that all behavior is motivated by the need for unification of these values. Finally, Lecky argued that self-consistency is a subjective experience and therefore cannot be directly inferred from behavioral observation.

Historically, trait theories of personality have been rooted in assumptions about stable dispositions or temperaments that guide behavior (McCrae & Costa, 1997). Some theorists have even argued that these structures originate in heritable physiological systems within the individual (Eysenck, 1981; Gray, 1981). As such, many trait psychologists have tended to look upon behavioral inconsistency as an indication of pathology (Block, 1961; Donahue, Robins, Roberts, & John, 1993). This

conceptualization has often been supported in research. In perhaps the first empirical investigation into the nature of personality variability, Block (1961) hypothesized that people located at *either* pole of the variability dimension -- those who are either inconsistent or rigid -- would be socially disadvantaged. He tested this curvilinear relationship between variability and psychological adjustment by asking participants to describe their interpersonal behavior across eight relationships. Instead of finding the relationship he expected, Block found that subjects with extreme variability in their personality across their relationships possessed higher levels of maladjustment. Those who exhibited extreme stability, or rigidity, were no less well-adjusted than those with moderate amounts of variability. This study became part of the foundation for several subsequent theories of cross-situational change in personality.

Recently, Fleeson (2001) suggested that variability is actually a component of personality. He proposed a conceptualization of traits as distributions of state expressions of those traits. First, he argued that most people regularly express all levels of all traits, and that situational factors determine which level will be expressed at a given moment. Second, although behaviors are difficult to predict for a single occasion, the mean of an individual's distribution of trait expression is stable and predictable. Finally, Fleeson suggested that other characteristics of these within-person distributions are also meaningful. In particular, the standard deviation of a distribution may be used as a measure of cross-situational consistency. Using hand-held computers to measure personality across situations, Fleeson found high within-person variability in trait expression. Furthermore, he found stable individual differences in personality variability.

Theories of consistency have begun to find application in other disciplines within personality psychology. Donahue and her colleagues (Donahue, et. al., 1993; also see Diehl et al., 2001) expanded on the work of Lecky (1945) and Block (1961) by examining the relationship between consistency in the self-concept and psychological well-being. According to Donahue et. al. (1993), the self-concept comprises multiple components or identities, and individuals differ in the degree to which these identities are distinct or differentiated from each other. Self-Concept Differentiation (SCD) is an individual difference that reflects the degree to which ones' numerous social identities are differentiated from each other rather than integrated into a unitary self. People who are differentiated are believed to have chronic problems with self-image and social relationships, thus predisposing them to greater levels of stress and negative emotions.

In order to measure self-concept differentiation, Donahue et al. (1993) assessed self-reported personality across five social roles: student, friend, romantic partner, son/daughter, and worker. Participants were first asked to rate themselves on each of 60 attributes for how they behaved "in general". They were then asked to rate themselves on these same adjectives for how they behave in each social role. People who have consistent self-concepts should report expressing the same amount of each characteristic across every role. For example, a consistent person would rate themselves as a 4 on a 7-point "assertive" scale each time. If a person is not consistent, they may rate themselves as being a 2 on assertiveness in some roles and a 6 or 7 in others. Donahue et al. computed an SCD score by individually factor analyzing each person's personality scores across all five social roles. The first factor that emerged from a principal components analysis reflects the amount of variance that is shared across roles or, in other words, the

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amount of consistency. Therefore, the amount of variance that cannot be accounted for by this first factor reflects inconsistency, or SCD. Replicating Block's (1961) findings, Donahue et. al. (1993) found that self-concept differentiation was positively related to maladjustment across several measures of well-being.

The individual difference of SCD continues to be a popular topic of research. Recently, several studies have found support for the SCD/well-being relation (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997; Diehl et al., 2001; Suh, 2002). Sheldon et al. (1997) examined the role of subjective authenticity in self-reports of the Big Five and in ratings of satisfaction across specific social roles. They found evidence that authenticity may mediate the SCD/well-being relation. Diehl et al. (2001) found that the SCD/well-being relation increases in strength as people age. Suh (2002) argued that the association is due to norms of individuation that are found in Western cultures. He found support for his argument by demonstrating that, while there are greater levels of SCD in Korea, the association with well-being does not exist there. These studies have highlighted several intervening variables which account, at least partially, for the association between SCD and well-being. However, there hasn't been enough empirical research to fully explain the processes which underlie this association.

Donahue et al. (1993) argued that individual differences in personality traits that are associated with SCD might explain why some people are differentiated. In particular, they found that the traits of Neuroticism, Agreeableness, and Conscientiousness were moderately correlated with SCD. They interpreted this pattern of associations as evidence that people high in SCD have problems respecting and following social norms and, in extreme cases, develop antisocial and delinquent behavior patterns (Donahue et

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al., 1993; p.838). These problems then lead to conflicts in the family, and subsequently, to a failure to integrate their different relationship experiences into a coherent sense of self (p.844). One question may be whether it is SCD, or just the combination of low Agreeableness and Conscientiousness and high Neuroticism that would lead to such outcomes. In fact, issues concerning the measurement properties of SCD have kept these two alternatives from being fully disentangled.

Problems with SCD

Research has shown that an association between SCD and well-being exists. However, there are both theoretical and empirical reasons to doubt the validity of SCD. First, global reports of personality are difficult for respondents to make (Schwarz, Groves, & Schuman, 1998; Lucas & Baird, 2003). This kind of report may be even more difficult to make across several social roles. In particular, such a measure may be severely limited by the respondents' memory of relevant events or situations within each role context (Lucas & Baird, 2003). Memory may be biased by selective recall of positive events, influenced by personal or social expectations and norms for each role, or misguided by confusion about which events or situations belong in specific role categories. In addition, given that there may be roles which a participant enacts less frequently or with greater irregularity than others (i.e. romantic partner versus family member), memory effects may not apply equally to each role in the measure.

A second concern about the validity of SCD is that there is little empirical evidence of its convergence with similar measures. Several recent studies have compared multiple methods of assessing consistency. McReynolds, Altrocchi, and House (2000) developed an explicit measure of self-consistency which assessed the degree to which a

person believed that they were the same across situations or relationships. The authors found a significant moderate correlation of .41 between their measure of self-pluralism and SCD. However, Campbell, Assanand, and DiPaula (2003) used a measure similar to Donahue et al.'s SCD and found that this measure was only significantly correlated with one of the four other scales in their study. In yet another study, Diehl et al. (2001) compared standard SCD scores with scores on another measure developed by Harter and Monsour (as cited in Diehl et al., 2001). They found small correlations between these two measures, and concluded "the two measures did not assess SCD in similar ways." (p.647) In addition, they found that the Harter and Monsour measure was only associated with one of their 11 well-being indexes. Understanding how and why these similar measures tend to disagree is a major goal of this paper.

A final concern, which may explain the problems described in the previous paragraph, deals with the calculation of SCD. The factor-analytic method, first developed by Block, is not clearly interpretable and may combine irrelevant sources of item variance with cross-role changes in personality (Locke, 2003). Donahue and others (Suh, 2002; Diehl et al., 2001) have interpreted the SCD measure as an index of "the extent to which an individual's ordering of the attributes from most to least descriptive varies from role to role" or "the mean intercorrelation among the role identities." (Donahue et al., 1993, p.836) While the relationship between this index of variability and well-being is consistent across studies, the calculation of SCD makes interpretation difficult. Is SCD really an index of change? How might item content affect the interpretation of SCD? What can account for the relationships between SCD and other

individual differences? Our first objective is to understand the nature of the variability that is captured in Donahue's SCD.

