Is Self-Esteem
a Central Ingredient
of the Self-Concept?

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At each of two sessions a week apart, 101 college subjects produced open-ended lists of items in nine categories of self-knowledge and also completed scales that provided measures of self-esteem, private self-consciousness, public self-consciousness, and social anxiety. Analyses showed that subjects' productions of self-knowledge were invested with self-evaluation in two ways: (a) Positiveness of self-evaluation (self-esteem) was significantly correlated with numbers of affectively positive items produced (such as liked activities, good qualities, and names of friends), and (b) concern about evaluation of self by others (social anxiety) was associated significantly with both production of relatively few items of self-knowledge and repeated production of the same items on the two testing occasions. These findings suggest that self-esteem is a pervasive component of measured self-concept, even for measures that lack manifest esteem-related content.

In the last decade there has been a widespread effort to improve theoretical understanding of the self-concept. This effort has included (a) the construction of measures of individual differences in self-relevant cognition (e.g., Fenigstein, Scheier, & Buss, 1975; Snyder, 1974) and (b) the development of methods to examine the role of the self-concept in information processing (e.g., Carver & Scheier, 1983; Gur & Sackeim, 1979; Kuiper, MacDonald, & Derry, 1983; Markus, 1977; McGuire & McGuire, 1982; Rogers, Kuiper, & Kirker, 1977; for overviews of this recent work see Greenwald & Pratkanis, 1984; Kihlstrom & Cantor, 1984).

As part of the effort to improve understanding of the self-concept, the present research investigated properties of an open-ended self-concept assessment

procedure. In a variety of domains the value of open-ended assessments has been found to justify their coding effort (e.g., Ericsson & Simon, 1980; Petty, Ostrom, & Brock, 1980). However, in the area of self-concept assessment, open-ended measures have had relatively little use (see Wylie's review volumes, 1974, 1979) in comparison with constrained-response measures, most of which focus on assessment of self-esteem.

McGuire (McGuire & Padawer-Singer, 1976; McGuire & McGuire, 1982) has noted that a special value of open-ended assessments of self-concept is that they permit examination of important aspects of self-concept that are independent of self-esteem. The present research obtained evidence bearing on this claim. An open-ended measure that permitted relatively simple scoring was constructed by asking subjects to produce items in response to probes for specific categories that were mentioned most frequently by subjects in McGuire's research. Two indices that could readily be scored were (a) numbers of items produced in each requested category and (b) repetition of items produced on two occasions. The question of whether or not these measures are independent of self-esteem was addressed by examining their correlations with some widely used self-report, constrained-response format personality measures, including two measures of self-esteem.

METHOD

Subjects

Data were collected at both Ohio State University (N = 58; 27 male and 31 female) and Ohio University (N = 43; 18 male, 24 female, and 1 whose sex could not be determined). At both locations, participants were student volunteers from introductory psychology courses. When volunteering, students were scheduled to appear at two sessions that were exactly one week apart. Data were collected by timed administration of booklet measures in a classroom setting, with about 20 students participating in each session. Of a total of 118 students who participated in the first sessions (68 at OSU and 50 at OU), 7 (4 from OSU, 3 from OU) did not keep their appointments for the second session. Data from another 10 subjects were unusable, 9 (6 at OSU, 3 at OU) due to improper following of instructions and another (at OU) because of difficulty with English. Because there were no significant mean differences as a function of school in personality measures or in measures based on knowledge production, the two samples were merged for all analyses.[1]

Procedure

In each of the two sessions subjects first responded to a series of 13 items, each of which requested production of a list of items in a specified category. The first two and last two categories were familiar, natural (semantic) categories. The intervening nine were categories of self-knowledge, including those that McGuire and Padawer-Singer (1976) had found to be most prominent in

unconstrained responses to the nonspecific probe, "Tell me about yourself." Each of the 13 categories was named at the top of an otherwise blank page. Subjects were given 3 minutes to respond to each category. The instructions for the 13 categories are here reproduced, in the order that was used for all subjects.

