The Puzzle of Negative Self-Views: An Explanation Using the Schema Concept

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People with negative self-views seem to behave more predictably than people with positive self-views. To explain this puzzle, the authors conceptualized a self-view as a schema and postulated that negative self-views are more tightly organized schemas than are positive self-views. Studies 1a and 1b demonstrated that the elements of a negative self-view are more tightly interconnected than those of a positive self-view. Studies 2–6 demonstrated and examined a consequence of this principle, namely, that negative self-descriptions are more consistent than positive self-descriptions. For people with negative self-views, different contexts evoke the same tight schema, producing more consistent self-descriptions. This explanation integrates several findings about the self and has important implications for personality theory and assessment.

Negative views of the self have a unique psychological quality. Western societies generally urge people to report and maintain positive self-views (e.g., outgoing or happy), and, as a result, people are reluctant to see themselves as shy or unhappy (cf. Greenwald, 1980; Taylor & Brown, 1988). Nonetheless, some people do hold negative views of the self, thereby deviating from the societal norm of desirability. Because negative self-views have evolved in spite of this norm, their history might make them particularly strong and tightly organized. In this article, we examine the organization of negative self-views, show that they are more tightly organized than positive self-views, and use this principle to explain the following puzzling observation.

We have observed that people with negative self-views often seem to follow theoretical predictions more closely than people with positive self-views. For example, Markus (1977) identified people who described themselves as independent or as dependent. These participants were presented with a list of words to which they responded “like me” or “not like me.” The results showed that the dependent schemas appropriately endorsed more dependent adjectives than independent adjectives, but that the independent schemas endorsed virtually as many dependent as independent adjectives. Furthermore, reaction times were assessed for each response, and these data showed the same asymmetry: They confirmed Markus’s predictions for the dependent schemas but not for the independent schemas.

A similar asymmetry appeared in the results of Markus, Crane, Bernstein, and Siladi (1982, Study 2). Masculine and feminine schematics were compared for their reaction times to self-descriptive attributes and for their ability to provide behavioral examples of those attributes. The masculine schematics (whose self-schemas contained socially undesirable elements, such as aggressive) differed more from an aschematic control group than did the feminine schematics (whose self-schemas contained socially desirable elements, such as gentle). Negative schematics also differed more from aschematics in two other studies (Fong & Markus, 1982; Nystedt, Smari, & Boman, 1991). Finally, introverted participants showed superior recall of self-relevant adjectives compared with that of extraverted participants (Hill & Bellw, 1988).

A second puzzling finding is that the presence of negative thoughts about the self is a better predictor of a variety of behaviors than the presence of positive thoughts. (For a review, see Schwartz, 1986.) For example, the number of negative thoughts (but not the number of positive thoughts) is a good indicator of the person’s level of social anxiety (Cacioppo, Glass, & Merluzzi, 1979), test anxiety (Galassi, Frierson, & Sharer, 1981), assertiveness (Schwartz & Gottman, 1976), and ability to cope with cardiac surgery (Kendall et al., 1979).

A third puzzling finding is that negative self-views are more strongly related to affect than are positive self-views. For example, Ogilvie (1987) demonstrated that the undesired self (a person’s most negative self-characteristics) is a more powerful predictor of happiness than the person’s ideal self (containing the most positive characteristics). Similarly, research based on self-discrepancy theory (Higgins, 1987) has shown that discrepan-
cies between actual and ideal self-characteristics are significantly related to negative affect (Strauman & Higgins, 1987, 1988). Such discrepancies always imply the presence of a negative self-view that contradicts an imagined positive alternative.

Is there a coherent framework that can explain these puzzles? This article attempts to provide such a framework. First we conceptualize a self-view as a schema and show that negative self-views are more tightly organized schemas than are positive self-views. Then we demonstrate and examine a consequence of this principle, namely, that a negative self-schema is used more consistently in self-descriptions than is a positive self-schema. Finally we use these results to explain the puzzling findings discussed above.

Definition of a Schema

To begin with, we need a working definition for the concept of a schema. The term schema has acquired many different meanings and connotations in psychology (Singer & Salovey, 1991), but different usages agree that a schema is a collection of mental representations that are interassociated and function together as a unit (Horowitz, Malle, Knutson, Dryer, Nelson, & Person, 1995). When this unit describes some aspect of the self, psychologists refer to it as a self-schema. For example, a person's self-schema for extraversion may represent interassociated beliefs (e.g., I am outgoing), typical behaviors (e.g., socializing), and social settings (e.g., a party), as well as feelings, personal experiences, and physiological reactions (e.g., high arousal). The most important theoretical feature of this definition is that the network of interassociated elements can be evoked by one or two critical stimuli (e.g., a feeling, a situation, a behavior, or a word flashed on a screen). In our example, if the person goes to a party (one element), other elements of the schema are likely to be activated as well, and he or she would socialize with other people, be outgoing, be pleasantly aroused, and so forth.

A schema, as defined above, is nothing more than a network of interassociated elements. A tight schema is then defined as one in which the elements are very strongly interassociated. The stronger the associations, the higher the probability that activation of any one element will activate associated elements, and, in turn, activate the entire unit. In a less tight schema, the elements are more loosely associated, so the initial activation of one element is less apt to activate the full schema. The first step in this analysis is to examine whether positive and negative schemas differ in their tightness. Studies 1a and 1b investigated whether the elements of a negative self-schema are more strongly interassociated than those of a positive self-schema.

Study 1a

The first study examined four pairs of contrasting personality constructs (four positive and four negative). A construct (e.g., extraversion) was considered to be analogous to a schema whose elements include attributes (e.g., outgoing or lively). For each construct, three common interassociated attributes were identified from the literature (Goldberg, 1992; John, 1990; Markus, 1977). The constructs (along with their attributes) were extraversion (extraverted, outgoing, and lively); introversion (introverted, shy, and reserved); calmness (calm, relaxed, and carefree); nervousness (nervous, tense, and worrying); independence (independent, individualist, and leader); dependence (dependent, conformist, and follower); cautiousness (cautious, self-controlled, and conscientious); and impulsiveness (impulsive, adventurous, and happy-go-lucky).

In this study, participants first selected from a list attributes that best described themselves. Then they were asked to judge which of these self-descriptive attributes seemed interassociated. We hypothesized that self-descriptive attributes from a given negative construct would form a tighter schema than self-descriptive attributes from the contrasting positive construct. We therefore expected that participants would more often judge the attributes of a given negative construct to be interassociated than the attributes of the contrasting positive construct.

Method

Participants

Seventy-five undergraduate students (37 women and 38 men) in an introductory psychology class at San Jose State University received class credit for participating in the study. The median age was 20 years, and the sample was composed of 69% Caucasians, 15% Asian Americans, 8% Hispanics, 7% African Americans, and 1% East Indians.

Procedure and Material

The participants were tested in groups of 5 to 10. They received a booklet that contained an alphabetical list of 44 attributes (the 24 construct attributes listed above together with 20 filler attributes). The participants were asked to select up to seven attributes that were the most self-descriptive. Then they copied the selected attributes into the row and column margins of a 7 x 7 matrix (only the cells above the diagonal were depicted), so that each attribute was paired with all other attributes. The participants then judged, for each pair, "whether the two characteristics go together, are opposites, or are independent." The instructions defined these terms as follows:

To say that two of your characteristics go together means that each time you show one of the characteristics, you probably also show the other. To say that two of your characteristics are opposites means that each time you show one of them, you probably do NOT show the other. Finally, to say that two of your characteristics are independent means that showing one has nothing to do with showing the other.

First we examined each participant's matrix of attributes and identified those attribute pairs that contained at least 1 of the 24 construct attributes; we called those pairs the critical comparisons. Some of these critical comparisons were pairs of attributes from the very same construct (e.g., reserved and shy from the construct introversion); they were called within-construct pairs. (All other critical comparisons were called between-construct pairs and are discussed below.) Forty-eight participants contributed at least one within-construct pair, which they had judged to go together or not. Then, for each of the eight constructs separately, we computed the proportion of within-construct pairs judged to go together by each participant and averaged these proportions across participants to yield eight mean proportions (four positive and four negative). We hypothesized that the proportions for the negative constructs would be uniformly higher than the corresponding proportions for the positive constructs.

