

The Predictive Strength of Personal Constructs Versus Conventional Constructs: Self-Image Disparity and Neuroticism

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ABSTRACT Idiographic personal construct (PC) measures of self-image disparity were hypothesized to be stronger than nonidiographic conventional construct (CC) measures in predicting neuroticism. Ninety-six college students completed PC and CC measures of real self, ideal self, social self, and ideal social self; the NEO Five-Factor Inventory; and the Marlowe-Crowne Social Desirability Scale. Content analysis showed that individuals' PC measures were unique. The disparity between real self and ideal self and the disparity between social self and ideal social self were computed for PC and CC; test-retest reliabilities were .76 to .81. Results of simultaneous multiple regression analyses supported the hypothesis. Also, the two-variable PC self-image disparity scores were stronger than one-variable PC esteem scores in predicting neuroticism. Implications were discussed for research method, self-concept theory, personal construct theory, neuroticism, and psychotherapy.

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A premise of phenomenological psychology is that perception is a proximal cause of behavior (Adler, 1924/1969; Kelly, 1955; Rogers, 1951; Shlien, 1963; Snygg & Combs, 1949). The uniqueness of an individual's perceptions is emphasized by Shlien (1963) and by Kelly (1955) in his theory of personal constructs. According to Kelly's theory, each person has a system of personal constructs, that is, a personal lexicon of characteristics of the self and others. Individuals differ in the structure and content of their construct systems, though they may also share common constructs in some aspects of their perceptions. Kelly developed the Role Construct Repertory Test to elicit a person's constructs. In its emphasis on individual uniqueness, personal construct theory provides a conceptual and a methodological basis for idiographic measures of individuals' self-perceptions.

Past research has shown that individuals regard their personal constructs as more meaningful self-descriptors than constructs from other sources, including conventional constructs, which have generally accepted usage (Adams-Webber, 1970; Cromwell & Caldwell, 1962; Isaacson & Landfield, 1965; Landfield, 1965). These findings suggest that a person's own constructs are more closely related to the person's self-concept than are conventional constructs. On the basis of these findings and on the basis of Kelly's (1955) and Shlien's (1963) postulate of individual uniqueness, we hypothesized that measures of self-concept that use personal constructs are stronger predictors of affect and behavior than are measures that use conventional constructs.

There is evidence for this hypothesis in previous research on the disparity between real self and ideal self: In comparison to a conventional construct measure of real-ideal disparity, an idiographic measure has been found to have a stronger relation to self-esteem (Moretti & Higgins, 1990) and to an abstract, content-free measure of real-ideal disparity (Shlien, 1962). The present hypothesis also is consistent with past research inspired by James's (1890/1981) observation that only the attributes a person considers important contribute to that person's sense of self-worth (Pelham, 1995a, 1995b; Pelham & Swann, 1989; but cf. Marsh, 1993, 1995). Although these investigators used conventional constructs, each participant indicated the constructs' relative personal importance, and the results provided evidence that self-image disparity measured with the more important constructs was more closely related to global self-esteem.

In the present study, we used personal and conventional constructs to measure the disparity between real self (how one sees oneself) and ideal self (how one would like to be in one's own eyes). An important component of self-concept theory, this disparity is "an internal self-ideal relationship . . . which exists within each person's consciousness of himself. . . ." (Shlien, 1962, p. 146). James (1890/1981) referred to this aspect of consciousness of self as "the ratio of our actualities to our supposed potentialities" (p. 296). Real-ideal disparity has been considered an indicator of self-esteem or self-acceptance in theories of personality and psychopathology (e.g., Adler, 1924/1969; Allport, 1955; Horney, 1950; James, 1890/1981; Rogers, 1959), has been the subject of much research in these areas (e.g., Altrocchi, Parsons, & Dickoff, 1960; Higgins, 1987, 1989, 1998; Higgins, Tykocinski, & Vookles, 1990; Kureshi & Husain, 1979; Rogers & Dymond, 1954; Zigler, Balla, & Watson, 1972; see also Wylie, 1979), and has been used as an outcome measure in research on counseling and psychotherapy (Ewing, 1954; Rogers & Dymond, 1954; Shlien, 1957; Shlien, Mosak, & Dreikurs, 1962).

In the present research, we studied the relation between real-ideal disparity and neuroticism. Neuroticism is the experience of negative affects, such as anxiety, depression, hostility, and inferiority, which are found to different degrees in normal personality and psychopathology (Costa & McCrae, 1992). Past research has found that individuals with a high disparity between real self and ideal self on conventional constructs are high in neuroticism (Kureshi & Husain, 1979). Higgins and colleagues (Higgins, Bond, Klein & Strauman, 1986; Higgins, Klein, & Strauman, 1985; Strauman & Higgins, 1988; see also Higgins, 1987, 1989, 1998) and others (Scott & O'Hara, 1993; Strauman, 1989) have found that real-ideal disparity measured with idiographic constructs is associated with depression and other dejection-related affects, which are aspects of neuroticism. In the present study, we used neuroticism as the criterion variable in comparing the predictive strengths of personal construct versus conventional construct measures of the disparity between real self and ideal self.