(1) Write down the names of as many different kinds of *fish* as you can think of.

(2) Write down the names of as many different kinds of *trees* as you can think of.

(3) Write down the names of people you *like*, such as family members, friends, and famous people.

(4) Write down the names of people you *dislike*, including family members, people you know, and famous people.

(5) Write down what you think are your *good qualities* and characteristics.

(6) Write down what you think are your *bad qualities* and characteristics.

(7) Write down a list of your *daily activities*. These are the things that you do every day.

(8) Write down a list of the *activities that you enjoy*. These can be such things as hobbies, amusements, and sports.

(9) Write down the *activities that you dislike*. These are things that you prefer not to do, yet you are obliged to do at least occasionally.

(10) Describe your physical appearance.

(11) Write down the names of *groups* that you belong to or that you feel a part of. These groups can be informal groups of people or formal organizations.

(12) Write down the names of as many different *fruits* as you can think of.

(13) Write down the names of as many different *birds* as you can think of.

Each session was completed by subjects' filling out three personality scales—the Self-Consciousness Scale (23 items), the Rosenberg Self-Esteem Scale (10 items), and the Texas Social Behavior Inventory (16 items). The Self-Consciousness Scale (Fenigstein et al., 1975) yields three measures—private self-consciousness (based on 10 items), public self-consciousness (7 items), and social anxiety (6 items). Private self-consciousness is conceived as the disposition to focus attention on experiential aspects of self, such as thoughts and feelings (a sample item: "I'm constantly examining my motives"); public self-consciousness is the disposition to focus on externally observable aspects of self, such as appearance ("One of the last things that I do before I leave my house is to look in the mirror"); and social anxiety is concern about adequacy of public perfor-mance ("I feel anxious when I speak in front of a group"). The Rosenberg (1965) and TSBI (Helmreich, Stapp, & Ervin, 1974) scales each yield a single measure of self-esteem. The two self-esteem measures differ in that the TSBI is conceived as a measure of the social aspect of self-esteem ("I am a good mixer"; "I feel confident of my appearance"), whereas the Rosenberg scale assesses global self-esteem ("I feel that I have a number of good qualities"; "I take a positive attitude toward myself").

Procedure for the second session was identical to that for the first. The second session was conducted in order to assess the similarity of items of self-knowledge accessed on two occasions.

RESULTS

Measures

For each of the 13 category lists, two scores were obtained: *Number of items produced* was the average number of items produced in response to the two requests (a week apart) to list items in the category; *repetition of items* was the geometric mean proportion of items in each category that were produced at both sessions. Repetition was calculated as $n_{12} \div \sqrt{n_1 \cdot n_2}$, where n_1 is the number of items in the category produced during the first session, n_2 is the number in the category produced during the second, and n_{12} is the number produced identically or very similarly at both sessions. (This statistic is also identified as a common-element correlation—see McNemar, 1969, pp. 145-146; and see Bellezza, 1984, for a previous similar use of this measure.)

Descriptive characteristics of measures are presented in Table 1 for the personality measures, and in Table 2 for the measures of number of items produced and repetition of items.

Correlations Among the Personality Measures

The largest correlations among the personality measures (see Table 3) were ones involving the TSBI self-esteem measure—a negative correlation with social anxiety ($r = -.69$) and a positive correlation with the Rosenberg self-esteem measure ($r = .59$).[2] The significant negative correlations of social anxiety with both of the self-esteem measures (see Table 3) are consistent with ones reported by previous investigators (e.g., Breckler, 1981; Turner, Scheier, Carver, & Ickes, 1978). The measure of social anxiety thus appears to be, in part, a reversed measure of self-esteem. The significant positive correlation between public and private self-consciousness is one that has been obtained repeatedly in previous uses of the Self-Consciousness Scale (e.g., Carver & Scheier, 1981).