If negative schema elements are very tightly connected with each other, they might be less tightly connected with elements of other schemas. Therefore, attributes of a given negative construct should less often...
Table 1
Mean Proportion of Judged Connections Between Schema Elements in Study 1a

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Within-construct pairs</th>
<th>Between-construct pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
<td>Negative</td>
</tr>
<tr>
<td>Extraversion-Introversion</td>
<td>0.83</td>
<td>1.00</td>
</tr>
<tr>
<td>Calm-Nervous</td>
<td>0.85</td>
<td>1.00</td>
</tr>
<tr>
<td>Independent-Dependent</td>
<td>0.76</td>
<td>1.00</td>
</tr>
<tr>
<td>Cautious-Impulsive</td>
<td>0.67</td>
<td>1.00</td>
</tr>
<tr>
<td>M</td>
<td>0.78</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Results and Discussion

Table 1 shows that the attributes within the negative constructs were more consistently judged to go together than the attributes within the positive constructs. Participants considered every pair of attributes from a common negative construct to go together (all proportions were 1.0), but they did not consider every pair of attributes from a common positive construct to go together (proportions were always less than 1.0). The average proportion across the four positive constructs was .78, which is significantly different from 1.0 (sign test, p < .02). If we assume that within-construct pairs represent elements of a schema, then elements of negative schemas appear to be more tightly interconnected than elements of positive schemas.

We examined the between-construct pairs to determine how often elements of a given schema seemed interconnected with elements of other schemas. Attributes of the negative constructs were less often judged to go together with attributes of other constructs. As shown in Table 1, the proportions for the negative constructs were systematically lower (M = .40) than those for the positive constructs (M = .50), t(46) = 2.88, p < .01.1

In Study 1a, participants judged the interconnections among attributes that they had endorsed as self-descriptive. The results showed that the attributes of a common negative construct, as compared with the attributes of a common positive construct, were judged to be more strongly connected to attributes of the same construct and less strongly connected to attributes of other constructs. If we assume that self-descriptive attributes of a given construct represent elements of a self-schema for that construct, then Study 1a suggests that negative schemas are more tightly organized than positive schemas.

Study 1b tested the same hypothesis with several modifications. First, we refined the procedure for identifying participants who possess a self-schema for a particular personality construct. Second, the participants themselves generated idiosyncratic self-descriptive statements that illustrated a particular self-schema. Finally, independent judges rated the interconnections among those participant-generated statements.

Study 1b

The first step was to identify participants who possessed a self-schema for particular personality constructs. Our procedure was based on the methods used by Markus and her associates (e.g., Fong & Markus, 1982; Markus, 1977). First we identified intercorrelated attributes that reflect a given construct. For example, the attributes outgoing, lively, and sociable characterized the extraversion construct. The attributes for each construct were selected from norms such as those used by Goldberg (1992) and John (1990). We then assessed participants' self-views by asking them to describe themselves on rating scales corresponding to the interassociated attributes that defined each construct.

Participants with a particular self-view were then asked to generate behavioral examples of that self-view. We conceptualized these examples as elements of an underlying self-schema and hypothesized that examples illustrating a negative self-view should be more closely interconnected than those illustrating a positive self-view. The behavioral examples were presented to judges (who were naive to the hypothesis). One group of judges rated their similarity, and another group rated their appropriateness as examples of that self-view. We hypothesized that behaviors illustrating a negative self-view would be judged to be more similar to each other and more appropriate as examples of that self-view.

Method

Participants

One hundred eight undergraduate students (65% women and 35% men) in an introductory psychology class at San Jose State University

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1 This comparison is a paired test comparing positive and negative between-construct pairs for those participants who had selected positive as well as negative construct attributes (n = 47). Overall, 68 participants selected attributes from the positive constructs (M = 0.49) and 50 participants selected attributes from the negative constructs (M = 0.40).
received class credit for participating in the study. The median age was 18 years, and the sample was composed of 46% Asian Americans, 33% Caucasians, 7% Hispanics, 6% African Americans, and 8% other ethnic groups.

**Procedure and Material**

The participants were tested in groups of 5 to 15. First they were shown 20 unipolar rating scales and asked to describe themselves along a 9-point continuum. The scales evaluated three attributes each for introversion (shy, reserved, and quiet), extraversion (talkative, lively, and outgoing), nervousness (tense, worrying, and nervous), and calmness (calm, relaxed, and laid-back); the other eight attributes were filler items. From participants' responses we formed schema indexes to select positive and negative schematics (see below). Then the participants answered two questions: (a) "Do you consider yourself generally outgoing or shy?" and (b) "Do you consider yourself generally relaxed or tense?" If they checked one or the other attribute (e.g., shy), in each question they were asked to give "reasons why you consider yourself shy. Give specific examples from your own behavior, thoughts, and emotions that illustrate why you consider yourself shy." Participants wrote their examples on six empty lines that were provided on the same page.

Two coders transcribed and categorized all examples. The participants produced 482 behavioral examples of the outgoing versus shy attributes; 228 were regarded as distinct by both coders, and 69% of these examples were idiosyncratic (i.e., they were mentioned only once). The most frequent example (22 mentions) was "I talk to people a lot." The participants produced 416 behavioral examples of the relaxed versus tense attributes: 216 were regarded as distinct by both coders, and 70% of these examples were idiosyncratic. The most frequent example (23 mentions) was "I am tense about school/tests."

**Formation of Schema Groups**

From the participants' unipolar ratings we formed schema indexes for the dimensions extraversion–introversion (E–I) and calmness–nervousness (C–N). The correlation between the two was .11, n.s. Each index was based on the three positive and the three negative unipolar scores that defined a given dimension. The scores were imputed by subtracting each participant's overall mean rating from that participant's rating on each scale. This step removed differences among participants in their use of the response format, as recommended by several authors (e.g., Horowitz, Rosenberg, Baer, Ureño, & Villasenor, 1988; Pelham, 1991; Wiggins, Steiger, & Gaeckle, 1981). The sign of the ratings was reversed for the negative attributes, and the six scores were averaged. The index for E–I (with the attributes talkative, lively, outgoing, shy, reserved, and quiet) had a reliability of $\alpha = .85$; the index for C–N (with the attributes calm, relaxed, laid back, tense, worrying, and nervous) had a reliability of $\alpha = .86$. Finally, we selected the top 33% (positive schematics) and the bottom 33% (negative schematics) of each schema index distribution. The resulting groups were called *extraversion schematics* and *introversion schematics* for one distribution, *nervousness schematics* and *calmness schematics* for the other distribution.

**Ratings of Similarity**

To examine the interconnections among elements of every participant's own self-schema, we first identified behavioral examples that were idiosyncratic to each participant. We did not examine frequently occurring behavioral examples because they may have reflected cultural stereotypes rather than the participant's own self-view. Approximately 70% of the supplied examples were truly idiosyncratic, 10% were nearly idiosyncratic (mentioned 2 to 10 times overall), and the remaining 20% were of high frequency. Research assistants naive to the hypothesis randomly sampled two behaviors from each schematic participant's responses. In most cases, both behaviors were truly idiosyncratic; where necessary, nearly idiosyncratic examples were also included. Altogether we sampled 125 pairs of examples. (Participants whose responses did not meet the criteria were excluded.) The number of participants in each schema group (and the proportion of truly idiosyncratic example pairs) were 37 extraversion schematics (68%), 30 introversion schematics (58%), 31 calmness schematics (56%), and 27 nervousness schematics (55%).