We also examined the disparity between social self (how one thinks one is seen by others) and ideal social self (how one would like to be seen by others), in order to measure one's perception of how one is esteemed by others. Several theorists have identified social self and ideal social self as components of self-concept (Cooley 1902/1964; Higgins, 1987; James, 1890/1981; Schlenker, 1980; Wylie, 1979). Higgins et al. (1985,

1986) have researched the disparity between real self and ideal social self, which is similar to the disparity in the present study though it uses real self rather than social self in comparison to the ideal social self. They have found a relation of that disparity, measured with idiographic constructs, to depression and other dejection-related affects similar to neuroticism.

A theoretical relation of the disparity between social self and ideal social self to the disparity between real self and ideal self is implied in Rogers's (1959) theory of self-concept. According to the theory, which is similar to Cooley's (1902/1964) and Mead's (1934) theories of the social origins of self-concept (see also Hardin & Higgins, 1996; but cf. Felson, 1993), the disparity between real self and ideal self reflects conditions of self-worth that have been internalized from experiences with significant others. As a corollary to Rogers's theory, we hypothesized that a person perceives esteem by others to parallel his or her own esteem for the self. This hypothesis is consistent with research on the false consensus effect, which has shown that individuals attribute their own attitudes and behaviors to others (e.g., Alicke & Largo, 1995; Ross, Greene, & House, 1977), and is supported more specifically by the findings that individuals believe others view them the way the individuals view themselves (Shrauger & Schoeneman, 1979). We predicted that the disparity between social self and ideal social self, as well as the disparity between real self and ideal self, would be associated with neuroticism, and that both disparities would be more strongly related to neuroticism when measured with personal constructs than when measured with conventional constructs.

A methodological issue in the literature on self-image disparity is whether the disparity between real self and ideal self explains unique variance in a criterion beyond the variance explained by real self ratings alone (Hoge & McCarthy, 1983; Moretti & Higgins, 1990; Wylie, 1974). In her critique of self-image disparity measures, Wylie (1974) argued that the variance in self-image disparity scores is primarily variance in the ratings of real self, and that a disparity score bears the error variance of its two component measures. This criticism was supported by Hoge and McCarthy (1983) who, using measures comprised of conventional constructs, found that real self scores were stronger predictors of global self-esteem than were disparity scores. By contrast, Moretti and Higgins (1990) hypothesized and found that with idiographic constructs, disparity scores explained variance in global self-esteem beyond the variance

explained by real self scores. Pelham and Swann (1989) reported similar results in predicting self-esteem with conventional constructs, controlling for the effects of variables such as positive and negative affectivity, though they used a single-variable measure of disparity. In the present study, we tested the hypothesis that self-image disparity scores would be stronger than self scores in predicting neuroticism.

Another methodological issue in the literature on self-image disparity is the correlation of disparity scores with socially desirable responding, and the potential confounding of social desirability with relations between disparity scores and other variables (Wylie, 1974). The interpretation of social desirability as a response style artifact or a substantive component of personality is an unresolved issue (McCrae & Costa, 1983; Edwards, 1990; Hogan & Nicholson, 1988; Walsh, 1990; Wylie, 1974). However, regardless of whether socially desirable responding is style or substance, it can be argued that a measure has greater construct validity if it predicts significant variance in a theoretically related criterion beyond the variance shared with social desirability. In the present study, one of the requirements for predictive strength was that a disparity score predict significant variance in neuroticism beyond that predicted by social desirability.

METHOD

Measures

Elicitation of personal constructs. With a computer program designed by the senior author, the personal constructs of each participant were elicited using a modified version of the Role Construct Repertory Test (Kelly, 1955). First the participant was asked to name a person the participant knew for each of 15 role titles. Then 14 triads of these persons, plus "me" and "ideal me," were presented: flame, pal, ideal me; me, mother, father; mother, ex-pal, accepted teacher; father, boss, successful person; me, brother, rejecting person; sister, rejecting person, accepted teacher; sister, pitied person, happy person; me, threatening person, happy person; mother, flame, ideal me; father, flame, ideal me; me, brother, sister; boss, successful person, ideal me; mother, father, threatening person; and me, pal, ideal me. For each triad, the participant was asked to provide a personality characteristic that described, in an important way that was meaningful to the participant, how two of the people were alike and a characteristic that described how the third person was different. Across the 14 triads, repetition of the same response was not permitted. With this procedure, 28 different descriptors were elicited. Responses that were not rateable on the personal construct

questionnaires (see below), for example “not different,” were identified by the researchers and removed from the completed questionnaire protocols before the disparity scores and self scores were computed.

Personal construct (PC) questionnaires. After the computer program elicited the 28 descriptors, it presented them to the participant in the same randomized order on each of four separate questionnaires. The questionnaires used a scale from 1 (“never or almost never true”) to 7 (“always or almost always true”) to measure real self (“describe yourself as you see yourself”), ideal self (“describe yourself as you would like to be in your own eyes”), social self (“describe yourself as others see you”), and ideal social self (“describe yourself as you would like others to see you”).

Conventional construct (CC) questionnaires. The computer program also presented 28 items from the Adjective Check List (ACL; Gough & Heilbrun, 1983), which were the four highest-loading items on each of seven factors identified by Parker and Veldman (1969). These descriptors were presented in the same randomized order on each of four separate questionnaires. The CC questionnaires used a 7-point scale to measure real self, ideal self, social self, and ideal social self with the same instructions as the PC questionnaires.