Predictors of Number of Items Produced

Table 4 presents correlations of the personality measures with the 13 measures of numbers of items produced. The table also shows average absolute magnitudes of the correlations of each personality measure separately for the nine self-knowledge categories and the four semantic categories. For correlations involving self-knowledge categories, it can be seen that, among the personality measures, the two self-esteem measures had the largest average correlations. Also, it was only for the two self-esteem measures that the correlations involving self-knowledge categories were noticeably larger than those involving semantic categories.

TABLE 1   Characteristics of Personality Measures (N = 101)

	Range[a]	Mean[b]	SD	Test-Retest Reliability
Personality measures				
private self-consciousness	10/19 - 47/50	33.2	4.5	.66
public self-consciousness	7/13 - 35/35	26.1	4.8	.82
social anxiety	6/6 - 30/30	18.0	4.9	.80
Rosenberg self-esteem	10/17 - 40/40	32.5	4.9	.86
TSBI self-esteem	16/33 - 75/80	57.1	8.5	.85

a. Range information is given in the format, Min/Observed Range/Max, where Min and Max are the minimum and maximum possible scores on each scale.
b. These means are based on average scores on two completions of each measure, at sessions a week apart.

TABLE 2   Characteristics of Measures Based on Semantic and Self-Knowledge Categories (N = 101)

	Numbers of Items Produced			Repetition of Items	
	Mean[a]	SD	Test-Retest Reliability	Mean[b]	SD
Fish	13.7	4.8	.85	.72	.13
Trees	16.9	6.0	.84	.70	.14
Liked persons	24.5	8.7	.71	.60	.14
Disliked persons	7.5	4.3	.57	.49	.24
Good personal qualities	8.5	3.0	.74	.50	.17
Bad personal qualities	6.2	2.3	.64	.44	.20
Liked activities	12.7	4.0	.59	.56	.16
Disliked activities	6.6	2.6	.60	.46	.21
Daily activities	12.9	3.8	.55	.69	.15
Physical characteristics	8.7	2.5	.64	.70	.15
Group memberships	5.2	3.1	.84	.71	.22
Fruit	17.2	4.5	.81	.81	.09
Birds	14.4	4.7	.85	.75	.11

a. These means are based on average scores on two completions of each measure, at sessions a week apart.
b. The reptition measure is a common-elements correlation (see text).

The directions of the significant correlations between self-esteem measures and measures of numbers of items produced for categories of self-knowledge conformed to a simple pattern. Six of the seven significant positive correlations were with categories that were primarily or exclusively affectively positive (good personal qualities, liked activities, liked persons, and group memberships); and two of the three significant negative correlations were with categories that were exclusively affectively negative (bad personal qualities and disliked activities).

TABLE 3   Intercorrelations Among the Five Personality Measures
(N = 101)

	Private Self-Consciousness	Public Self-Consciousness	Social Anxiety	Rosenberg Self-Esteem
Public self-consciousness	.40***			
Social anxiety	.09	.27**		
Rosenberg self-esteem	−.12	−.24**	−.33***	
TSBI self-esteem	−.04	−.15	−.69***	.59***

*p < .05; **p < .01; ***p < .001.

(The remaining two significant correlations involved categories of self-knowledge that were not clearly either positive or negative—daily activities and physical characteristics.)

Social anxiety was next in average magnitude of correlations with numbers of items produced in the self-knowledge categories. Consistent with the negative relationship between social anxiety and the self-esteem measures (see Table 3), the pattern of these correlations was approximately a mirror image of that for the self-esteem measures. More important, however, the five significant correlations between social anxiety and measures of numbers of items of self-knowledge produced were all negative; subjects high in social anxiety produced fewer items of self-knowledge than did subjects low in social anxiety.

Public and private self-consciousness were lowest in average magnitude of correlations with numbers of items produced. Although 6 of the 18 individual correlations were significant at or beyond the .05 level, no consistent pattern of these correlations was readily discernible.

Two follow-up analyses confirmed the patterns just described. First, an adjustment was made for possible individual differences in general verbal productivity, by using average numbers of semantic-category productions as a covariate in correlations of the personality measures with each measure of self-knowledge production. The numerical values for these partial correlations, when computed to two decimal places, were identical to those for the unadjusted correlations shown in Table 3.