Principal components analysis will extract a large single factor only if there are strong correlations among variables. In order to have strong correlations, a person must have a small amount of variance within the same item across each role and have a large amount of variance across items within the same role. Table 1 contains an example of a hypothetical case in which two people are equally consistent across roles: both individuals report being more nervous in Role 3 and more talkative in Role 1, but each person changes by only one scale point. In fact, within each item, both people only fluctuate slightly. They have an identical pattern of variance within items across roles and an average within-item standard deviation of .51. In contrast, within each role, Person 1 shows more change across items. In Role 1, she reports being a 5 on "Talkative" and a 1 on "Organized", while Person 2's ratings of those same items are 4 and 2, respectively. The standard deviation across items in Role 1 is 1.81 for Person 1 and 0.83 for Person 2.

Using the factor analytic technique, Person 1 would have a very low differentiation score because the first factor in her data explains almost all of the variance. Her SCD score would be around 6. Person 2 would have a differentiation score of around 30 because only 70 percent of the variance in his responses has been accounted for. According to SCD theory, Person 1's self-concept is more consistent across social roles. However, this conclusion is clearly not supported by the data. It is the large amount of cross-item variability that produces a stronger first factor, not greater cross-role consistency. Judging by item content, cross-item variance simply reflects the

unique patterning of traits within the individual. This source of variance is irrelevant to theories of cross-situational change, and may also be highly sensitive to item scaling.

The fact that factor analytic SCD scores may be determined by people's trait patterns is problematic because these traits are also known to be reliably correlated with well-being. In particular, Extraversion has been linked with positive affectivity and Neuroticism with negative affectivity (Lucas & Diener, 2000). Since cross-item variability represents the patterning of traits within a person, including this source of variance may inflate the association between SCD and well-being. Furthermore, associations that have been found between SCD and personality traits may result from including this trait information in the measure of change. The theory of SCD is fundamentally about response consistency (i.e. cross-role variance), and the way it is measured should clearly reflect it.

Possible Solutions

Several variants of the factor-analytic SCD are possible. For example, Campbell et al. (2003) used bivariate correlations to indicate the amount of agreement, or unity, in the self-concept across roles. Specifically, if a person reported having a similar profile across each role, then the average correlation among the roles would be high. While this index may be more straightforward than principal components analysis, it still suffers from the same confounding effects of cross-item variance. As I discussed above, factor analysis begins with the matrix of correlations among roles, and the eigenvalue of the first principle component is highly related to the average correlation in this matrix (see Campbell et al., 2003). Therefore, the average correlation among roles does not correct for confounding item variance, and is not a suitable alternative to factor analysis.

As part of their landmark study, Donahue et al. (1993) explored 2 indexes of variability from their self-concept differentiation measure. The first was the factor analytic score described above. The second was the average standard deviation of responses on each attribute across roles. The authors suggested that this latter measure represented "the absolute differences among the (role) identities" (Footnote 1, p.836). Based on the strong correlations that were found between these indexes, Donahue et al. (1993) decided to only report results from the factor-analytic scores in their paper. Furthermore, the authors reported that the two seemed to be similarly related to their well-being variables. We feel that it is important to understand how these indexes differ theoretically. In fact, unless item means are all normally distributed, this alternative approach may not entirely account for the effect of mean scores.

Because SCD is constructed from repeated measures, the standard deviation of an item across roles is tied to the mean score for that item. For example, in order for a person to have an average score of 0 on the item Trustful, they must rate themselves as a 0 on that item in every role. Even if they report being a 1 in a single role, their average will be above 0. Therefore, variability can only occur in the middle of the scale. Figure 1 contains an example of a scatter plot of mean scores and standard deviations across roles for the item "Trustful". The correlation between the mean and standard deviation is -.54, reflected in the dashed line. However, the first thing of note is that the overall distribution of means is skewed, with most people averaging a 2 or above. In addition, those averages falling between 1 and 3 have the highest standard deviations. These two conditions create a situation where there are more observations at the high end of the "Trustful" dimension, and these individuals are also, by definition, more consistent. In

other words, only the individuals lower on trust are variable because they fall in the middle of the scale. There are very few people who are (consistently) not trustful at all. Therefore, unless the distribution of item means is approximately normal, the standard deviation will appear to be a linear effect of the mean, and will contain information about the trait dimension that is measured by that item.

Since item means are so closely tied to raw standard deviations, the effect of trait associations between personality and affect may still be driving the relationship between SCD and well-being. The theoretical quadratic effect of mean scores on standard deviations can be corrected for to produce another alternative index of variability. This can be done by computing ordinary least squares regression equations and saving the residual variance in standard deviations for each item. The average of these residuals represents the amount of raw variability in responses across roles, after accounting for non-normality in item distributions. With this index, we can determine whether, at any given mean score, a person with that score who has a lot of response variance is any different from someone with that score who has very little response variance. In other words, we can tell whether a consistent "2" is different from a variable "2". According to SCD theory, a consistent "2" should be more well-adjusted.

Testing predictive validity

Most of the research on SCD to date has focused on the pattern of correlations among individual differences related to SCD (i.e. personality, self-esteem, positive and negative affect). However, very few studies have tested the ability of SCD to predict relevant outcomes. In particular, it is important to establish SCD as a measure of inconsistent self-perceptions in order to accurately interpret the correlations with other

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scales. One study that tested a similar measure in this way was McReynolds et al.(2000). They examined the relationship between scores on an explicit measure of self-consistency and within-person variability of other measures over time. Using a 75-item annual check-list of life events, they found that self-pluralism (SPS) predicted self-reported life changes over an 8-year period. In other words, people high on SPS were also more likely to experience meaningful life changes. In addition, they found that SPS was related to variability in well-being, depression, and body weight, over that same period. Therefore, explicitly asking participants how much they change predicted other relevant measures of change. Because SCD is a construct that is similar to self-pluralism, we should expect it to also predict meaningful changes in a person's life.

According to SCD theory, people who are highly differentiated change the way that they perceive themselves based upon changing situational contexts. Donahue et al. (1993) argued that SCD may result from "oversensitivity to the expectations and demands of others" (p.845). This greater susceptibility to situational influences may be associated with a lack of a true sense of self. Because people with high SCD lack a clear definition of self, we should expect these people to report a greater variety of self-perceptions across different situations. Those who are low in SCD should not see themselves differently across these situations because their definition of themselves does not change based upon the social roles they enact.

As a test of the predictive validity of SCD, as well as the alternatives discussed above, I will see how these scores relate to how people report on their behavior as it is happening. By using diary methods, I can assess self-perceptions over several situations and participants can provide descriptions of the kinds of roles they are in at those times.

This approach may be less dependent upon the specificity of the respondents' memories because reports are made in closer temporal proximity to relevant experiences (Bolger, Davis, & Rafaeli, 2003). In this way, the same process of personality change can be assessed without relying on participants' ability to accurately recall events or imagine what they might be like in a role that they may not fulfill. Using this technique, I will test whether SCD can predict variability in self-perceptions over on-going experiences. At the same time, I will be able to evaluate the alternative analyses to find out if prediction improves as the measure is refined.