The selected pairs were printed verbatim in a questionnaire, and judges rated each pair's similarity on a 7-point rating scale. The pairs were presented in a fixed random order, and blocks of 10 pairs were systematically counterbalanced across participants. Six judges evaluated the 67 outgoing and shy pairs; their agreement was $\alpha = .81$. Six other judges evaluated the 58 relaxed and tense pairs; their agreement was $\alpha = .85$.

**Ratings of Appropriateness**

Then the entire pool of behavioral examples was presented to another group of judges (undergraduate students) who rated each example for its appropriateness as an example of the schema it was meant to illustrate. Six judges rated the 228 outgoing versus shy examples, and six different judges rated the 216 relaxed versus tense examples; each set was presented in a fixed random order. The judges rated two aspects of the outgoing versus shy examples in counterbalanced order: (a) their appropriateness for an outgoing self-view (outgoing ratings) and (b) their appropriateness for a shy self-view (shy ratings). Each rating scale ranged from 1 (not appropriate) to 5 (extremely appropriate). The interrater agreement was high for both sets ($\alpha = .95$ for the outgoing ratings and $\alpha = .93$ for the shy ratings). The corresponding ratings had a correlation of $-.91$, so we formed a composite appropriateness rating by taking the absolute difference between the two. This score could range from 0 to 4. The analogous procedure was adopted for the relaxed versus tense examples. The interrater agreement for the relaxed ratings was $91$; for the tense ratings, the interrater agreement was $93$. The two sets had a correlation of $-.89$, so we also formed a composite by taking the absolute difference between the two.

**Results and Discussion**

Both analyses supported the hypothesis that negative schema elements are more tightly organized than positive schema elements. Behavioral examples produced by introversion schematics were rated more similar to each other ($M = 4.4$) than were those produced by extraversion schematics ($M = 3.6$), $t(64) = 2.36, p < .02$. Likewise, the examples produced by nervousness schematics were rated more similar to each other ($M = 5.0$) than those produced by calmness schematics ($M = 4.2$), $t(51) = 2.34, p < .02$.

The second analysis examined the appropriateness of each schematic participant's examples as an illustration of that schema. Examples produced by introversion schematics were rated as more appropriate ($M = 2.83$) than examples produced by extraversion schematics ($M = 1.77$), $t(68) = 7.6, p < .001$. A similar difference emerged between the nervousness schematics ($M = 2.5$) and the calmness schematics ($M = 2.1$), $t(61) = 1.65, p = .05$, one-tailed.

The results of Studies 1a and 1b support the hypothesis that the elements of a negative schema are more tightly interconnected than those of a positive schema. If this principle is valid,
it has important consequences for personality assessment, and we now examine one of these consequences.

We defined a schema as a network of interconnected elements that function together as a unit. If the elements are tightly interconnected, the activation of one element tends to spread to neighboring elements, so the full schema is likely to be activated. Therefore, whenever an element of a negative self-schema is activated (e.g., by an attribute on a self-rating scale), that element is likely to activate the full negative schema. As a result, the same negative schema is available for subsequent self-descriptions. This reasoning implies the following hypothesis: People with negative self-schemas should provide more consistent self-descriptions across different measures than people with positive self-schemas. This process would explain why researchers have found more orderly results for negative self-views than for positive ones. Studies 2 and 3 used simple measures of personality to compare the consistency of positive and negative self-descriptions on a single occasion. We hypothesized that negative self-descriptions would show greater consistency than corresponding positive self-descriptions.

Study 2

Method

Participants

Seventy-five undergraduate students (37 women and 38 men) in an introductory psychology class at San Jose State University received class credit for participating in the study. The median age was 20 years, and the sample was composed of 69% Caucasians, 15% Asian Americans, 8% Hispanics, 7% African Americans, and 1% East Indians.

Procedure

The participants were tested in groups of 5 to 10. First, the participants were asked to list five self-descriptive attributes. Then they received a booklet with instructions and all necessary materials. Most participants finished the booklet within 15 min. Then they were asked again to list five self-descriptive attributes. Finally, the experimenter thanked the participants and debriefed them.

Material

First we selected four contrasting pairs of personality constructs. Each of these eight constructs was defined by a set of three intercorrelated attributes to make a total of 24 attributes. The constructs (along with their defining attributes) were extraversion (extraverted, outgoing, and lively); introversion (introverted, shy, and reserved); calmness (calm, relaxed, and carefree); nervousness (nervous, tense, and worrying); independence (independent, individualist, and leader); dependence (dependent, conformist, and follower); cautiousness (cautious, self-controlled, and conscientious); and impulsiveness (impulsive, adventurous, and happy-go-lucky). These 24 attributes appeared in the following tasks, which allowed us to examine the participants’ consistency of self-description across measures.

Unipolar self-rating scales. The 24 attributes, presented in alphabetical order, were each rated for self-descriptiveness along a scale ranging from 1 (not at all) to 11 (extremely). Each rating was then ipsitated by subtracting the participant’s mean rating across all 24 scales.

Bipolar self-rating scales. The 24 attributes were arranged into 12 contrasting pairs (e.g., outgoing–shy) and presented as bipolar scales, ranging from 5 at the lefthand pole through 0 to 5 at the righthand pole. (For half the scales the negative attribute was on the left; for the other half it was on the right.) Ratings were ipsitated by subtracting the participant’s mean rating across all 12 bipolar scales.

Attribute checklist. The 24 attributes, along with 20 filler attributes, were presented in a fixed random order in three columns on a single page. Participants were asked to check up to seven of the most self-descriptive attributes. A score was computed for each dimension (e.g., E-1) consisting of the number of checks for the positive attributes (extravedted, outgoing, and lively) minus the number of checks for the corresponding negative attributes (introverted, shy, and reserved).

Spontaneous attribute generation. Participants were asked at the beginning and at the end of the session to generate five self-descriptive attributes. The scores consisted of the number of positive attributes minus the number of negative attributes for each construct. The correlation between the corresponding scores from the beginning and the end of the session was .55, p < .001, so the two scores were combined to increase the measure’s reliability.

These tasks were presented in the following order: The spontaneous attribute-generation task always occurred at the beginning and at the end, and the order of the other three tasks was systematically varied across participants.

Classification of Schema Groups

Positive and negative schema groups had to be selected from the same measure to make the selections psychometrically equivalent. Therefore, we first generated a single schema index for each dimension (e.g., E-1). As in Study 1b, this index was based on the three positive and the three negative unipolar ipsitated scores for a given dimension. Thus we formed schema indexes for E-1 (α = .83), C-N (α = .83), independence–dependence (I-D, α = .61), and cautiousness–impulsiveness (C-I, α = .60).

From each schema index distribution we then selected the top 33% (positive schematics) and the bottom 33% (negative schematics). In this way we identified extraversion schematics, introversion schematics, nervousness schematics, calmness schematics, dependence schematics, independence schematics, impulsiveness schematics, and cautiousness schematics.2

Analysis of Consistency

For each dimension, we compared the two schema groups for their consistency across the following four measures: (a) the three-item unipolar aggregate for the positive pole, (b) the three-item unipolar aggregate for the corresponding negative pole, (c) the three-item bipolar aggregate, and (d) the score from the attribute checklist. A fifth measure, the score on the spontaneous attribute generation task, was available only for the E-1 dimension; for the other dimensions most participants did not generate a sufficient number of relevant attributes.

We hypothesized that negative schema groups would show greater consistency among these measures than positive schema groups. To assess consistency, we computed a Pearson correlation coefficient for each pair of measures. However, Pearson rs can be affected by a difference in variance between groups (Parunonen & Jackson, 1985). Therefore, we rank-ordered the participants’ scores on each measure to equalize the variance for all measures and for all groups and analyzed the resulting rank-order correlation coefficients. The results were identical both

2 The choice of the 33rd percentile was arbitrary, but we have found that a more severe criterion such as 20% reduces the schema groups to too small a size, making correlational analyses less reliable; alternatively, a more lenient criterion such as 50% reduces the discriminability of the schema groups. We repeated all tests reported here using other possible criteria, and all findings have been replicated.
ways, so we report only the more conservative rank-order coefficients below.