PC and CC self-image disparity scores. To measure the disparity between real self and ideal self on PC and on CC (PC RS-IS and CC RS-IS), the absolute value of the difference between the real self endorsement and the ideal self endorsement was determined for each item; then the mean of these values was computed to yield a disparity score. The same scoring procedure was followed for the disparity between social self and ideal social self on PC and on CC (PC SS-ISS and CC SS-ISS).

PC and CC real self (RS) and social self (SS) scores. A single-variable self score similar to that recommended by Wylie (1974) was computed for real self on PC and on CC (PC RS and CC RS) and for social self on PC and on CC (PC SS and CC SS). First, we reversed the scale on items for which the ideal pole of the scale was 1 rather than 7. For each item, the ideal pole was defined as meeting one of the following conditions: (a) the ideal rating on the item was at the pole; (b) the ideal rating was between the self rating and the pole; or (c) the ideal rating and the self rating were equal and not on the pole, and the ideal rating was between the midpoint of the scale and the pole. After the reversal, the mean of the ratings was computed. With this procedure, higher mean RS and SS scores indicated higher self-esteem and perceived esteem by others, respectively.

Neuroticism (Neu). The NEO Five-Factor Inventory (Costa & McCrae, 1992) was administered. The 12-item Neu scale of this inventory has a correlation of .92 with the full 48-item Neu scale of the NEO Personality Inventory, a

three-month test-retest reliability of .79, and an internal consistency alpha of .86 (Costa & McCrae, 1992). The items address the negative affects of anxiety, depression, hostility, and inferiority.

Social desirability (SoD). The Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960, 1964) was used to control for this potentially confounding variable. Paulhus (1984) found that this scale taps both the response style of impression management and the substantive personality characteristic of self-deceptive enhancement.

Participants and Procedure

Participants were 48 female and 48 male undergraduates at a small southeastern university. Their age range was 18 to 22 years with a mean of 19.5 years. The second author, a male undergraduate, administered the study to most of the participants in groups of 12 (six women and six men); some administrations had fewer participants. The testing was done in a computer laboratory, except that four participants took the tests individually in their dormitory rooms. Participants completed all tests in a single session about 1 hour long.

The questionnaires were administered in 16 counterbalanced orders. Within each gender, three participants responded to each order of administration. Counterbalancing was done in the following manner. In the computer program, the set of four PC questionnaires was counterbalanced with the set of four CC questionnaires. Within each set of questionnaires, the real self and ideal self questionnaires were counterbalanced with the social self and ideal social self questionnaires (with real self always before ideal self and social self always before ideal social self), yielding eight orders. The paper-and-pencil NEO Five-Factor Inventory was counterbalanced with each of the eight orders, yielding 16 orders. The paper-and-pencil Marlowe-Crowne SoD Scale always was administered last.

Sixteen female and 16 male participants returned for a second session 3 to 5 weeks later to provide data for the test-retest reliability of the PC and CC disparity measures and self measures. They again completed the ratings of real self, ideal self, social self, and ideal social self on the personal constructs that had been elicited in the initial testing, as well as on the conventional constructs. Each of the eight counterbalanced orders of these questionnaires was represented twice for each gender.

RESULTS

Descriptive statistics on all variables are presented in Table 1. On Neu, the present sample had a lower mean and a somewhat higher standard

Table 1
Means and Standard Deviations ($N = 96$)

	Neu	SoD	RS	SS	RS-IS	SS-ISS
<i>M</i>	21.19	13.01				
<i>SD</i>	8.13	5.14				
Personal Constructs						
<i>M</i>			4.90	4.83	1.48	1.46
<i>SD</i>			0.79	0.75	0.68	0.69
Conventional Constructs						
<i>M</i>			4.58	4.54	1.45	1.40
<i>SD</i>			0.61	0.64	0.56	0.57

Note. Neu = neuroticism; SoD = social desirability; RS = real self; SS = social self; RS-IS = real self vs. ideal self disparity; SS-ISS = social self vs. ideal social self disparity.

deviation than the norms for college students, $M = 24.56$, $SD = 7.87$, published by Costa and McCrae (1992).

Reliability Coefficients

Test-retest reliability coefficients for the self scores and the disparity scores are presented in Table 2. According to Wylie's (1974) rationale, a self score should be more reliable than a disparity score, because the latter bears the error variance of each of its two components. However, the results showed no difference in reliability between self scores and disparity scores. In relation to the major hypothesis, in which the predictive strength of PC and CC disparity scores were compared, it is noteworthy that the PC and CC disparity scores did not differ in reliability.

Correlation of RS-IS with SS-ISS

To test the hypothesis that RS-IS is correlated with SS-ISS, zero-order and partial correlation coefficients, with SoD partialled out, were computed between these disparities on PC and on CC. The zero-order correlation between PC RS-IS and PC SS-ISS was $r(94) = .77$, $p < .001$; the partial correlation was $r(93) = .74$, $p < .001$. The zero-order correlation between CC RS-IS and CC SS-ISS also was $r(94) = .77$, $p < .001$; the partial correlation was $r(93) = .73$, $p < .001$. These correlations

Table 2
Test-Retest Reliability Coefficients ($N = 32$)

Constructs	RS	SS	RS-IS	SS-ISS
Personal	.83	.78	.81	.79
Conventional	.82	.78	.76	.76

Note. RS = real self; SS = social self; RS-IS = real self vs. ideal self disparity; SS-ISS = social self vs. ideal social self disparity.