Present Studies

High scores on SCD are supposed to indicate psychological "fragmentation", and be "associated with intrapersonal and interpersonal difficulties marked by emotional distress, rejection of social norms, and volatile relationships in love and work" (Donahue et al., 1993; p.859). However, ambiguities in the measure make it difficult to understand exactly why SCD is related to adjustment. In addition, studies of SCD generally haven't addressed specifically how this construct relates to changes in self-perceptions over time. As a result, many important issues still require attention. These include: (1) why similar measures of consistency have different relationships with well-being (Diehl et al., 2001), and (2) how well reports of consistency at the level of the self-concept predict consistency in self-perceptions of personality across actual situations. It is clear that cross-item variance is irrelevant to SCD theory, and that this variance reflects trait information. It also seems plausible that cross-role variance is closely tied to trait information as well. However, it is important to find out what effect this information has

in the SCD/well-being relation. Furthermore, it is unclear whether this information can be controlled for without drastically changing the instrument.

The two studies I present here were conducted for several purposes. Study 1 was designed to replicate the association between SCD and well-being and to explore this relationship in greater detail. Specifically, I wanted to examine the measurement properties of SCD to assess the sources of variance that contribute to it. In addition, I developed an alternative method of computing SCD in order to test the hypothesis that the relationship between SCD and well-being is the result of a measurement artifact. Then, in Study 2, I compared the standard, contextual self-report method of assessing SCD with an experience sampling measure (ESM) of momentary self-perceptions from actual situations. Specifically, I was interested to see if self-perceptions of personality variability, as measured by the standard SCD scale, could predict momentary changes in self-perceptions. Also, I wanted to explore how these momentary changes are associated with well-being. Even if the two measures of self-concept differentiation are found to be related to one another, it is possible that the two are differentially related to well-being.

The main purpose of Study 1 was to test whether the apparent effect of SCD on well-being is due to reliable associations between personality and affect, rather than to variability per se. The first step was to replicate the standard SCD/well-being relation using the factor analytic SCD measure. Next, I investigated the properties of this scale to show that it includes variance that is irrelevant to self-concept differentiation. I then investigated whether this irrelevant variance inflates the correlation with well-being by testing the strength of the association when more appropriate indexes are used. SCD is supposed to be related to high Neuroticism and low Agreeableness and Conscientiousness. If this is the case, then the relationship between SCD and well-being may not be due to an incoherent self-concept, as much as to underlying personality traits that are known to be related to adjustment.

Method

Participants.

Two-hundred and seventy participants were recruited from introductory psychology courses offered during the fall semester at a large university in the Midwestern United States. Each participant received partial course credit for completing the project. Seventy-seven percent were women and 98% were between 18 and 25 years of age. Seventy-nine percent identified themselves as White/Caucasian, 8% as Asian, 7% as Black/African-American, 1% as Native American, and 5% as a race other than those listed.

Procedure.

Participants reported to a large classroom on campus in groups of 15 to 30. First, participants completed the 50-item International Personality Item Pool (IPIP, Goldberg, 2001), which measures the traits of Extraversion, Neuroticism, Conscientiousness, Agreeableness, and Openness. This measure consists of a number of brief statements, and participants are asked to rate how well each item describes their personalities on a 0-4 scale (i.e., "Am the life of the party", "Worry about things", "Use difficult words", "Like order", "Sympathize with others' feelings"). I also assessed each participant's level of subjective well-being (SWB). Participants were asked to complete the Intensity and Time Affect Survey (ITAS; Diener, Smith, & Fujita, 1995) as an assessment of trait-level affect. This scale consists of 24 moods which are each rated on a 0-4 scale for how commonly they are felt (i.e., Joy, Sadness, Pride, Anger). The ITAS provides estimates of trait positive affect (PA) and negative affect (NA). As a third measure of SWB, I assessed life satisfaction (LS) using the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffen, 1985). This measure consists of 5 statements ("In most ways my life is close to my ideal." "The conditions of my life are excellent." "I am satisfied with my life." "So far I have gotten the important things I want in my life." "If I could live my life over, I would change almost nothing") which are rated on a 0-4 agreement scale.

Finally, participants were asked to complete an SCD measure that was based on Donahue et al.'s (1993) scale. First, participants were asked to report their personality in general, by rating 20 trait adjectives on a 0-4 scale for how well each described them. These adjectives have been used in a previous study by Fleeson (2001) and measured each of the Big Five Traits. Then, for each of 6 social-role conditions (Friend, Romantic

Partner, Family Member, Student, Worker, and Stranger), participants were instructed to first think about how they see themselves in that role. Then they were asked to rate the same 20 adjectives for how well they described them in each role. The stranger social role was included to capture those situations in which the person may be in a social situation, but not with someone they know personally.

Results

Scores for SCD were computed for 264 participants (m =33.34, sd = 16.66). Four participants could not be scored on SCD: two because they provided incomplete data and two because their responses had no variance which made factor analysis impossible. For each participant in the final sample, a principle components analysis was conducted using the social-role conditions as the replications. The percent of variance accounted for by the first extracted factor was subtracted from 100 to yield the index of differentiation. The distribution of SCD scores can be found in Figure 1. Scores for PA ranged from 1.00 to 4.00 (m = 2.83, sd = .61), NA ranged from .06 to 3.63 (m = 1.47, sd = .71), and LS ranged from .00 to 4.00 (m = 2.58, sd = .95).

The first objective was to replicate the relationship between SCD and well-being. As can be seen in the left column of Table 2, SCD was significantly related to all three of the SWB measures. People with high SCD scores reported higher levels of NA and lower levels of PA and LS. These results replicate previous studies that have supported the "fragmentation" theory of within-person variability. Also, replicating previous findings, SCD was negatively related to Extraversion, Agreeableness, and Conscientiousness, and positively related to Neuroticism (line 1 of Table 3). Openness

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was the only trait that was not significantly associated with SCD. These traits were also correlated with the 3 SWB variables (Table 4).

Next we wanted to decompose the SCD score into its specific components. As noted above, a strong first factor will only emerge if there are both low cross-role variance and high cross-item variance in the data. Yet cross-item variance is irrelevant to SCD. To demonstrate this, I computed both the average cross-item standard deviation (m = 1.13, sd = .21) and average cross-role standard deviation (m = .70, sd = .25) for each person. The factor-analytic SCD correlated .79 (p <.01) with cross-role s.d. and .24 (p <.01) with cross-item s.d. In other words, while the factor analytic SCD score is strongly related to cross-role variance, it is also significantly associated with theoretically irrelevant cross-item variance. In addition, cross-item variance was positively correlated with Positive Affect (r = .22, p < .01) and Life Satisfaction (r = .17, p < .01), and negatively correlated with Negative Affect (r = -.27, p < .01).

When we examined item standard deviations (thereby removing cross-item variance from the analyses) cross-role variance was still significantly associated with SWB, albeit to a much lesser degree than the overall SCD (see Table 2). It was positively associated with NA and negatively associated with PA and LS. Whereas the overall pattern was very similar to that of the factor analytic index, the magnitude of the associations decreased considerably. When theoretically irrelevant trait information is removed from the analysis, the result is a weaker association with well-being. In other words, this drop illustrates that trait level associations between personality and affect are confound the factor analytic index of SCD.

Theorists interested in SCD are concerned with variability in the self-concept across roles. The above analyses show that factor analysis of SCD confounds variability with mean levels of traits. Cross-role standard deviations remove some of this confounding effect. However, for the 20 items in our scale, correlations between item means and standard deviations ranged in magnitude from .07 to .54, with an average of .35. Therefore, it is still not clear whether the associations between standard deviations and well-being are due to individual differences in variability, or to associations between traits and well-being.