Results and Discussion

The sample as a whole viewed the positive constructs as desirable and the negative constructs as undesirable. In general, an attribute's social desirability value is highly correlated with its mean rating (raw or ipsatized) across participants. In the present sample, these mean ratings were highly correlated ($r = .92$) with the attributes' social desirability values from the norms of Hampson, Goldberg, and John (1987) for American samples. Therefore, an attribute's mean ipsatized rating reflects its social desirability and should be positive for desirable attributes and negative for undesirable attributes. The values in the present sample were as follows: introversion, −0.89; and extraversion, 0.67; nervousness, −0.89; and calmness, 0.34; dependence, −1.24; and independence, 1.01; and impulsiveness, −0.02; and cautiousness, 1.02. Thus, the difference between poles was considerable for three of the dimensions but somewhat smaller for the fourth pair (C-I). Apparently, impulsiveness was viewed as a neutral trait rather than as an undesirable trait, so the C-I pair should have shown a smaller difference in consistency than the other pairs.

For each dimension, we then computed intercorrelations among the self-descriptive measures across all participants to demonstrate the measures' convergent validity. For the E-I dimension, the correlation coefficients ranged from .62 to .87 (mean $r = .74$, using Fisher's $z$ transformation). For the C-N dimension, they ranged from .53 to .83 (mean $r = .65$). For I-D they ranged from .58 to .74 (mean $r = .65$). Finally, for C-I, they ranged from .38 to .61 (mean $r = .49$). Thus, the self-descriptive measures displayed high convergent validity.

Finally, we compared the negative and positive schematics for their consistency by examining their correlations separately. Table 2 shows the comparison between the extraversion schematics and the introversion schematics. The correlation for the introversion schematics was higher than that for the extraversion schematics in 9 of the 10 comparisons (sign test, $p < .05$). The mean consistency for the extraversion schematics was .50, whereas that for the extraversion schematics was .22, which was significantly lower, $t(18) = 3.8$, $p < .001$.

Table 3 summarizes the consistency coefficients and statistical tests for the other three dimensions. Every comparison showed greater consistency for the negative schematics. For C-I, where the poles differed less in social desirability, the effect was somewhat smaller. Finally, we also performed all analyses on the raw (unipsatized) scores, and the results were the same.

To summarize, participants with negative self-schematics showed greater consistency across various self-descriptive measures than participants with positive self-schemas. We call this difference the negativity effect in self-description. Two questions must be raised about the negativity effect. First, are those people who are consistent in one domain (e.g., introversion) also consistent in the other domains? If so, the negativity effect would be a general effect rather than domain specific. Second, is the negativity effect in self-description due to properties of a person's self-view or to properties of the words used to describe those self-views? These questions are examined below.

Is the Negativity Effect General or Domain Specific?

We needed to determine whether people who were negative schematics in one domain (hence more consistent) were also more consistent in the other domains. For example, we compared dependence schematics and independence schematics for their mean consistency in each of the other domains. For dependence schematics the mean correlation (averaged across the other three domains) was .57; the corresponding value for the independence schematics was .63. In the same way we compared the other pairs of positive and negative schematics. The corresponding mean correlations were .66 for the extraversion schematics, .54 for the extraversion schematics, .65 for the nervousness schematics, .62 for the calmness schematics, .52 for the impulsiveness schematics, and .75 for the cautiousness schematics. Thus, in two cases the negative schematics exhibited somewhat less consistency in the other domains, and in two cases the values were reversed. Therefore, the negativity effect in self-description appears to be domain specific. People who are negative schematics (hence more consistent) in one personality domain are not necessarily more consistent in other domains.

<table>
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<th>Table 2</th>
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<td><strong>Comparison of Consistency Between the Extraversion and Introversion Schematics in Study 2</strong></td>
</tr>
<tr>
<td>Measure</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>1. Unipolar extraversion</td>
</tr>
<tr>
<td>2. Unipolar introversion</td>
</tr>
<tr>
<td>3. Bipolar</td>
</tr>
<tr>
<td>4. Check</td>
</tr>
<tr>
<td>5. Generated</td>
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</tbody>
</table>

Note: The lower triangle shows intercorrelations of measures for extraversion schematics (n = 22) and the upper triangle shows intercorrelations of measures for introversion schematics (n = 24). Positive coefficients indicate correlations in the predicted direction. Unipolar extraversion = unipolar scales for extraversion attributes; unipolar introversion = unipolar scales for introversion attributes; bipolar = bipolar scales; check = attribute checklist; generated = spontaneous attribute generation.

* $p < .05$. ** $p < .01$.

<table>
<thead>
<tr>
<th>Table 3</th>
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<tbody>
<tr>
<td><strong>Summary of Consistency Comparisons for the Dimensions Calmness–Nervousness, Independence–Dependence, and Cautiousness–Impulsiveness in Study 2</strong></td>
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<tr>
<td>Schema groups</td>
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<td>---</td>
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<tr>
<td>Comparison</td>
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<td>Mean consistency</td>
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<td>Difference</td>
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</tbody>
</table>

Note: Calm = calmness; Nerv = nervousness; Ind = independence; Dep = dependence; Caut = cautiousness; Imp = impulsiveness.

* $p < .05$. ** $p < .01$. 
Is the Negativity Effect Due to Words or to Self-Views?

Some investigators have proposed that negative words have a more precise meaning and are therefore more valid than corresponding positive words. For example, positive words may be more inclusive (Gidron, Koehler, & Tversky, 1993; Hampson, John, & Goldberg, 1986), hence less specific in meaning. According to this view, the negativity effect is due to the more precise meaning of negative words used for self-description. That is, words like shy, dependent, and tense allow more precise self-descriptions than corresponding positive words. Alternatively, the negativity effect may arise, not from the precision of negative words but from the tightness of the person’s negative self-view. That is, the mental representation of a negative construct is more tightly organized, no matter whether it is expressed by a negative word (e.g., I am tense) or by the negation of a positive word (e.g., I am not relaxed). If words matter, then only self-descriptions using negative words should show the negativity effect; but if self-views matter, then self-descriptions using either negative words or negated positive words should show the effect. The following analysis demonstrates that self-views matter and that the negativity effect holds both for negative words and for negated positive words.

We first divided the 24 attributes into 12 positive and 12 negative words according to their social desirability values. Then, for each of the 24 attributes, we selected the high-scorers (top 33%) and the low-scorers (bottom 33%), making a total of 48 groups. People who scored high on positive attributes and people who scored low on negative attributes expressed a positive self-view, whereas those who scored high on negative attributes and those who scored low on positive attributes expressed a negative self-view. Then we assessed each group’s consistency by calculating the average rank-order correlation coefficient among the following measures: (a) the unipolar scale for that attribute (e.g., outgoing), (b) the corresponding bipolar scale (outgoing-shy), and (c) the corresponding score on the attribute checklist (0 or 1). We then performed a 2 (positive vs. negative attribute) × 2 (low- vs. high-scoring people) analysis of variance (ANOVA) on these 48 coefficients. The word hypothesis predicts a single main effect on the attribute factor: Greater consistency should hold for negative attributes, no matter whether people score high or low on those attributes. The self-view hypothesis predicts an interaction effect: People scoring high on negative attributes as well as people scoring low on positive attributes should show greater consistency because both express a negative self-view.

Table 4 shows the results of this analysis. Neither main effect was significant (both Fs < 1), but the interaction was, F(1, 44) = 10.2, p < .005. The effect size of the interaction amounts to a correlation of .64. High-scorers groups showed greater consistency in 1 of the 12 negative attributes, and low-scorers groups showed greater consistency in 9 of the 12 positive attributes. Thus, people with negative self-views were more consistent than people with positive self-views, no matter how these negative views were expressed—by endorsing a negative attribute or negating a positive attribute.