$p < .001$ for all coefficients.

indicate that one's self-esteem is highly related to one's perception of how one is esteemed by others.

Content Comparison of PC and CC Measures

The major hypothesis was based in part on Kelly's (1955) postulate that individuals have unique personal constructs. To address this postulate, the PC descriptors elicited from participants were examined to determine the extent to which individuals used different descriptors. Synonyms were considered different descriptors because they have different connotations. An average of 34.0% of each individual's descriptors was unique to the individual. Non-unique descriptors were shared on average by only 2.3% of the sample. Also, an average of only 3.0% of each individual's descriptors was shared by more than 10% of the sample, and no descriptors were shared by more than 40% of the sample. Thus, each participant was unique in many personal constructs, and there was only a small extent of commonality of personal constructs across participants.

The overlap between the PC descriptors and the CC descriptors also was examined. Of the 28 CC descriptors, 11 did not appear in the personal constructs of any participants, and 6 descriptors appeared once in the personal constructs of 6 participants. The remaining 11 CC descriptors, on average, appeared in the personal constructs of only 2.3% of the sample. Thus, the CC descriptors appeared very infrequently in the participants' personal constructs.

Correlations of PC With CC Disparity Measures

How much variance was shared by the PC and CC disparity measures, which were to be compared in testing the major hypothesis? To address

this question, zero-order and partial correlation coefficients, with SoD partialled out, were computed between the PC and CC measures for RS-IS and for SS-ISS. Between PC RS-IS and CC RS-IS, the zero-order correlations for the whole sample, women, and men were $r(94) = .69$, $rs(46) = .78$, and $.58$, $ps < .001$, respectively; the partial correlations were $r(93) = .65$, $rs(45) = .73$, and $.55$, $ps < .001$, respectively. Between PC SS-ISS and CC SS-ISS, the zero-order correlations for the whole sample, women, and men were $r(94) = .68$, $rs(46) = .64$, and $.76$, $ps < .001$, respectively; the partial correlations were $r(93) = .63$, $rs(43) = .57$, and $.73$, $ps < .001$, respectively. It is noteworthy for later discussion that there was no significant gender difference in the zero-order correlations for RS-IS or for SS-ISS ($z_s = 1.82$ and -1.13 , respectively).

The partial correlations indicated that the two measures of the same disparity using different content accounted for 30% to 53% of the variance in each other, depending on gender and the type of disparity. The size of this shared variance, however, is limited by the moderate reliability of these measures (.76 to .81; see Table 2).

Preliminary Analyses for Comparing Predictive Strengths

Assumptions of multiple regression. Simultaneous multiple regression analyses were used to compare the predictive strengths of the variables of interest. To test the assumptions on which multiple regression analysis is based, the relation between the studentized residual and the predicted values of Neu was plotted for each of the four disparity scores, each of the four self scores, and the SoD scores. The plots supported the assumptions of linearity and homogeneity of variance.

Interactions with gender. The interaction between gender and each of the four disparity scores and each of the four self scores was tested in simultaneous regression analyses with Neu as the dependent variable; SoD, gender and the variable of interest were entered together with the interaction term. A significant $\beta = .58$, $p < .05$, for the interaction between gender and CC SS-ISS indicated that analyses should be done separately for men and women when they involved this variable.

Social desirability. In Table 3 zero-order correlations of SoD with Neu, self scores, and disparity scores are presented. It is noteworthy for later consideration that the correlations with SoD were somewhat stronger for the CC disparity scores than for the PC disparity scores. However, dependent *t*-tests indicated that none of these differences was significant: whole sample, $t_s(93) = 0.80$ to 1.06 , $ps > .20$; women and men, $t_s(45) = 0.46$ to 1.17 , $ps > .20$.

Neu and all self scores and disparity scores were significantly correlated with SoD, except PC RS and PC RS-IS for men. As Table 3 shows, when zero-order correlations between Neu and the self scores or the disparity scores were compared with partial correlations in which SoD had been partialled out, all partial correlations were lower. Thus, SoD was a confounding variable in the relation between Neu and the other variables, inflating the zero-order correlations. Consequently, the effect of SoD was controlled in the multiple regression analyses of the relations of the self scores and the disparity scores to Neu.

Comparing Predictive Strengths

The criteria used to determine whether one of two variables was a stronger predictor of Neu involved two steps: (a) the variable had a significant zero-order correlation with Neu, and (b) the variable predicted significant variance in Neu beyond that predicted by the other variable and SoD.

Disparity score versus self score. Wylie's (1974) rationale suggests that a self score would be a stronger predictor of a criterion than would a disparity score, because the latter bears the error variance of each of its two components. As shown in Table 3, all disparity scores and self scores had significant zero-order correlations with Neu, except CC SS-ISS for men. With this exception, then, all disparity scores and self scores met the first criterion for predictive strength.

To determine whether a disparity score or a self score better met the remaining criterion for predictive strength, each disparity score was compared with its corresponding self score in a simultaneous multiple regression analysis with the two variables of interest and SoD as the independent variables and Neu as the dependent variable.