In order to test this alternative explanation, we calculated a quadratic regression equation for each item predicting cross-role standard deviations from mean scores and squared mean scores. The average effect for the quadratic function of the mean was significant for every item (β *range* = -.79 to -2.38, *average β* = -1.59, *sd* = .43; *t range* = -3.89 to -12.60, *average t* = -7.86, *sd* = 2.61; all *p*'s < .01). An inspection of item mean distributions also confirmed that most of these items were highly skewed.

After calculating the regression equations, we averaged the 20 residual values for each person (*m* = .00, *sd* = .22). As can be seen in Table 5, this corrected standard deviation is very strongly related to the raw standard deviations. However, the corrected standard deviation was not related to any of the SWB measures (NA *r* = .04, n.s.; PA *r* = .03, n.s.; LS *r* = -.02, n.s). The further drop in correlations with SWB indicates that trait information may have been driving the association with well-being even when raw standard deviations were used. Once I controlled for the quadratic effect of mean scores on standard deviations, there was no evidence for a relationship between SCD and well-being.

The corrected standard deviation seems to account for irrelevant variance that is inherent in factor analyses of SCD. As a final test of this, I wanted to see whether Block's (1961) hypothesis of an inverted U-shaped relationship could be supported using the new index. I computed regression equations predicting the 3 SWB variables from corrected standard deviations and the square of those values. A positive quadratic effect emerged for NA ($\beta = 1.00$, $t = 1.80$, $p < .10$), and negative quadratic effects were found for both PA ($\beta = -.90$, $t = -1.87$, $p < .10$) and Life Satisfaction ($\beta = -2.19$, $t = -2.97$, $p < .01$). These results suggest that those people with a moderate amount of variance in their responses across roles tend to report higher levels of subjective well-being. Those people with extreme rigidity *or* variability report the lowest levels of subjective well-being.

Discussion

Previous research has shown that SCD is reliably related to well-being. We replicated this finding using the standard procedure for computing SCD. However, subsequent analyses supported my argument that there are several problems with this method that may artifactually increase the magnitude of the relation. First the factor analytic SCD conflates 2 sources of variance: across roles and across items. Of the two, only cross-role variance is theoretically relevant to SCD because it represents the degree to which a person's responses on each item change from one role to the next. Cross-item variance, on the other hand, simply reflects the unique pattern of traits within the individual. Because personality traits correlate with well-being, this irrelevant source of variance inflates the correlation between SCD and well-being. When cross-item variance was removed from the analysis, the relationship with well-being weakened considerably.

The second issue we addressed relates to the use of raw standard deviation scores as an index of situational change. Because of the artifactual association between mean levels and variance, along with the skewed distributions of item means, this index also confounds trait information with variance. When I examined the corrected standard deviation, the association between SCD and well-being dropped to zero. This suggests that the original relationship between SCD and well-being is entirely due to associations between mean levels of personality traits and affect. Finally, when response variance was examined after correcting for these confounds the correlations between consistency and SWB dropped to near zero. However, these correlations do not represent a lack of a relationship. Rather, I found that a curvilinear relationship emerged instead (Block, 1961). In Study 2, I compare all three SCD indexes from Study 1 with a measure of consistency derived from reports of momentary self-perceptions.

STUDY 2

Previous research on SCD has relied heavily upon global self-reports to assess response consistency (Donahue et al., 1993, Diehl et al., 2001). Very little research has been done to examine the broad spectrum of methods that can inform theories of personality change, yet SCD theory makes very clear predictions about dynamic changes in the self-concept across situations. If SCD theory is correct, the self-concept of those with high SCD should change more dramatically across situations than it should for those with low SCD. In this study, I chose to employ an experience sampling technique to test this possibility (Bolger et al., 2003; Stone, Shiffman, & DeVries, 1999). This method is a newer version of traditional daily-diary methods, where participants provide an on-going account of their experiences. For each moment that is sampled, a person's perceptions of himself or herself can be assessed, as well as aspects of the situation that they are in. These reports can then be compared to obtain an estimate of the degree to which a person's self-perceptions change across roles in actual situations.

Some theorists may argue that SCD involves individual differences in the ability to organize changing self-perceptions into a consistent self-concept, and that the two measures should not be expected to associate. However, given the results of Study 1, these measures may not converge instead because the factor-analytic SCD measure combines irrelevant sources of variance. Therefore I expect that SCD and situational changes in personality will not be related. Once these inherent confounds are accounted for by using the alternative indexes, self-reported variability should be more strongly related to situational changes.

Finally, I wanted to examine whether a person's level of change in momentary self-perceptions is related to their well-being. Even if perceptions of change are able to predict changes in perception across moments, the two may still be differentially related to well-being. If momentary changes in self-perceptions are also negatively associated with well-being, then this may still support the fragmentation view of the self-concept.

Method

Participants

One hundred and five participants were recruited from summer psychology courses and from advertisements posted on campus at a large university in the Midwestern United States. Our sample consisted of 72% women; 94% were between 17 and 20 years of age. Eighty percent identified themselves as White/Caucasian, 9% as Asian, 7% as Black/African-American, and 4% as a race other than those listed.

Materials

Questionnaire data for this study were collected using the same measures used in Study 1: the 50-item IPIP, the 24-item ITAS, the 5-item SWLS, and our 20-item, 6-role SCD measure. Palm m100 computers, equipped with the Experience Sampling Program (ESP) were used for momentary assessment of personality. At each sampled moment, a 33-item questionnaire was administered (see Appendix L). Items on this questionnaire included the same 20 trait adjective items used in the SCD measure from Study 1. Momentary mood was assessed using 4 affect items: Pleasant, Unpleasant, Sad, and Happy. These personality and affect items were each rated on a 7-point scale ranging from 0 ("does not describe me") to 6 ("describes me very well"). Finally, participants responded to six items designed to measure aspects of the situation that they found

themselves in at the time the alarm sounded. These items explicitly asked what social role the person was in just before the alarm sounded. Participants were asked to respond by indicating yes or no to "Were you being a student?"; "Were you being a friend?"; "Were you being a romantic partner?"; "Were you being a family member?"; "Were you being a worker?"; or "Were you being a stranger?". These items were not mutually exclusive, so participants could report being in more than one role at a time. Each item was presented one at a time and responses were given by touching numbered boxes on the screen below each question.

Procedure

Small groups of five to ten participants reported to a small classroom for the first phase of the study. First, participants completed the 50-item IPIP as a global assessment of trait personality. Participants were then asked to complete the ITAS and SWLS as assessments of SWB. For the remainder of the session, participants were trained on the use of the palm-top computers.

Phase 2 of data collection began immediately after the end of the first questionnaire session and consisted of 7 days of experience sampling. During this phase, data were collected on the hand-held computers. The computers were programmed to randomly sound an alarm up to 8 times per day during the participants' waking hours. Each time the alarm sounded, participants had 10 minutes to respond to the questionnaire.

Phase 3 of data collection took place one day after the completion of phase 2. Participants returned to our lab to turn in the computers and were asked to complete our revised version of the SCD measure. Once this was completed, participants were thanked, debriefed, and paid. Participants received $20 for their completion of all three

phases of data collection. An additional $5 was given to those participants who completed at least 5 questionnaires per day during phase 2 (82% completed 35 or more questionnaires). One participant who decided to terminate their participation in the middle of the study was compensated for the data that they provided up to that point.