Note. Units of observation are groups of participants (e.g., the group of people scoring low on a particular positive attribute). Each cell averages 12 groups’ mean intercorrelations among three self-descriptive instruments.

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The results of Study 2 thus suggest that people with negative self-schemas provide more consistent self-descriptions than people with positive self-schemas. This negativity effect in self-description is domain specific and independent of the particular words that are used to describe that self-schema. In the following studies (Studies 3a and b), we replicated this effect. This time we limited our comparisons to personality dimensions that were selected to be statistically orthogonal. From a principal-components analysis of the 24 basic unipolar scales of Study 2, two clear dimensions emerged: E-I (explaining 18% of the total variance, with all six preselected attributes loading between .60 and .80) and C-N (explaining 15% of the total variance, with five of the six preselected attributes loading between .56 and .85). Study 3a replicated the negativity effect for the orthogonal dimensions, E-I and C-N, and Study 3b added another orthogonal dimension to these two, namely, conscientiousness–laziness (C-L).

Studies 3a and 3b

Method

Participants

The participants in Study 3a were 101 undergraduate students (60 women and 41 men; median age = 19 years) in an introductory psychology class at San Jose State University, who received class credit for participating in the study. The sample was composed of 46% Caucasians, 23% Asian Americans, 24% Hispanics, 4% East Indians, and 3% African Americans.

The participants in Study 3b were 120 undergraduate students (64 women and 56 men; median age = 19 years) in an introductory psychology class at San Jose State University, who received class credit for participating in the study. The sample was composed of 43% Asian Americans, 33% Caucasians, 10% African Americans, 8% Hispanics, and 6% of undisclosed ethnicity.

Procedure

Both studies took place in a classroom at San Jose State University. The participants were tested in groups of 5 to 15. The experimenter handed each participant a booklet with all instructions and measures. As each participant finished the booklet, the experimenter thanked and debriefed that participant.

Materials

Study 3a examined the E-I and C-N dimensions with three attributes defining each pole of each dimension. The poles (and their attributes)
were extraversion (extraverted, outgoing, and lively), introversion (introverted, shy, and silent), calmness (calm, relaxed, and self-controlled), and nervousness (nervous, tense, and worrying). In addition, 12 other attributes served as filler items. A principal-components analysis of these 24 unipolar scales yielded two dimensions, which accounted for 44% of the total variance and represented E-I (with the six defining attributes loading between .72 and .84) and C-N (with the six defining attributes loading between .68 and .82). The 12 filler items formed no coherent pattern. Schema indexes were computed as before. These indexes had internal consistencies of .82 (C-N) and .89 (E-I). Positive and negative schema groups were again defined as the top and bottom third of the distribution of schema indexes.

Study 3b examined three dimensions. The first dimension (E-I) was defined by the poles extraversion (talkative, lively, and outgoing) and introversion (reserved, shy, and quiet). The second dimension (C-N) was defined by the poles calmness (easygoing, relaxed, and calm) and nervousness (anxious, tense, and nervous). A third dimension, (C-L), was defined by the poles conscientiousness (organized, responsible, and hardworking) and laziness (careless, disorganized, and lazy). A principal-components analysis on these 18 unipolar scales yielded the expected three dimensions (explaining 61.5% of the variance), and all attributes loaded on their appropriate components (with loadings from .42 to .87). The three schema indexes had internal consistencies of .88 (E-I), .80 (C-N), and .86 (C-L).

In both studies, participants provided self-descriptions on the unipolar scales, bipolar scales, and on an attribute checklist. Thus, for each dimension, we compared the positive and negative schema groups for their consistency across the following measures: (a) the three-item unipolar aggregate for the positive pole of a dimension, (b) the three-item unipolar aggregate for the negative pole of that dimension, (c) the three-item bipolar aggregate, and (d) the six-item attribute checklist aggregate (the number of attributes selected at the positive pole minus the number selected at the negative pole).

Results and Discussion

To begin with, for each dimension we computed intercorrelations among the self-descriptive measures across all participants. In Study 3a, the intercorrelations among E-I measures averaged .82 (ranging from .76 to .86); those among C-N measures averaged .73 (.67 to .83). In Study 3b, the intercorrelations among E-I measures averaged .83 (.77 to .87), those among C-N measures averaged .63 (.47 to .77), and those among C-L measures averaged .77 (.64 to .88). Thus all measures showed high convergent validity.

Then we assessed the consistency of self-descriptions for positive and negative schematics separately to test the negativity effect. In Study 3a, 11 out of 12 coefficients across both dimensions were higher for negative schematics (sign test, p < .05). In Study 3b, all 18 coefficients across the three dimensions were higher for negative schematics than for positive schematics (p < .01). Moreover, as Table 5 shows, negative schematics had a greater average consistency than positive schematics in all five comparisons between groups.

The results of Studies 2, 3a, and 3b demonstrate a negativity effect in self-descriptions: People with negative self-views are more consistent in their self-descriptions than people with positive self-views. These studies, however, have addressed only one meaning of consistency, namely, the consistency across measures administered at the same time. Studies 4 and 5 examined another meaning of consistency, namely, the consistency across time. Study 4 examined the consistency within a single measure

| Table 5 |
| Replication of the Greater Consistency (Mean Correlations) of Negative Schematics in Studies 3a and 3b |
| --- | --- | --- |
| Dimension | Neg | Pos | Diff |
| Study 3a | | | |
| Extraversion–Introversion | .65 | .46 | t(10) = 2.06* |
| Calmness–Nervousness | .54 | .14 | t(10) = 2.56** |
| Study 3b | | | |
| Extraversion–Introversion | .58 | .31 | t(10) = 3.49** |
| Calmness–Nervousness | .50 | .19 | t(10) = 2.69** |
| Conscientiousness–Laziness | .52 | .20 | t(10) = 3.44** |

Note. Neg = negative schematics; Pos = positive schematics; Diff = difference.  
* p < .05.  ** p < .01.

on different occasions, and Study 5 examined the consistency on different measures on different occasions.

Study 4

Why do positive schematics show lower consistency than negative schematics? One possibility is that positive schematics do not really have a stable self-schema for the construct in question. In terms of classical test theory, a stable self-schema could be represented by the true score (T), which combines with a random error component (E) to produce the total self-rating (X), where . Thus if positive schematics do not have stable self-schemas, their self-ratings should contain proportionately less true score variance, resulting in a lower test–retest reliability on a given measuring instrument. If the two groups’ test–retest reliabilities are equal, however, then positive schematics do have a stable self-schema. That stable self-schema guarantees that their self-descriptions are just as consistent on any one instrument, though their self-descriptions might still vary from one instrument to the next. In that case, the elements of their self-schemas would be stable, but the loose interconnection among elements could cause variation across instruments (as discussed later).

Method

Participants

Undergraduate students in an introductory psychology class at Stanford University were tested twice, 3 weeks apart. Complete data for both sessions were provided by 201 students (110 women and 91 men). The sample was composed of 50% Caucasians, 29% Asians, 9% Hispanics, 5% African Americans, 1% Native Americans, and 6% of undisclosed ethnicity.

Procedure and Material

The participants were presented with a booklet and rated themselves on 20 unipolar scales along a 9-point continuum. These scales assessed the E-I and C-N dimensions. Three attributes defined each pole, namely, extraversion (outgoing, sociable, and talkative), introversion (shy, withdrawn, and quiet), calmness (relaxed, easygoing, and laid-back), and nervousness (tense, anxious, and worrying). In addition to
these 12 attributes, the booklet contained eight filler attributes. All participants completed the ratings twice, 3 weeks apart. We performed principal-components analyses on the ipsatized unipolar scores in each session. The first two components corresponded to the two dimensions E-I and C-N and accounted for more than 50% of the variance in each session. We computed schema indexes from the participants’ initial responses, selecting the top 33% (positive schematics) and the bottom 33% (negative schematics). Then we computed test–retest reliabilities for each group.