The second additional analysis examined correlations of the personality measures with combined indices of numbers of items produced in affectively positive and negative categories. The index of *positive productions* was an average of numbers produced for the categories of liked persons, good personal qualities, liked activities, and group memberships. The *negative productions* index combined the categories of disliked persons, bad personal qualities, and

TABLE 4   Correlations of Personality Measures With Numbers of Items Produced (N = 101)

	Personality Measures				
	Private Self-Consciousness	*Public Self-Consciousness*	*Social Anxiety*	*Rosenberg Self-Esteem*	*TSBI Self-Esteem*
Semantic categories					
fish	.06	−.12	−.15	.01	.08
trees	.04	−.27**	−.26**	.10	.20*
fruit	.25**	.02	−.18*	−.03	.18*
birds	.12	−.10	−.08	−.11	.05
average absolute values	.12	.13	.17	.06	.13
Self-knowledge categories					
liked persons	−.05	.09	−.25**	.16	.23*
disliked persons	−.03	.09	−.06	.07	.07
good personal qualities	.22*	−.12	−.41***	.33***	.42***
bad personal qualities	.24**	.17*	−.04	−.33***	−.11
liked activities	.07	−.18*	−.17*	.12	.25**
disliked activities	.12	.10	.08	−.26**	−.06
daily activities	.06	.03	−.20*	.15	.31***
physical characteristics	.37***	.11	.06	−.17*	−.02
group memberships	.07	−.25**	−.26**	.18*	.27**
average absolute values	.14	.13	.17	.20	.19

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

disliked activities. Positive productions correlated positively and significantly with both TSBI self-esteem ($r = .37$) and Rosenberg self-esteem ($r = .25$), and negatively with social anxiety ($r = -.36$), but nonsignificantly with private ($r = .05$) and public ($r = -.08$) self-consciousness measures. Negative productions had only one significant correlation, a negative correlation with the Rosenberg self-esteem measure ($r = -.17$).

Predictors of Repetition of Items

With the exception of the social anxiety measure, the personality measures were weakly and inconsistently correlated with repetition of self-knowledge items on the two testing occasions (see Table 5). For social anxiety, however, four of nine correlations with the self-knowledge repetition measures were significant, and all of these were positive. In other words, subjects high in social anxiety were more likely to repeat items on the two testing occasions. This positive relationship between social anxiety and repetition of items was maintained both in partial correlations (using average repetition scores for the four semantic categories as the covariate) and in correlations using averaged repetition indices for the four affectively positive ($r = .21$) and three affectively negative ($r = .25$) categories.

DISCUSSION

The present findings indicate the involvement of self-esteem in a measure of self-concept that has no superficial esteem-relevant content. More specifically, three measures that are conceptually linked to individual differences in self-evaluation (two of self-esteem and one of social anxiety) proved to be better predictors of measures derived from subjects' open-ended self-descriptions than were two measures of more cognitively conceived individual differences (public and private self-consciousness).[3]

Self-knowledge and self-presentation interpretations. Two interpretations seem equally plausible. One assumes that individual differences in self-esteem are, in effect, differences in *cognitive access* to affectively positive versus affectively negative knowledge about oneself. The second interpretation assumes that subjects high in social anxiety engage in a form of *self-censorship* (cf. Schlenker & Leary, 1985), which is manifest (a) in their reporting relatively few items of self-knowledge and (b) in their taking care to report the same items on two testing occasions a week apart. Both of these interpretations accord a prominent role to self-evaluative processes, and both fit well with recent accounts in which both self-evaluation and concern about evaluation by others are treated as fundamental to personality (Breckler & Greenwald, 1986; Greenwald & Breckler, 1985; Paulhus, 1984; Tetlock & Manstead, 1985; Schlenker, 1982).