Results

Scores for SCD were computed for 103 participants. Two people who chose to end their participation early did not provide SCD data. The distribution of SCD scores can be found in Figure 3. To get a general idea for how much people changed their responses throughout the week, I computed each person's overall ESM standard deviation ($m = .99$, $sd = .20$) and also corrected for item skew using the regression approach from Study 1 to compute the corrected overall standard deviation ($m = .00$, $sd = .17$). These values represent the amount a person changed from moment to moment, regardless of the roles they were in.

Next I wanted to recreate the data structure of the global SCD measure with the ESM data. Using the six role items, I assigned each moment to the role or roles the participant reported being in at the time. If a participant reported being in more than one role at a time, the data for that moment were added to each role category that the person was in.[1] I then computed the average of each item within the roles, resulting in the Item (20) x Role (6) matrix, with each cell representing the average for that item from multiple moments. The cross-role ESM standard deviations ($m = .34$, $sd = .28$) and corrected ESM standard deviations ($m = 0.00$, $sd = .16$) were then computed. These measures were based on the roles for which the participant provided data. Most people (90%) provided data for either 5 or 6 roles. Only 2 people gave reports for 2 or 3 roles, and no one gave

reports for 1 role or fewer.[2] The most common role for which people had missing data was romantic partner. When I conducted the analyses separately using only those people with data for all 6 roles, the overall pattern of results did not change. Therefore, I present the results from analyses on the entire sample.

The intercorrelations among the indexes of variability are presented in Table 6. As in Study 1, all of the indexes of variability based on the Donahue et al. procedure are significantly associated with each other. However, these measures are differentially associated with the ESM indexes. The factor analytic SCD measure does significantly predict overall ESM standard deviations. However, this relation drops when the overall ESM standard deviations are corrected for mean scores. In addition, SCD is not associated with either the cross-role ESM standard deviations or the corrected ESM standard deviations. In other words, the factor analytic SCD measure does not predict actual changes in self-perceptions across situations or roles. The cross-role standard deviation from the global SCD measure ($m = .71$, $sd = .20$) is also not associated with changes in self-perceptions across situations or roles in ESM. Only the corrected standard deviation from the global SCD ($m = .00$, $sd = .16$) was significantly correlated with each index of variability from the ESM data. This suggests that once the effects of mean scores are controlled for, participants who had more cross-role response variance in the global measure also had more cross-role response variance during the week that was sampled.

Scores for PA ranged from 1.63 to 4.00 ($m = 2.89$, $sd = .50$), NA ranged from .19 to 2.88 ($m = 1.15$, $sd = .58$), and LS ranged from .20 to 4.00 ($m = 2.81$, $sd = .83$). As for the relationship between SCD and SWB, the findings from previous research were

replicated as before: factor-analytic SCD was significantly correlated with Positive Affect, Negative Affect, and Life Satisfaction. However, the pattern of relationships between the alternative indexes of variability and well being are almost identical to those found in Study 1 (top 3 lines of Table 7). When I examined cross-role standard deviations, the relationship with SWB dropped considerably. Furthermore, the corrected standard deviation was not significantly associated with any of our SWB measures.

Only one of the indexes of variability from the ESM measure was associated with SWB. Specifically, the corrected overall standard deviation was positively associated with PA. This suggests that people whose self-perceptions change more across moments actually report higher levels of positive affect. Taken alone, this finding contradicts the fragmentation view of SCD. However, none of other indexes predicted any of the SWB variables. In particular, the correlations between cross-role standard deviations and well-being were all nearly zero. The correlations for the corrected standard deviation are slightly stronger, but are still not significant. In fact, they are also in the opposite direction to that predicted by SCD theory.

As an alternative to the trait measures of PA and NA, I also averaged the affect items over the ESM measure to asses the amount of positive and negative affect that the person experienced throughout the week. The global SCD measure was significantly correlated with PA and NA over the week, but this association again decreased substantially when confounds were removed. None of the ESM indexes were related to these measures. In other words, there was no evidence that the amount of PA and NA experienced during the week was related to the amount of variability in self-perceptions during that same period.

Examining the trait data from the 50-item IPIP scale, I found that several of the Big Five personality traits were associated with the factor analytic SCD, but that this association was reduced when I focused only on cross-role standard deviations. As can be see in Table 8, The corrected standard deviation from the global SCD measure was only significantly associated with the trait of Extraversion. Neither index of cross-role change from the ESM data was associated with personality in a way that would be predicted by SCD theory. The only significant association was between the corrected ESM standard deviation and the trait of Conscientiousness.

Finally, as in Study 1, I tested Block's (1961) hypothesis of a curvilinear association between consistency and SWB by regressing the corrected standard deviation along with the square of those scores on the three SWB variables. Once again, the quadratic function was negative for both PA (β = -2.07, t = -1.43, ns) and LS (β = -5.00, t = -2.08, p <.05), and positive for NA (β = 2.84, t = 1.71, p <.10). This suggests that people who have a moderate amount of response variance on the global SCD scale report higher levels of SWB.

Discussion

In order to test the predictive validity of the factor-analytic SCD measure, I partitioned the ESM data in two different ways: across situations, and across roles within those situations. I then computed 2 indexes of both the degree to which participants' self-perceptions changed across situations and across roles. The SCD measure was significantly correlated with changes in self-perceptions across situations. However, this relationship was no longer significant when item skew was accounted for in the ESM data. The same pattern was true for raw standard deviations from the global SCD

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measure. Only when item means were completely controlled for in the global data was SCD able to predict raw and corrected variance across situations. As expected, the factor-analytic measure also failed to predict changes in self-perceptions across roles. Controlling for trait confounds in the global data resulted in stronger prediction of cross-role change. This finding suggests that global reports of changes in personality are related to actual changes in how a person perceives him or her self across situations, but that confounds inherent in factor analysis along with deviations from multivariate normality produce Type II errors in prediction.

Study 2 replicated the general SCD effect that factor-analytic scores are negatively related to well-being. However, as in Study 1, this effect was due to the confounding effect of mean trait scores on well-being. When cross-item variance was removed, and the association between item means and standard deviations were accounted for, the association between consistency and well-being dropped to near-zero. As further evidence of this confound, I found significant moderate associations between SCD and the Big Five personality traits, as well as associations between those traits and SWB. The correlations between the factor analytic SCD measure and personality should not be interpreted as an indication of some shared dispositional qualities underlying both. Instead, theses associations reflect that fact that trait information is imbedded in the item content of the SCD scale.

The fragmentation theory of self-concept differentiation was also not supported using ESM methods. Overall, variability in self-perceptions over time was not associated with trait SWB. In addition, many of the correlations were in the opposite direction as would be predicted by SCD theory. Finally, the amount of change in the ESM data was

also not related the amount of positive or negative affect experienced throughout the week. Therefore, having changing momentary self-perceptions does not seem to have immediate repercussions for the individual, nor is it reflected in their general level of adjustment.