Results and Discussion

The schema index for E-I had internal consistencies of .90 at Time 1 and .91 at Time 2. The corresponding values for C-N were .89 and .88. In the whole sample, the test–retest reliability after 3 weeks was .87 for E-I and .80 for C-N. Test–retest reliabilities of the individual rating scales ranged from .59 to .82.

For each of the two dimensions, we then computed rank-order correlations to examine the test–retest reliability within each schema group. The extraversion schematics and the introversion schematics showed identical test–retest reliability ($r = .51, p < .001$). Calmness schematics showed a reliability of .43 ($p < .001$), and nervousness schematics showed a reliability of .42 ($p < .001$); the latter difference was not significant ($p > .20$).

In addition, we prepared frequency tables to show how many people in each schema group at Time 1 were classified the same way at Time 2. Of those who were classified as introversion schematics at Time 1 ($n = 66$), 83% were classified the same way at Time 2. Of those who were classified as extraversion schematics at Time 1 ($n = 68$), 81% were classified the same way at Time 2. Similarly, the figure for nervousness schematics ($n = 67$) was 76%, and that for calmness schematics ($n = 64$) was 72%. Neither difference was significant ($p > .20$).

Thus, negative and positive schematics do not differ in their temporal stability when the same instrument is administered twice. Therefore, we cannot say that positive schematics lack temporally stable self-schematics. Because positive and negative schematics showed equal test–retest reliability, their descriptions must contain equal proportions of true score variance. Why, then, do positive schematics show lower consistency on different instruments administered at the same time?

Apparently, the true score component of a self-description needs to be analyzed further into a self-schema component and a measure-specific component. The self-schema component is that part of a score that is stable across different measuring instruments and reflects the person’s self-schema; the measure-specific component reflects unique characteristics of the measuring instrument. Both parts are stable across time, but only the schema component is stable across measuring instruments. According to this analysis, positive schematics show lower consistency across different instruments because their self-descriptions contain a smaller proportion of schema variance. In other words, positive and negative schematics have equal true-score variance (their test–retest reliability is the same) but unequal schema variance (their consistency across instruments differs).

As a result, the negative schematics should show greater consistency across instruments even if the instruments are administered on different occasions. Study 5 tested this hypothesis.

Study 5

Method

Participants

Undergraduate students in an introductory psychology class at Stanford University were tested twice, 3 weeks apart. A total of 218 students (99 women and 119 men) provided complete data for both sessions. The sample was composed of 64% Caucasians, 24% Asian Americans, 5% Hispanics, 3% African Americans, 2% Native Americans, and 2% of undisclosed ethnic origin.

Procedure and Material

The participants were presented with a booklet and rated themselves on 22 unipolar scales along a 9-point continuum. Sixteen attribute scales assessed the E-I and C-N dimensions, with 4 attribute scales representing each pole, namely, extraversion (extraverted, lively, talkative, and outgoing), introversion (reserved, shy, introverted, and quiet), calmness (calm, relaxed, laid-back, and easygoing), and nervousness (anxious, nervous, tense, and worrying). In addition, six other scales served as filler items. All scores were ipsatized and aggregated as before.

In the second session (3 weeks later) the participants were presented with another booklet that contained two other self-descriptive measures. The first, an attribute-generation task, required them to list 5 personality attributes that were the most self-descriptive. The second task, an attribute checklist, required them to endorse 7 attributes that were the most self-descriptive. This checklist included the 16 attributes that were used in the unipolar rating task of Session 1, together with 14 filler attributes from the conscientiousness and agreeableness dimensions. We computed two scores from these tasks. To score the attribute-generation task, we first classified each attribute as extraverted, introverted, calm, nervous, or other (following the norms of Goldberg, 1992; John, 1990; McCrae & Costa, 1987) and computed the number of extraverted attributes minus the number of introverted attributes (a measure of E-I) and the number of calm attributes minus the number of nervous attributes (a measure of C-N). To score the attribute checklist, we computed the number of endorsed extraverted attributes minus the number of endorsed introverted attributes (E-I) and the number of endorsed calm attributes minus the number of endorsed nervous attributes (C-N).

Results and Discussion

We performed a principal-components analysis on the unipolar rating scales. The first two components (corresponding to the two dimensions E-I and C-N) accounted for more than 50% of the variance in the data set. The internal consistencies for the schema indexes were .91 for E-I and .88 for C-N. On the basis of these indexes, we selected the bottom 33% (negative schematics) and the top 33% (positive schematics).

Then we examined the consistency among the four self-descriptive measures for each dimension: (a) ratings for the positive pole of the dimension, (b) ratings for the negative pole, (c) scores for the attribute-generation task, and (d) scores for the attribute checklist. The mean consistency for the E-I dimension across the entire sample was .69, for the C-N dimension it was .59.

Finally, we assessed the consistency of the negative and positive schema groups separately by computing average rank-order correlations within each group. Across both dimensions, 11 out of 12 consistency coefficients were higher for negative
schematics than for positive schematics (sign test, p < .05). Introversion schematics had a significantly higher mean consistency (mean r = .37) than extraversion schematics (mean r = .23), t(10) = 2.12, p < .05, one-tailed. Likewise, nervousness schematics had a significantly higher consistency (mean r = .37) than calmness schematics (mean r = .12), t(10) = 4.44, p < .01.3

These results show that negative schematics are more consistent than positive schematics across different instruments, even if the instruments are administered at different times. Apparently, the self-descriptions of positive schematics contain a smaller proportion of schema variance and a larger proportion of measure-specific variance, producing comparable consistency for a given instrument but lower consistency across instruments.

To explain these results, we need to consider the organization of a self-schema, that is, whether its elements are tightly or loosely interconnected. Why would a tight interconnection among elements cause greater consistency across instruments? When the elements of a schema are tightly organized, different measuring instruments produce the same final outcome: No matter which element is activated, the entire schema is likely to get activated (producing consistency across instruments). When the elements are loosely organized, however, different measuring instruments activate different elements, which in turn activate not the full schema, but a subset of the schema. Although this subset is reliably activated by a given instrument, different instruments activate different subsets, so the consistency across instruments is lower.

Finally, we need to consider one remaining methodological question. Might the negativity effect be a statistical artifact? Most personality traits are perceived as either socially desirable or socially undesirable. Therefore, the distributions of self-ratings on these traits are typically skewed toward the undesirable end, producing a longer tail at that end. People at the undesirable end therefore span a broader range of scores than people at the desirable end. This restricted range of scores at the desirable end may attenuate their correlations with other variables, producing the negativity effect.

The results of the present studies cannot, however, be explained this way. For one thing, we performed all of the analyses not only on raw data, but also on rank-transformed data, where the positive and negative groups necessarily had equal ranges. Second, the restricted range cannot account for the negativity effect in the raw data either: The schema groups were formed not from individual scales, but from schema indexes, and schema indexes are aggregates of individual scales, so they show less skewness. In one case (E-I in Study 5) the skewness was even reduced to zero. However, the skewness was not entirely eliminated in all cases, and in those cases the positive and negative groups were not identical in their range of raw scores. To circumvent this problem, we reanalyzed the raw data in a way that equated the positive and negative groups for their range of scores, as described next.

Study 6

Four samples (Studies 2, 3a, 3b, and 5) provided consistency data for the E-I and C-N dimensions. For each dimension in each sample, we formed eight positive groups that increased successively in range. Starting at the positive end of the distribution, we selected the highest 20%, then the highest 30%, and so forth, up to the highest 90%, making 32 positive groups for each construct across the four samples. In the same way we formed eight negative groups for each dimension in each sample: Starting at the negative end, we selected the lowest 20%, then the lowest 30%, and so forth, up to the lowest 90%, making 32 negative groups for each dimension across the four samples. These groups differed, of course, in their range of scores and in their consistency, so it was possible to examine the relation between score range and consistency separately for positive and negative groups from each dimension. We hypothesized that a broader range would be associated with greater consistency and, more important, that negative groups would show greater consistency than corresponding positive groups across all ranges.