In comparing RS-IS with RS, the results for personal constructs showed that the disparity score was a stronger predictor than the self

Table 3
Zero-Order Correlations of Social Desirability and
Neuroticism With Self and Disparity Scores; Partial Correlations of
Neuroticism With Self and Disparity Scores

	SoD	RS		SS		RS-IS		SS-ISS	
		PC	CC	PC	CC	PC	CC	PC	CC
SoD	—	.33	.38	.32	.40	-.32	-.38	-.33	-.41
W	—	.40	.39	.31	.36	-.40	-.45	-.34	-.47
M	—	.23 ^a	.35	.34	.47	-.22 ^a	-.28	-.32	-.37
Neu	-.44	-.46	-.56	-.46	-.46	.52	.47	.49	.41
	—	(-.38)	(-.48)	(-.37)	(-.34)	(.45)	(.37)	(.41)	(.28)
W	-.51	-.61	-.59	-.51	-.62	.63	.61	.58	.67
	—	(-.52)	(-.49)	(-.43)	(-.54)	(.54)	(.50)	(.51)	(.57)
M	-.38	-.29	-.57	-.43	-.41	.40	.31	.40	.27 ^b
	—	(-.23) ^a	(-.51)	(-.34)	(-.28) ^b	(.35)	(.23) ^a	(.32)	(.15) ^a

Note. The first row for SoD and first two rows for Neu are values for women and men combined ($N = 96$). In subsequent rows are values for women (W) and men (M) ($ns = 48$). Values in parentheses are correlations with Neu, partialing out SoD. Neu = neuroticism; SoD = social desirability; RS = real self; SS = social self; RS-IS = real self vs. ideal self disparity; SS-ISS = social self vs. ideal social self disparity; PC = personal constructs; CC = conventional constructs.

^a $p > .10$; ^b $p < .10$.

All $ps \leq .05$, unless footnoted.

score: for PC RS-IS, $\beta = .41, p < .01$; for PC RS, $\beta = -.03, ns$; and for SoD, $\beta = -.30, p = .001$. In contrast, the results for conventional constructs showed that the self score was a stronger predictor than the disparity score: for CC RS, $\beta = -.42, p = .001$; for CC RS-IS, $\beta = .06, ns$; and for SoD, $\beta = -.25, p < .01$. When the stronger disparity score PC RS-IS was compared with the stronger self score CC RS, each predicted significant variance beyond that predicted by the other score and SoD: for PC RS-IS, $\beta = .24, p < .05$; for CC RS, $\beta = -.32, p < .005$; and for SoD, $\beta = -.24, p < .01$.

In comparing PC SS-ISS with PC SS, the results again showed that for personal constructs the disparity score was a stronger predictor than the self score: for PC SS-ISS, $\beta = .30, p < .05$; for PC SS, $\beta = -.13, ns$; and for SoD, $\beta = -.30, p < .005$.

In comparing CC SS-ISS with CC SS, separate analyses were done for women and men, because CC SS-ISS had been found to interact with gender in predicting Neu. For women, the results showed that for conventional constructs the disparity score was a stronger predictor than the self score: for CC SS-ISS, $\beta = .36, p < .05$; for CC SS, $\beta = -.26, p = .10$; and for SoD, $\beta = -.24, p < .05$. For men, however, results showed that neither CC SS-ISS nor CC SS predicted significant variance in Neu beyond that predicted by the other score and SoD: for CC SS-ISS, $\beta = -.23, ns$; for CC SS, $\beta = -.49, p < .10$; and for SoD, $\beta = -.24, ns$.

In summary, contrary to Wylie's (1979) rationale, a self score was stronger than a disparity score in predicting Neu in only one of five comparisons. Specifically, of two comparisons of PC disparity scores with PC self scores, the disparity scores were stronger in both. Of three comparisons of CC disparity scores with CC self scores, the disparity score was stronger once, the self score was stronger once, and neither was stronger once. In the one instance in which a CC self score was stronger than a CC disparity score, a sixth comparison showed that this CC self score was not stronger than the corresponding PC disparity score. On the basis of these results, disparity scores were used to test the major hypothesis that personal constructs have greater predictive strength than conventional constructs.

Self-image disparity and neuroticism: Personal versus conventional constructs. The criteria used to determine whether a PC or a CC disparity score was a stronger predictor of Neu were described earlier (see "Comparing Predictive Strengths"). As shown in Table 3, zero-order correlations

between Neu and each of the four disparity scores were significant, except CC SS-ISS for men. With this exception, then, the PC and CC disparity scores met the first criterion for predictive strength.

To determine whether a PC disparity score or a CC disparity score better met the remaining criterion for predictive strength, PC RS-IS and CC RS-IS were compared in a simultaneous multiple regression analysis with the variables of interest and SoD as the independent variables and Neu as the dependent variable. PC SS-ISS and CC SS-ISS also were compared in similar analyses done separately for men and women, because CC SS-ISS had been found to interact with gender in predicting Neu. The results are presented in Tables 4 and 5.

On RS-IS the results supported the hypothesis that PC measures are stronger than CC measures in predicting Neu (see Table 4). PC predicted significant variance beyond that predicted by CC and SoD, whereas CC did not predict significant variance beyond that predicted by PC and SoD.

On SS-ISS the results for men supported the hypothesis of the greater predictive strength of PC (see Table 5). PC predicted significant variance beyond that predicted by CC and SoD, whereas CC did not predict significant variance beyond that predicted by PC and SoD.