GENERAL DISCUSSION

Across two studies, the negative relationship between Donahue et al.'s (1993) measure of Self-Concept Differentiation and well-being was shown to be an artifact of measurement. In particular, using factor analysis to compute an estimate of SCD is inappropriate because it conflates cross-item variance with cross-role variance. Focusing only on the theoretically meaningful source of variance resulted in substantially weakened correlations between differentiation and well-being. In addition, as Study 1 illustrated, due to the nature of repeated measures designs, cross-role standard deviations are also confounded with mean scores. Once this dependency was accounted for, self-concept differentiation and well-being were no longer related. Finally, Study 2 provided evidence that an estimate of cross-situational consistency derived from ESM data was also unrelated to well-being. These results fail to support the fragmentation view of self-concept differentiation.

Traditional methods of computing SCD also lack predictive validity. That scores from factor analysis do not predict changes in self-perceptions is not surprising, given that this index has been found to be weakly related to other self-reports of self-consistency (Campbell et al., 2003; Diehl et al., 2001). This seems to be due to the imprecision of factor analysis as a measure of change. Conflating multiple sources of variance makes factor-analysis difficult to interpret, and may be an imprecise method of assessment in person-centered research (Locke, 2003).

There are more direct ways to assess self-consistency. Several measures of the construct tend to rely on explicit self-reports, where people are asked outright how

consistent they believe they are. These kinds of questions do not depend upon ratings of trait descriptors and may be less susceptible to the influence of trait-level associations. One drawback to this approach is that these items may be prone to social desirability biases if norms of consistency are strong in one's culture (Suh, 2001). An advantage of contextual reports is that they may be more easily specialized for particular research questions. For instance, if a researcher is interested in differences in self-perceptions in the family versus at work, contextual reports can focus specifically on those two domains. The use of contextual self-reports in the study of change may be strengthened by systematically removing the pre-existing effects of personality on the outcome variable of interest.

The results of these studies do not support the idea that self-consistency is a universal human motive (Lecky, 1945). In fact, the distributions of the several indexes of cross-role change indicate that moderate levels of variability are common (see also Fleeson, 2001). Furthermore, there is evidence that a curvilinear trend exists in the association between these indexes and subjective well-being when analyses isolate appropriate response variance (Block, 1961). These results are by no means conclusive. Lecky's theory may be right in some instances and partitioning variance across roles is not the only way to test for the consistency motive. For instance, consistency within roles may be more important for adjustment than consistency between them. Researchers may find that reports of changing self-perceptions within roles (i.e., worker or family) have a stronger association with SWB.

It has been argued that the individual difference of SCD is strongly related to personality traits (i.e. Neuroticism, Agreeableness, and Conscientiousness; Donahue et

al., 1993), such that people high on certain traits may be predisposed to experience SCD. Our analyses provide a different account. The high correlations between SCD and personality may reflect the redundancy of correlating factor analytic SCD scores with personality traits. When cross-item variance was removed from the calculation of SCD, a very different pattern of associations with personality began to emerge. In fact, neither response consistency nor situational consistency seem to be reliably predicted by any of the big five personality traits that are discussed in SCD theory.

Finally, modern trait theorists are beginning to focus on individual differences in state consistency (Fleeson, 2001). Generally, this kind of research utilizes repeated measures data, often in the form of experience sampling. In Fleeson's conceptualization of traits as density distributions of states, the mean of the distribution of state expressions of approximates a person's trait level of that characteristic. He argues that mean scores can be considered independent of state variance. However, as I have shown, this may only be true if trait scores are normally distributed. If the population distribution of a trait is skewed, then the within-person variance of states may be related to the mean of an individual's density distribution.

Limitations

One concern with the approach that I am proposing is that, by way of statistical manipulation, it controls for too much. If there are traits that underlie SCD which are captured in specific items in the scale, those traits should be allowed to influence the consistency with which a person responds to all of the other items. For example, if a person has high SCD because he or she is neurotic, then we should not control for neuroticism when examining the association between SCD and well-being. However, it

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is important to point out that none of the procedures used in these studies controlled for global trait ratings. Instead, variance associated with mean levels for each item was removed only from the same item's SD. For instance, mean levels of irritability were removed only when calculating the standard deviation for irritability. It would still be possible for highly irritable people to report high levels of variance on other items. Thus, it is theoretically possible for the corrected SD measure to be strongly correlated with traits such as extraversion and neuroticism.

Using regression equations to derive an individual difference measure may also be somewhat problematic. When using the residual value as a corrected standard deviation, the equation from which this value is derived is sample-specific. One advantage of the factor analytic approach is that a person's SCD score will remain the same regardless of what sample they are in. Using the quadratic residual score will lead to different scores for the same person if they are put into a different sample. Therefore, to ensure a reliable estimate of relative response consistency, data should be collected from larger samples. Alternatively, other multivariate statistics may be explored which can control for both item content and non-normal data.

Another issue that should be considered is whether one ought to expect our different measures of consistency to converge at all. It could be argued that contextual self-reports and ESM self-reports assess very different processes, and each method has its own set of advantages and disadvantages. One advantage of using diary methods is that they allow individuals to report on the roles that are relevant to them. Contextual self-reports, on the other hand, impose a role structure on the self-concept by forcing participants to rate themselves for roles that the may or may not fulfill in their actual

lives. On the other hand, one week of ESM may not give us a reliable estimate of what a typical week is like in the person's life. This subtle difference may be part of the reason why I did not find strong agreement between the different methods of assessment.

A criticism of the experience sampling measure is that it may not be broad enough to be compared with SCD, which is based upon a larger collection of experiences. In other words, comparing self-perceptions based on years of experiences with self-perceptions during such a small window of time doesn't tell us much. In order to get a representative sample of experiences to measure consistency in self-perceptions across situations I may need to collect data for months. The issue may be whether the week that I assessed can be assumed to be typical or normal for the participant. Maybe it was more stressful for a number of people, or less social for some. However, assuming that each person was affected by a unique combination of experiences, the "typicality" of the week may be random across the sample. Barring any major event or set of circumstances that would affect everyone (e.g., finals week, natural disaster, or political turmoil), the extent to which a week is normal for everyone should be normally distributed throughout our sample.

In order to test the precision of experience sampling, I analyzed data from another study in which participants completed 2 different weeks of ESM, separated by 8 months (Lucas, Baird, Le, & Eng, 2003). First of all, I found moderate to strong correlations between the two waves of data for the percentage of time that respondents spent in each role. That is, the amount of time that participants reported being in each role during week 1 was significantly correlated with the amount of time they reported being in the same roles in week 2 (Friend r = .65; Student r = .44; Romantic Partner r = .41; Family

Member $r = .63$; Worker $r = .50$; Stranger $r = .60$; all p's $< .01$). Trait Extraversion was measured on a 3-item scale ("affectionate", "assertive", and "sociable"). These items were rated, using a 7-point scale, for how much the participant felt that way at the moment. The standard deviation of extraversion across moments, irrespective of role, was moderately correlated across the two weeks ($r = .60$, $p < .01$). Similar role items as were used in Study 2 were used to assign each moment to the appropriate social roles. I computed the corrected cross-role standard deviation for both waves of data and found that these measures were not significantly associated with each other ($r = .12$, n.s.). This suggests that, while the amount of overall situational change in extraversion during one week is reliable, the amount of change in that trait across social roles is not. It is unclear whether this result can be generalized to other personality traits, or whether it is limited to self-perceptions of extraversion. However, based on this small amount of evidence, one might conclude that subjective feelings of inconsistency wax and wane. Certain periods of a person's life, and possibly even certain weeks, may be characterized by greater levels of consistency in self-perceptions, but these fluctuations should be probabilistically related to his or her trait level of SCD.