The conclusion that self-esteem (or, better, self-evaluation) is pervasively involved in self-concept must be tempered by recognition of some limits of this

TABLE 5 Correlations of Personality Measures With Item Repetition Measures (N = 101):

	Personality Measures				
	Private Self-Consciousness	Public Self-Consciousness	Social Anxiety	Rosenberg Self-Esteem	TSBI Self-Esteem
Semantic categories					
fish	.07	.06	.10	.15	.03
trees	−.02	.03	.04	.01	−.01
fruit	.03	.19*	−.01	−.10	−.03
birds	.14	.20*	.07	−.12	−.05
average absolute values	.07	.12	.06	.10	.03
Self-knowledge categories					
liked persons	.23**	.23**	.24**	−.06	−.11
disliked persons	.14	.21**	.28**	−.09	−.08
good personal qualities	.04	.16	.02	−.03	−.02
bad personal qualities	.10	−.06	−.02	−.01	−.02
liked activities	−.07	.01	.16	.03	−.09
disliked activities	−.22**	.06	.24**	−.13	−.09
daily activities	.01	−.05	.20*	.03	.03
physical characteristics	.01	.11	.14	−.16	−.04
group memberships	−.03	.13	.11	−.08	−.09
average absolute values	.09	.11	.16	.07	.06

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

study. First, the study considered only two indices based on productions of self-knowledge—number of items produced and repetition of items on two occasions. (These indices were selected because of their being easily coded from subjects' open-ended responses.) Indices based on more analytic coding procedures (e.g., McGuire, McGuire, & Cheever, 1986) might reveal significant dimensions of variance that are independent of self-evaluation. Second, the design used only two non-esteem-related individual difference measures— public and private self-consciousness. (These measures were selected because of the relevance of their conceptual definitions to measures of access to self-knowledge.) In retrospect, and noting the apparent involvement of concern about self-presentation in productions of self-knowledge, it would have been useful to include a measure of individual differences in self-monitoring (Snyder, 1974).

Implications for self-concept assessment. The observed correlations of self-esteem and social anxiety with measures based on the self-description task, although highly significant and accounting for substantial variance, were not so large as to suggest that the self-description task should or could be used as a measure of self-esteem. Nevertheless, it was apparent that self-esteem (or, more generally, self-evaluation) was importantly involved in subjects' self-descriptive responses in the semiconstrained format. We suggest, therefore, that an unconstrained self-description task need not, and should not, be regarded as yielding a self-concept assessment that is independent of self-esteem. In further research with measures of spontaneous self-concept, it may be useful to include accompanying (constrained-format) assessments of self-esteem. Use of both types of measures in the same setting may allow the collection of data that adds to understanding of both self-esteem and the spontaneous self-concept.

NOTES

1. Because there were no hypotheses concerning sex differences, data were combined for males and females. Examination of sex differences in response to a reviewer's request indicated that correlation matrices for males and females were not significantly different. There were a few significant differences between sexes in means, largely due to a general tendency for females to list more items in self-relevant categories.

2. The criterion used for describing correlations as statistically significant in this article is a two-tailed alpha = .05 criterion. All reported correlations were based on N = 101 (df = 99). Minimum absolute values of correlations that achieved two-tailed .05, .01, and .001 levels were, respectively, .17, .24, and .30.

3. In subsidiary analyses, attempts were made to develop combined indices of self-knowledge item productions that should be most closely associated with public or private self-consciousness. A combined index of *public self-knowledge productions* was constructed by averaging three categories of items that were, in principle, as apparent to an observer as to the subjects themselves (group memberships, daily activities, and physical appearance). Somewhat surprisingly, this index was uncorrelated ($r = -.05$) with public self-consciousness, but was significantly correlated with private self-consciousness ($r = .18$), and was even more strongly correlated with social anxiety ($r = -.22$) and TSBI

self-esteem (r = .28). An index of *private self-knowledge productions* combined six categories of items that are based on feelings that should not be directly observable by others (liked and disliked people, liked and disliked activities, good and bad personal qualities). This index was uncorrelated with either private (r = .07) or public (r = .04) self-consciousness, but was significantly correlated with social anxiety (r = −.27) and TSBI self-esteem (r = .25).

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