On SS-ISS the results for women, however, showed that CC had greater predictive strength than PC (see Table 5). CC predicted significant variance beyond that predicted by PC and SoD, whereas PC did not predict significant variance beyond that predicted by CC and SoD.

Role of social desirability in comparing the predictive strengths of the PC and CC disparity scores. As reported earlier, the correlations with SoD for the CC disparity scores were somewhat higher than for the corresponding

Table 4
 Predicting Neuroticism: Multiple Regression
 Analyses for Disparity Between Real Self and
 Ideal Self Measured With Personal Constructs and
 Conventional Constructs ($N = 96$)

Variable	<i>B</i>	<i>SE B</i>	β
Social Desirability	-0.44	0.14	-.28**
Personal Constructs	4.19	1.39	.35**
Conventional Constructs	1.82	1.73	.13

** $p \leq .01$.

Table 5
 Predicting Neuroticism: Multiple Regression Analyses
 for Disparity Between Social Self and Ideal
 Social Self Measured With Personal Constructs and
 Conventional Constructs

Variable	<i>B</i>	<i>SE B</i>	β
Men			
Social Desirability	-0.59	0.27	-.31*
Personal Constructs	5.72	2.58	.45*
Conventional Constructs	-2.40	2.67	-.19
Women			
Social Desirability	-0.32	0.16	-.23*
Personal Constructs	2.69	1.47	.25
Conventional Constructs	6.81	2.43	.40**

Note. $n = 48$ for men and for women.

* $p \leq .05$. ** $p \leq .01$.

PC disparity scores (see Table 3 and the section "Social Desirability"). Although these differences were not significant, their role in comparing the predictive strengths of the PC and CC disparity scores nonetheless warrants attention.

In the analyses that tested the major hypothesis, was the greater predictive strength of the PC disparity score the consequence of a greater reduction of the predictive strength of the CC disparity score than that of the PC disparity score when SoD was included in the multiple regression analyses? To address this question, we did the analyses without SoD. In two of the three analyses, the results showed that including SoD reduced the beta weights more for the CC disparity scores than for the PC disparity scores. Nevertheless, the analyses without SoD yielded the same outcomes as the analyses with SoD: PC RS-IS was stronger than CC RS-IS for the whole sample, $\beta_s = .38$ and $.21$, $ps < .01$ and $.10$, respectively; PC SS-ISS was stronger than CC SS-ISS for men, $\beta_s = .47$ and $-.09$, $ps < .05$ and *ns*, respectively; and CC SS-ISS was stronger than PC SS-ISS for women, $\beta_s = .50$ and $.26$, $ps < .001$ and $.10$, respectively.

Another question about the results supporting the major hypothesis is whether the low mean on SoD for this sample (see Table 1) contributed to the relative strength of the PC disparity scores. Would a sample with a higher mean on SoD yield the same results? We addressed this question by testing the interaction between SoD and the PC or CC disparities in

predicting Neu. To parallel the major analyses, we tested the interactions for PC and CC SS-ISS separately for each gender. None of the interactions was significant (β s = $-.18$ to $.23$, all $ps > .30$). Thus, there was no evidence that SoD moderated the relation between the disparity scores and Neu.

Exploratory Analyses

Exploratory analyses were performed to examine the relation of the self scores and the disparity scores to the other four scales on the NEO-FFI besides Neu: Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C). On each of these four scales, multiple regression analyses revealed no interactions between gender and any of the predictor variables.

For the E, A, and C scales, zero-order correlations showed that high scale scores were significantly associated with high self scores, low disparity scores, and high SoD scores, except that E was not significantly correlated with PC RS and PC RS-IS. For the O scale, there were no significant correlations. The standard deviations on all five NEO-FFI scales were higher than the norms for college students (Costa & McCrae, 1992) and comparable to each other; therefore, a truncation in range could not account for differences among the scales in the strengths of their correlations with the variables of interest.

As we had done with Neu, we compared the strength of a self score with that of its corresponding disparity score in predicting E, A, and C. We used simultaneous multiple regression analysis with the self score, the disparity score, and SoD as the independent variables. On E, the results showed that neither the self scores nor the disparity scores were stronger predictors. On A, CC SS was stronger than CC SS-ISS (β s = $.45$ and $.08$, $ps < .005$ and ns , respectively). On C, CC RS was stronger than CC RS-IS (β s = $.35$ and $.01$, $ps < .05$ and ns , respectively), PC SS was stronger than PC SS-ISS (β s = $.35$ and $.00$, $ps < .05$ and ns , respectively), and CC SS was stronger than CC SS-ISS (β s = $.48$ and $.21$, $ps < .005$ and ns , respectively). In summary, unlike the results on Neu, neither a disparity score nor a self score was a stronger predictor on E. Contrary to the results on Neu, a self score was a stronger predictor than a disparity score in one of four comparisons on A and in three of four comparisons on C.