Future Directions

There are numerous other ways to operationalize within-person variability. For example, it may be interesting to know whether a person who is variable at the level of the self-concept is also more likely to be perceived as variable by other people. Informant reports may be one way to get a better picture of how an individual changes across his or her relationships. According to fragmentation theory, a person with a highly differentiated self-concept might also show a greater amount of variance across observer

reports of personality given by informants. For example, comparisons could be made between ratings given by a persons' parent and those given by his or her boss or best friend. If the contextual self-report measures of SCD are valid, then they should predict the extent to which these informants agree on their perceptions of the individual. In addition, if SCD is characterized by difficulties in social relationships, then informant ratings of relationship quality should be lower for people with higher levels of self-reported SCD.

The composition and intrapersonal correlates of the self-concept may also be influenced by social norms or internal and external expectations. There are several ways that this may be tested. Currently, I am conducting a series of studies in which I examine the judgmental processes required by contextual self-reports. In particular, conversational norms against providing redundant information may operate to inflate variability in self-reports. Also, it may be important to know how role-related expectations affect self-perceptions within each role. What others expect of us, or what someone expects of him or her self, may shape the self-concept. The conflict that Lecky referred to may be similar to feelings of discrepancies between an actual and ought self (Higgins, 1987).

Future research should focus on potential moderators of the relationship between consistency and well-being. One previous study examined the role that feelings of authenticity, or genuineness, play in the relationship between consistency and adjustment (Sheldon et al., 1997). These authors found that subjective authenticity and SCD were independent predictors of well-being. Therefore, inconsistent people might still be well

adjusted as long as they feel like they are in control of their own actions. Experience

sampling designs may be well-suited for similar studies of subjective authenticity.

Finally, variability in self-perceptions may be a legitimate interpersonal strategy

in which changes in self-expression are in the service of relationship development and

maintenance. Laboratory research using social dilemmas might be one way to test

whether the self-consistency dimension can be conceptualized as an approach to

interpersonal interaction. In these paradigms, choices must be made between 2 or more

decisions, at least one of which would result in a temporary gain for oneself, and another

would result in a temporary loss. Individuals could be paired with a series of "partners"

with whom they would take turns choosing between whether to benefit themselves or the

other person. Based upon the characteristics and behavior of partners, we might expect

that consistency would have an effect on how a person approaches the task. Specifically,

consistent people may exhibit the same strategy in social dilemma tasks regardless of the

characteristics of their interaction partner. On the other hand, variable people might be

more likely to change their approach to the task, as they come into contact with different

interaction partners. In addition, both strategies could result in positive outcomes.

Some people prefer to express themselves in the same way to all people. Other

individuals prefer to express different aspects of themselves, depending upon what they

think is most appropriate in given situation. In this way, variable people might see this as

an opportunity for them to capitalize on the rewards of being able to relate to a variety of

people. This strategy might become increasingly popular in a world where a greater

variety of people regularly come into close contact with each other. Taking the same

interpersonal approach in every situation might actually become a barrier to the

development of healthy and productive social relationships. Therefore, it may be more important to shape self-expressions to the goal of harmonious interpersonal interaction.

FOOTNOTES

     1. By assigning a single moment to multiple roles we may be attenuating the differences between roles. However, we feel that this may be a more appropriate assessment of actual within-person change. In particular, traditional SCD measures do not account for the possibility that a person can enact multiple roles at once and that these roles may have differential overlap with each other. For example, for most people the romantic partner and friend roles might overlap more than the family and worker roles. Other research is currently looking at how asking for judgments for each role separately might actually inflate differences among roles and prime self-discrepancies.

     2. Because the social role items in our ESM scale consisted of 6 dichotomous (yes/no) items, it is possible for a person to complete the questionnaire and not report being in any roles at the moment.

APPENDICES

APPENDIX A

Table 1

Example of two cases using factor analytic SCD.

	Person 1					Person 2			
Item	Role 1	Role 2	Role 3	s.d.		Role 1	Role 2	Role 3	s.d.
Talkative	5	4	4	.58		4	3	3	.58
Nervous	1	1	2	.58		2	2	3	.58
Assertive	4	5	4	.58		3	4	3	.58
Organized	1	1	1	.00		2	2	2	.00
Insightful	5	5	4	.58		4	4	3	.58
Hardworking	2	1	1	.58		3	2	2	.58
Caring	4	5	5	.58		3	4	4	.58
Irritable	1	2	1	.58		2	3	2	.58
s.d.	1.81	1.93	1.67			0.83	0.93	0.71	
% Variance Explained	93.84					69.80			

Note. These two hypothetical cases have identical amounts of cross-situational variance in their reports. The difference in the percentage of variance explained by the first factor can be attributed to the difference in the cross-item variance.

Table 2

Correlations between indicators of consistency and well-being (Study 1).

| | | Consistency Measure | | |
		SCD	S.D.	Corrected S.D.
	PA	-.44**	-.25**	.03
Well-Being Measure	NA	.41**	.19**	.04
	LifeSat	-.35**	-.21**	-.02

Note. SCD = factor-analytic measure of self-concept differentiation; S.D. = average cross-role standard deviation for all 20 items; Corrected S.D. = the average quadratic residual from regressing mean levels on standard deviations per item; PA = positive affect; NA = negative affect; LifeSat = satisfaction with life. *p<.05; **p<.01.

Table 3

Correlations between the Big Five personality factors and indicators of consistency

(Study 1).

Consistency Measure	Personality Trait				
	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
SCD	-.22**	-.19**	-.27**	.35**	-.01
S.D.	-.11	-.07	-.26**	.16**	-.05
Corrected S.D.	.08	.12	-.13*	.06	.04

Note. *p<.05, **p<.01.

APPENDIX D

Table 4

Correlations between the Big Five personality factors and indicators of well-being (Study 1).

Well-Being Measure	Personality Trait				
	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
PA	.40**	.39**	.07	-.30**	.16**
NA	-.33**	-.12*	-.05	.71**	.03
LifeSat	.27**	.17*	.14*	-.39**	.05

Note. *p<.05, **p<.01.

APPENDIX E

Table 5

Correlation matrix of indicators of consistency (Study 1).

	Consistency Measure		
	SCD	S.D.	Corrected S.D.
SCD	1.00		
S.D.	.79**	1.00	
Corrected S.D.	.45**	.85**	1.00

Note. SCD = factor-analytic measure of self-concept differentiation; S.D. = average cross-role standard deviation for all 20 items; Corrected S.D. = the average quadratic residual from regressing mean levels on standard deviations per item. *p<.05; **p<.01.

Table 6

Correlation matrix of indicators of consistency (Study 2).

Consistency Measure

	1	2	3	4	5	6	7
1. SCD	1.00						
2. Cross-role SD	.79**	1.00					
3. Corrected SD	.42**	.82**	1.00				
4. Overall ESM SD	.20**	.35**	.35**	1.00			
5. Corrected Overall ESM SD	-.10	.17	.39**	.81**	1.00		
6. Cross-role ESM SD	-.04	.14	.24*	.40**	.47**	1.00	
7. Corrected ESM SD	-.13	.06	.24*	.30**	.49**	.75**	1.00

Note. SCD = factor-analytic measure of self-concept differentiation; Cross-role SD = average cross-role standard deviation for all 20 items; Corrected SD = the average quadratic residual from regressing mean levels on standard deviations per item; Overall ESM SD = the total amount of variance in responses over the week; Corrected Overall ESM SD = the average quadratic residual from the total variance over the week; Cross-role ESM SD = cross-role standard deviation from the moment data; Corrected ESM SD = the average quadratic residual from moment data across roles;. *p<.05; **p<.01.