Figure 1 shows the mean consistency of positive and negative groups as a function of the groups’ score range for C-N. (Mean consistency is the average z-transformed Pearson r for each group; range is the standard deviation of each group’s schema index scores.) We computed a multiple regression equation predicting mean consistency from three variables: range, group (positive or negative), and the interaction between the two. The multiple correlation was .83, F(3, 60) = 44.8, p < .001. The coefficient for group was .47 (t = 4.2, p < .001), confirming our hypothesis that negative groups are more consistent than positive groups. The interaction between range and group was substantial (b = .16, t = 2.6, p = .01), so we fitted separate regression lines for each of the two groups. The effect of range was larger in the positive groups (b = .31, t = 7.3, p < .001) than in the negative groups (b = .15, t = 3.2, p < .01), so the slope was steeper for positive groups (see Figure 1). Thus, the negativity effect held across all ranges but was greatest for the narrower ranges, where the comparison groups are most purely schematic. Finally, the effect size of the negativity effect for C-N can be expressed as a correlation coefficient, namely, as the partial correlation between group and consistency, controlling for range and the interaction term. This value was .48 (p < .001).

In the same way, we analyzed the data for E-I, which showed similar results. The multiple correlation was .89, F(3, 60) = 76.2, p < .001. The regression coefficient associated with group was .33 (t = 3.2, p < .005), showing again that negative groups are systematically more consistent than positive groups. The interaction term was again substantial (b = .09, t = 1.8, p = .07), so we fitted separate regression lines for each group. Once again, the effect of range was larger in the positive groups (b = .36, t = 10.2, p < .001) than in the negative groups (b = .27, t = 7.7, p < .001), so the slope was steeper for positive groups. Thus, the negativity effect for E-I also held across all ranges but was greatest for the narrower ranges. Expressed as a partial correlation coefficient, the effect size of the consistency difference for E-I was .38 (p < .001).

3 A strict test of consistency between (and not among) the instruments of Session 1 (unipolar scales) and the instruments of Session 2 (attribute checklist and attribute-generation task) yielded identical results: Seven out of eight coefficients were greater for negative schematics (mean r = .39) than for positive schematics (mean r = .15), t(14) = 3.56, p < .01.
These analyses demonstrate that the negativity effect in self-description cannot be explained as a statistical artifact: Even when the range of the original scores is controlled, negative schematics are still more consistent than positive schematics.

General Discussion

This research began with a puzzling observation: In previous studies, people with negative self-views typically conformed to theoretical predictions more closely than people with positive self-views. To explain this puzzle, we hypothesized that a negative self-view is a more tightly organized schema than a corresponding positive self-view. We demonstrated in Studies 1a and 1b that the elements of a person's negative self-schema are more tightly interconnected than the elements of a corresponding positive self-schema. This tighter organization of a negative self-schema in turn led us to predict the greater consistency of negative self-descriptions: If a schema is tightly organized, the entire schema is likely to get activated, no matter which measuring instrument is used, producing consistency across instruments. If a schema is loosely organized, however, different measuring instruments activate different subsets of the schema rather than the full schema, so the consistency across instruments is lower. We therefore hypothesized that people with negative self-views would describe themselves more consistently across different measuring instruments than people with positive self-views. Studies 2–6 supported this hypothesis.

Alternative Explanations

Schemas or Words?

Could the present findings be explained without using the concept of a schema? One possibility is that the negativity effect depends not on the tighter organization of negative self-schemas, but on the tighter semantic association among negative words. Several facts contradict this hypothesis. First, in Study 2 we demonstrated that negative self-descriptions are more consistent, no matter whether those descriptions contain negative words or negated positive words. Likewise, a person's self-descriptions are more consistent on the particular construct for which that person holds a negative self-view, not on all negative constructs.

Second, if negative words are more strongly interassociated than are positive words, then the intercorrelations of self-ratings on any set of negative attributes (e.g., shy, reserved, and quiet) should be greater than the intercorrelations of self-ratings on the corresponding set of positive attributes (e.g., talkative, lively, and outgoing). To test this hypothesis using the present data, we examined the 13 sets of negative attributes used in Studies 2–5 and the corresponding 13 sets of positive attributes. Then we computed the mean intercorrelations among the attributes (a) for the 13 sets of positive attributes and (b) for the 13 sets of negative attributes. Contradicting the word hypothesis, the two average values were identical (mean \( r = .50 \)).

Third, if negative words are more tightly interassociated, then
the negativity effect should hold even when a single measuring instrument is administered twice. Study 4, however, showed that people with positive self-views are just as consistent on the same instrument across time. In sum, the present findings cannot be ascribed to a tighter semantic association among negative words.

Rarity, Extremity, and Unusualness

Could the present findings be explained by confounding correlates of negative self-views? Three possibilities need to be considered: (a) rarity (people who hold negative self-views may be rarer in the population), (b) extremity (their self-descriptions may be more extreme relative to the norm), and (c) unusualness (the words they use to generate negative self-descriptions may be more unusual).

First, rarity cannot explain the negativity effect, because every study compared an equal percentage (33%) of positive and negative schematics. Moreover, Study 6 showed that the negativity effect is robust across variations in group size (20%, 30%, through 90%) and across variations in the groups’ range of raw scores.

Second, extremity cannot explain the negativity effect because, after analyzing the raw data, we ipsatized and aggregated the individual scores and rank-ordered them, thereby removing outliers and occasional skewness in the distributions.

Third, unusualness cannot explain the negativity effect. All attributes used in these studies were selected from the norms of the lexical approach to personality (e.g., Goldberg, 1992; John, 1990). Moreover, Study 2 showed that the effect depends not on the particular words used (whether they are positive or negative), but on the content of the self-view (whether it is socially desirable or undesirable). Furthermore, the greater tightness of negative self-schemas cannot be explained by the unusualness of their elements. The behavioral examples generated by negative schematics in Study 1b were no more unusual than those given by positive schematics: The relative frequency of examples mentioned by introversion schematics was 12%; by extraversion schematics, 11%; by nervousness schematics, 14%; and by calmness schematics, 6%. The correlation between the frequency with which an example was mentioned by the participants and its appropriateness as rated by the judges was .08 for shy ratings, .14 (p = .05) for outgoing ratings, .00 for tense ratings, and .02 for relaxed ratings.

Some Puzzles Resolved

The tightness of negative self-views explains why negative schematics have conformed to theoretical predictions more closely than have positive schematics (e.g., Fong & Markus, 1982; Hill & Bellew, 1988; Markus, 1977; Nystedt et al., 1991). These studies all involved the repeated use of self-descriptive tasks. Even the reaction-time studies required self-descriptive judgments ("me" or "not me"). Thus, these studies understandably showed a negativity effect.

The tightness hypothesis also explains why negative thoughts about the self are powerful predictors of anxiety (Caccioppo et al., 1979; Galassi et al., 1981), depression (Ross, Mueller, & de la Torre, 1986; Tabachnik, Crocker, & Alloy, 1983), problems with assertiveness (Schwartz & Gottman, 1976), and coping styles (Kendall et al., 1979). Negative thoughts about a particular domain (e.g., achievement or social behavior) are often part of a specific negative self-schema for that domain (Horowitz & Malle, 1993). Therefore, they typically co-occur with corresponding feelings for that domain (e.g., anxiety or depression) as well as other elements of the negative schema, producing higher correlations between any two elements.

Another finding that appears in the literature is that people distort (e.g., exaggerate) their positive self-views (for reviews see Greenwald, 1980; Taylor & Brown, 1988). This tendency is facilitated by the looser organization of positive self-views because a loosely organized self-view can be more easily distorted and manipulated. Conversely, the tighter organization of negative self-views leads people to describe themselves more consistently and leaves little room for distortion.

The schema framework also integrates recent research on self-verification, self-discrepancy, and self-esteem, as described next.