Also, as we had done with Neu, we compared the strength of a PC disparity score with that of its corresponding CC disparity score in

predicting E, A, and C. We used simultaneous multiple regression analysis with the PC disparity score, the CC disparity score, and SoD as the independent variables. On E, the results showed that CC RS-IS was stronger than PC RS-IS ($\beta_s = -.28$ and $.09$, $ps = .05$ and ns , respectively). On A, CC SS-ISS was stronger than PC SS-ISS ($\beta_s = -.28$ and $.02$, $ps < .05$ and ns , respectively). On C, PC RS-IS was stronger than CC RS-IS ($\beta_s = -.30$ and $-.04$, $ps \leq .05$ and ns , respectively), and PC SS-ISS was stronger than CC SS-ISS ($\beta_s = -.29$ and $.04$, $ps \leq .05$ and ns , respectively). In summary, contrary to the results on Neu, a CC disparity score was stronger than its corresponding PC disparity score on E and on A. Similar to the results on Neu, the PC disparity scores were stronger predictors than their corresponding CC disparity scores on C. However, as reported in the previous paragraph, self scores were as strong or stronger than disparity scores in predicting C. Overall, the results of these exploratory analyses suggest a limitation on the generalizability of the findings with Neu to other personality domains.

DISCUSSION

The results, with one exception, supported the hypothesis that a personal construct measure of self-image disparity is stronger than a conventional construct measure in predicting neuroticism. This was the finding for the disparity between real self and ideal self for both men and women, and for the disparity between social self and ideal social self for men. The results for the disparity between social self and ideal social self for women, however, showed that a conventional construct measure of disparity was stronger than a personal construct measure in predicting neuroticism.

The present findings with the variable neuroticism are similar to the results with the variable self-esteem by Moretti and Higgins (1990) and with a content-free measure of self-image disparity by Shlien (1962), which also showed that an idiographic measure of self-image disparity was a stronger predictor than was a nonidiographic measure. However, in contrast to these previous studies, the present method required that a personal construct disparity measure predict variance in a criterion beyond that predicted by social desirability. Meeting this requirement strengthens the evidence for the construct validity of personal construct self-image disparity measures. Also, unlike the previous studies, the present method required that a personal construct measure predict unique variance beyond that predicted by a conventional construct measure.

Meeting this requirement increases the internal validity of the results. Nonetheless, the findings of the two previous studies, which used different dependent variables and different sets of conventional constructs, increase confidence in the generalizability of the greater predictive strength of personal construct self-image disparity measures to other variables in the domain of psychological well-being.

However, a limitation on the generalizability of the findings for neuroticism is suggested by the exploratory analyses on the other personality domains of extraversion, openness, agreeableness, and conscientiousness. Contrary to the findings for neuroticism, a conventional construct disparity measure was stronger in one of two comparisons on extraversion and in one of two comparisons on agreeableness. Similar to the results for neuroticism, a personal construct measure was stronger in both comparisons on conscientiousness. However, on conscientiousness, the single-variable self measures were as strong a predictor as or stronger predictors than the disparity measures. Openness was not related to either the personal construct or the conventional construct disparity scores. These exploratory findings suggest that the greater predictive strength of personal construct disparity measures relative to conventional construct disparity measures may be limited to criteria of psychological well-being such as neuroticism and self-esteem.

Why were the personal construct measures of disparity stronger than the conventional construct measures in predicting neuroticism? Their greater predictive strength cannot be attributed to higher reliability of ratings, because the test-retest reliability coefficients of the personal construct disparity measures were no higher than those of the conventional construct measures. We considered the role of social desirability as part of an explanation, because this response bias was more strongly confounded with the disparities measured with conventional than with personal constructs, though the difference was not significant. However, analyses without social desirability yielded the same outcomes as those controlling for social desirability. Also, social desirability did not moderate the relation between the disparities and neuroticism, suggesting that results would be similar with a sample with higher scores on social desirability. Thus, there was no evidence that a differential confounding with social desirability accounts for the greater predictive strength of the personal construct measures.

The predictive strength of personal constructs appears to be related to the uniqueness of individuals' constructs. An examination of participants'

personal construct descriptors showed that each participant was unique in many descriptors, and that there was only a small extent of commonality of descriptors across participants; these findings were similar to Shlien's (1962) study. Also, the conventional construct descriptors appeared very infrequently in participants' personal construct descriptors. The uniqueness of individuals' personal constructs in the present study accounts for their greater meaningfulness in comparison to conventional constructs found in past research (Adams-Webber, 1970; Cromwell & Caldwell, 1962; Isaacson & Landfield, 1965; Landfield, 1965). Attributing the greater predictive strength of self-image disparity measured with personal constructs to these constructs' unique, meaningful content for individuals is also consistent with research inspired by James's (1890/1981) hypothesis that only the attributes a person considers important contribute to that person's sense of self-worth (Pelham, 1995a, 1995b; Pelham & Swann, 1989; but cf. Marsh, 1993, 1995).

The basic hypothesis of personal construct theory is supported by the present findings: An individual has unique perceptions that are the basis for his or her affect and behavior. Specifically, the results show that a person's own descriptors for the characteristics of the self and others are unique to a substantial degree, and that the person's self-perception using these descriptors is related to the report of neurotic affects. Also, the stronger relation to these affects of a person's own descriptors, as compared to conventional descriptors, further strengthens the evidence for personal constructs as the basis of affect. Together with previous studies (Moretti & Higgins, 1990; Shlien, 1962), the present findings provide a foundation for the further development of self-concept measures that use personal constructs as their content.