APPENDIX G

Table 7

Correlations between indicators of consistency and well-being (Study 2).

Consistency Measure	PA	NA	LS	ESMPA	ESMNA
1. SCD	-.28**	.31**	-.30**	-.24*	.49**
2. Cross-role SD	-.19	.19*	-.22*	-.23*	.32**
3. Corrected SD	.01	.09	-.09	-.09	.11
4. Overall ESM SD	.12	.00	.01	-.02	.17
5. Corrected Overall ESM SD	.27**	-.10	.11	.08	-.18
6. Cross-role ESM SD	.07	-.06	.05	-.11	-.09
7. Corrected ESM SD	.14	-.10	.11	-.06	-.15

Note. SCD = factor-analytic measure of self-concept differentiation; Cross-role SD = average cross-role standard deviation for all 20 items; Corrected SD = the average quadratic residual from regressing mean levels on standard deviations per item; Overall ESM SD = the total amount of variance in responses over the week; Corrected Overall ESM SD = the average quadratic residual from the total variance over the week; Cross-role ESM SD = cross-role standard deviation from the moment data; Corrected ESM SD = the average quadratic residual across roles from the moment data; PA = positive affect; NA = negative affect; LS = satisfaction with life; ESMPA = average positive affect during the week; ESMNA = average negative affect during the week. *p<.05; **p<.01.

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APPENDIX H

Table 8

*Correlations between the Big Five personality factors and indicators of consistency*

(Study 2).

Consistency Measure	Personality Trait				
	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
SCD	-.42**	-.26**	-.18	.36**	-.23*
S.D.	-.38**	-.19	-.02	.34**	-.21*
Corrected S.D.	-.20*	.02	.15	.21	-.15
S.D.Mom	-.09	.08	.18	-.03	-.17
Corrected S.D. Mom	-.14	.12	.27**	-.14	-.09

Note. SCD = factor-analytic measure of self-concept differentiation; S.D. = average cross-role standard deviation for all 20 items; Corrected S.D. = the average quadratic residual from regressing mean levels on standard deviations per item; S.D.Mom = cross-role standard deviation from moment data; Corrected S.D. Mom = the average quadratic residual from moment data. *p<.05, **p<.01.

Figure 1

*Relationship between repeated-measure mean and standard deviation.*
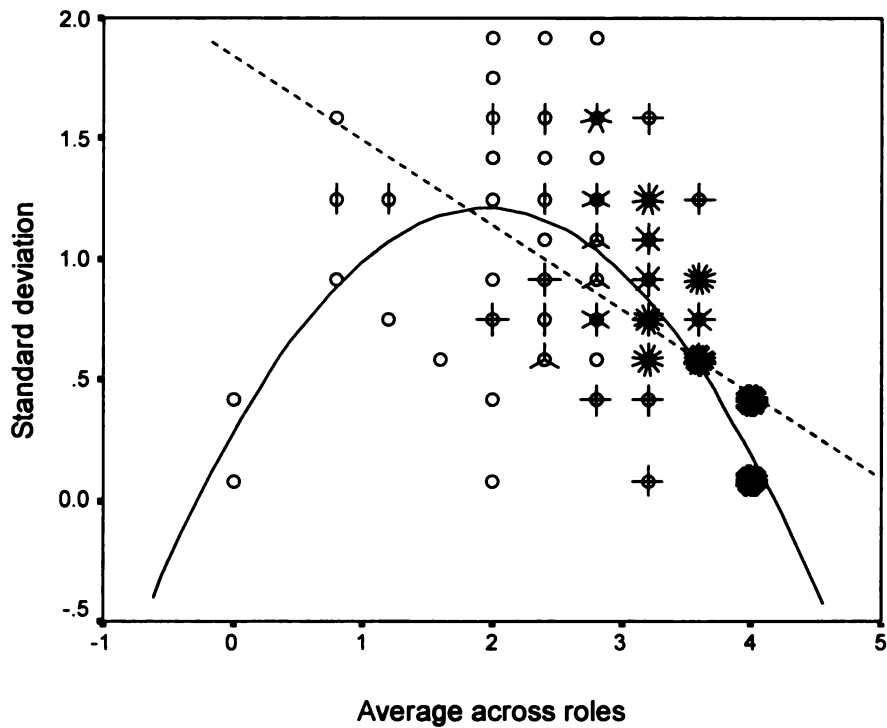
Note. The item represented is "Trustful". The dashed line indicates the linear relationship, and the solid line represents the quadratic relationship between these variables. Data points that are occupied by more than one case are indicated by multiple dashes.

Figure 2

Distribution of SCD scores for study 1.
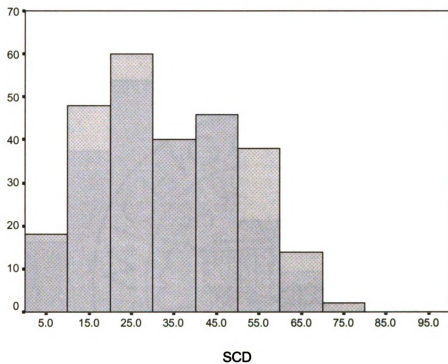
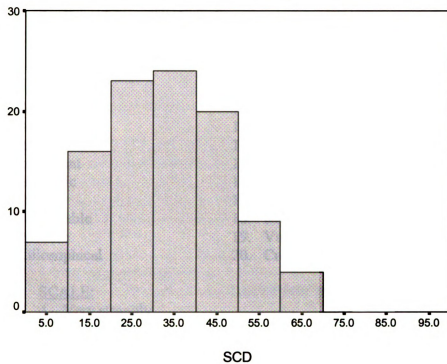*Note.* N = 266, Mean = 33.34, SD = 16.66.

APPENDIX K

Figure 3

Distribution of SCD scores for study 2.

Centered below the figure: SCD

Note. N = 103, Mean = 32.07, SD = 14.89.

For the following adjectives, please indicate how well each describes you at the moment before the alarm sounded.

SCALE:
4 – Describes me very well
3 – Describes me well
2 – Describes me moderately
1 – Describes me a little
0 – Does not describe me

1. Talkative
2. Cooperative
3. Organized
4. Irritable
5. Intelligent
6. Energetic
7. Trustful
8. Dependable
9. Insecure
10. Philosophical
11. Assertive
12. Rude
13. Hardworking
14. Optimistic
15. Inquisitive
16. Adventurous
17. Warm
18. Responsible
19. Vulnerable
20. Creative

SCALE:
4 – Very strongly
3 – Strongly
2 – Moderately
1 – Slightly
0 – Not at all

22. How PLEASANT are you feeling?
23. How UNPLEASANT are you feeling?
24. How SAD are you feeling?
25. How HAPPY are you feeling?
26. Were you engaged in a recreation activity before the alarm sounded? No|Yes
27. Please describe the situation you were in before the alarm sounded. Was the situation: 1 = Alone
                2 = Semi-social (with others but not interacting with them)
                3 = Social (interacting with others)
28. Were you being a student? YES|NO
29. Were you being a friend? YES|NO
30. Were you being a romantic partner? YES|NO
31. Were you being a family member? YES|NO
32. Were you being a worker? YES|NO
33. Were you being stranger? YES|NO

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