Self-Verification

Swann and his colleagues have shown that people with negative self-views (e.g., introverts) prefer partners who see them just as negatively as they see themselves rather than partners who see them more positively (e.g., Swann, Pelham, & Krull, 1989; for a review see Swann, 1992). This self-verification contradicts a person's need for self-enhancement (Greenwald, 1980; Taylor & Brown, 1988), but it is compatible with a schema account of negative self-views. Because a negative self-view is part of a tightly organized schema, it is strongly interconnected with many other elements, including affect, behaviors, and expected reactions from others. These reactions from others may be particularly important because they initially contribute to the formation of that self-view. Thus, when introverted people interact with other people, they automatically expect specific reactions that mimic their past experiences. As a result, they prefer partners who show these (negative) reactions over partners who show unrealistically positive expectations about the interaction.

Self-Discrepancy

Research on self-discrepancy theory (Higgins, 1987) has shown that discrepancies between the actual self and the ideal or "ought" self are significantly related to negative affect (e.g., Strauman & Higgins, 1987). In one study, Strauman (1990) compared several cues that evoke autobiographical memories. He found that people's self-guides (ought and ideal aspects of the self) produced significant amounts of childhood memories with negative emotional tone. This result may seem surprising, as the cues themselves were positive. However, the effect was strongest when a self-guide was discrepant from an actual self-view. Apparently, the self-view in this case was negative, so the self-guide (even though it was a positive word) activated a negative self-schema, which in turn elicited memories of negative emotional experiences. Thus, self-discrepancy theory describes how negative experiences, self-views, and self-guides within a
particular domain converge to form a tightly interconnected self-schema for that domain.

Self-Esteem

Showers (1992) related the organization of self-views to levels of self-esteem, demonstrating that people with low self-esteem, more than people with high self-esteem, cluster negative characteristics when describing themselves. That is, their negative self-descriptions follow one another with a higher probability. According to our schema framework, this clustering of negative self-descriptions occurs because some of the negative traits generated by participants with low self-esteem come from a common self-schema. Because these traits are more tightly interconnected, they are more likely to cluster together.

It is important, however, to distinguish between a negative self-view for a specific domain (e.g., nervousness) and the more general concept of low self-esteem. The consistency observed in the present studies concerns the interconnection of elements within a domain-specific self-schema. Perhaps everyone holds at least one domain-specific negative self-schema, and the elements within that schema are likely to be tightly organized, no matter whether the person is generally high or low in self-esteem. The relationship between specific self-schemas is a separate matter. Indeed, when one considers the self-concept across many domains (some positive, some negative), people with low self-esteem appear to have a less clear and less stable self-concept than people with high self-esteem (Campbell, 1990). Even people with low self-esteem hold many more positive than negative self-views (e.g., Pelham, 1991). Therefore, their diffuse overall self-concept might arise from the tension between a few tightly held negative self-views and many loosely held positive self-views.

Origins of a Tight Negative Self-Schema

Why is a negative self-schema more tightly organized? The present studies were not intended to provide evidence on this question, but we think that several processes work together. First, attribution research suggests that negative events are more likely than positive events to pull for an explanation (Peeters & Czapinski, 1990; Weiner, 1985; see also Jones & Davis, 1965). Furthermore, such explanations typically involve a single major cause (Liu, Karasawa, & Weiner, 1992). Therefore, when people observe a socially undesirable behavior in themselves, they try to explain this behavior, and their explanation may ascribe the undesirable behavior to an undesirable trait. In contrast, socially desirable behavior calls for little explanation, and, if anything, the explanation involves multiple causes (Liu et al., 1992).

In other words, people may draw stronger inferences about the self from negative than from positive behavior. For example, they may be more likely to develop a self-schema for introversion when they observe their own shy behavior than they are to develop a self-schema for extraversion when they observe their own outgoing behavior. This process is analogous to the negativity bias in social perception, in which people give more weight to negative than to positive information when forming impressions of others (e.g., Hamilton & Zanna, 1972; Hodges, 1974; for reviews see Kanouse & Hanson, 1972; Skowronski & Carlson, 1989). Apparently, people learn that negative information is often more diagnostic (consistent across situations) than positive information, so they apply this rule both to others and to the self.

The second factor that contributes to a tight negative schema is social feedback. According to the negativity bias in social perception, observers attach more weight to a person’s negative traits, so they would react more intensely to negative traits and communicate stronger feedback to the person. Such feedback could be explicit (e.g., when parents criticize a shy child) or subtle (e.g., when classmates avoid a shy child). Either way, repeated negative feedback would foster a consistent self-schema for that trait, especially if the person fulfills the social perceivers’ expectations (e.g., Snyder & Swann, 1978). Consequently, the consistency of a negative self-schema may itself justify the observer’s negativity bias: If negative self-descriptions are more diagnostic of a tight self-schema than positive ones, observers should indeed attach more weight to negative information (cf. Reeder & Brewer, 1979). Thus, the negativity rule in social perception may turn out to be not a bias, but a reasonable strategy. Finally, these two processes together may form a self-perpetuating cycle: Observers’ stronger feedback to negative traits causes greater consistency in a person’s negative self-schema, and this greater consistency implies greater diagnosticity, which again fosters a stronger weighting of negative information in observers.

Third, affect also plays an important role in a person’s acquiring a negative self-schema. When people observe an undesirable behavior in themselves or when they get criticized for this behavior, they may feel shame, guilt, or embarrassment. These negative feelings can themselves trigger a search for explanations (cf. Hildebrand-Saints & Weary, 1989). As a result, the person is likely to attribute an undesirable trait to the self, yielding even more negative affect. Most important, when negative feelings and negative attributions repeatedly co-occur, strong interconnections get formed between those elements, producing a tight negative schema.

Future Research

This account of negative self-views yields a number of new predictions. For example, negative schematics should be more able than other people to describe elements of their self-schema—experiences related to the formation of their schema, situations that now activate that schema, and so on. Furthermore, they should strongly exhibit known consequences of schema-guided processing, such as the self-reference effect (e.g., Rogers, Kuiper, & Kirker, 1977), false alarms in recognition (e.g., Bellezza & Bower, 1981), the Stroop effect (e.g., Bargh & Pratto, 1986), or faster questionnaire response latencies (Markus, 1977).

Self-description is usually the method of choice for assessing personality traits, so the negativity effect in self-description has important implications for personality research. First, the social desirability of self-descriptions should be an effective moderator of personality consistency (cf. Bem & Allen, 1974; Chaplin, 1991). In Tellegen’s (1988) terms, people at the undesirable end of a trait dimension might be more “traited” (i.e., schematic) than people at the desirable end. The trait scores of
people at the undesirable end should be a better predictor of external correlates than the scores of people at the desirable end. For example, Malle and Neubauer (1993) found that self-peer agreement was higher for introverts ($r = .54$) than for extraverts ($r = .28$). Similarly, Malle and Horowitz (1993) had participants watch videotapes of four target people interacting. The participants identified target people with negative self-schemas more reliably and saw them as more distinct than target people with positive self-schemas.

Second, negative self-descriptions should be more diagnostic of a corresponding underlying trait than positive self-descriptions. For example, in a combined sample of Studies 2 and 5 ($n = 293$), the conditional probability that somebody was an extreme extravert (top 33%), given that the person used an extraverted attribute in the spontaneous attribute-generation task, was $p (E|l) = .55$. The corresponding probability that somebody was an extreme introvert (bottom 33%), given that the person used an introverted attribute, was $p (l|E) = .84$, which was significantly higher, $X^2 (1, N = 132) = 12.03, p < .001$. Expressed in odds ratios, the rate of correctly identifying an introvert among those who provided an introverted self-description is more than four times higher than the rate of correctly identifying an extravert among those who provided an extraverted self-description. Therefore, personality researchers may be well advised to adopt the social perceivers' negativity bias and attach more weight to negative than to positive self-descriptions. In general, the study of personality may benefit from a focus on people with socially undesirable characteristics, for their greater consistency may help uncover important mechanisms of personality.

References


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