The findings also support Watson and Welch-Ross's (2000) phenomenological hypothesis that for self-report measures, phenomenal validity is a prerequisite for criterion-related validity. Phenomenal validity refers to how accurately a self-report measure corresponds to phenomenal experience. This correspondence can be judged only by the individual whose experience is being assessed. Past research has found that individuals regard their personal constructs as more meaningful than conventional constructs (Adams-Webber, 1970; Cromwell & Caldwell, 1962; Isaacson & Landfield, 1965; Landfield, 1965), indicating that personal constructs have greater phenomenal validity than do conventional constructs. The results of the present study provide evidence that a self-report

measure with higher phenomenal validity is a stronger predictor of a criterion than is a self-report measure with lower phenomenal validity.

The finding for women that the conventional construct measure of the disparity between social self and ideal social self was stronger than the personal construct measure in predicting neuroticism merits special attention, because it was contrary to the major hypothesis and to the corresponding result for men. It is possible that this gender difference resulted from the administration of the study by a male researcher, though this seems unlikely, inasmuch as there were no other gender differences. We also considered the possibility that the correlation between the conventional construct and the personal construct measures was stronger for women than for men. However, this correlation was lower for women than for men (though not significantly), ruling out this interpretation. The finding suggests that for female college students, neurotic concern about esteem by others is experienced more strongly in terms of conventional constructs than in terms of personal constructs.

The comparison of self scores with self-image disparity scores in predicting neuroticism provided little support for Wylie's (1974) criticism that the variance in self-image disparity scores is primarily variance in the self score, and that a disparity score bears the error variance of its two component measures. This rationale suggests that a self score should be more reliable and a stronger predictor of a criterion than is a disparity score. The present findings showed no difference in reliability between self scores and disparity scores. In predictive strength, a self score was stronger than a disparity score in predicting neuroticism in only one of five comparisons: the conventional construct real self score in comparison to the conventional construct disparity score between real self and ideal self. It is noteworthy that the little support found for Wylie's argument was only with conventional construct measures. Thus, the personal construct disparity scores were stronger predictors of neuroticism than were their self score counterparts, similar to Moretti and Higgins's (1990) results in predicting global self-esteem. In summary, the present findings suggest that for personal construct measures, the variance contributed by the ideal self rating to the self-image disparity score does not decrease reliability. Also, the present findings and those of Moretti and Higgins suggest that in predicting criteria of psychological well-being, the variance contributed by the ideal self rating increases the predictive strength of the self-image disparity score relative to the self score alone.

However, the generalizability of the greater predictive strength of disparity scores in comparison to self scores may be limited to criteria of psychological well-being. This limitation is suggested by the support for Wylie's argument in the exploratory analyses on conscientiousness and, to a very limited extent, on agreeableness. On conscientiousness, a self score was a stronger predictor than a disparity score in three of four comparisons; on agreeableness, in one of four comparisons. On extraversion, however, there were no differences in predictive strength. Openness was not related to any of the disparity scores or self scores. Again, it is noteworthy that of the four instances in which a self score was stronger, three of them were conventional construct measures. This finding suggests that self scores tend to be stronger than disparity scores in predicting a criterion when the two types of scores are measured with conventional constructs. Overall, the exploratory results, together with the results for neuroticism, suggest that the relative predictive strength of disparity scores versus that of self scores depends on which personality domain is the criterion.

As hypothesized, the disparity between real self and ideal self was highly correlated with the disparity between social self and ideal social self. This finding suggests that a person perceives esteem by others to parallel his or her own self-esteem. Similarly, in a review of research on self-perceptions, Shrauger and Schoeneman (1979) drew the more general conclusion that individuals believe others view them the way the individuals view themselves. This conclusion is also consistent with research on the false consensus effect, which has shown that individuals attribute their own attitudes and behaviors to others (e.g., Alicke & Largo, 1995; Ross et al., 1977).

The present findings have implications for understanding neuroticism, one of the factors in the three-factor model (Eysenck, 1991) and the five-factor model (Costa & McCrae, 1992; Digman, 1990; John, 1990) of personality. As hypothesized, the present findings showed that neuroticism is related not only to the disparity between real self and ideal self, as found in previous research (Kureshi & Husain, 1979), but also to the disparity between social self and ideal social self. Individuals high in neuroticism believe that they do not measure up to their own private ideals for themselves, and they believe that in the eyes of others they do not measure up to the ideals they would like others to have for them. The findings suggest that the negative affects of neuroticism, such as anxiety, depression, hostility, and inferiority, may be a consequence of the person's

negative perception of the self and the perception that one is viewed negatively by others.

The findings also have implications for practice and research in counseling and psychotherapy for neuroticism in college students. In practice, the negative affects of neuroticism can be understood as a consequence of negative self-perceptions, as discussed in the previous paragraph. Also for clinical practice, the findings suggest that the negative self-perceptions are best addressed in the individual's own words, with the exception for women noted earlier. The use of personal constructs gives the therapist a basis for greater empathic understanding of an individual's issues of self-esteem and perceived esteem by others. In turn, greater empathic understanding, according to theory (Rogers, 1951, 1959) and research (e.g., Barrett-Lennard, 1962; Orlinsky, Grawe, & Parks, 1994), enhances therapeutic change. For research on the outcome of therapy, the present findings suggest that in comparison to the conventional construct self-image disparity instruments used as outcome measures in past research (Ewing, 1954; Rogers & Dymond, 1954; Shlien, 1957; Shlien et al., 1962), personal construct measures of self-image disparity may be more sensitive measures of change.

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