# An Examination of the Factor Relationships Between the Personality Assessment and Two So-cial - Self Systems

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## Introduction

The nature of the self has been a topic that has intrigued philosophers and psychologists for centuries. William James (1890) suggested that there were three objects of self-thought: the material self, the social self, and the spiritual self. George Herbert Mead (1934) proposed a theory of self-development, suggesting that about the age of four a child develops the ability to take the role of a generalized other, has re-flexitivity of thought and can view self as a social object. Assumptions regarding the nature of the self are deeply rooted in the clinical tradition. All insight therapies view understanding the self to be a primary goal of therapeutic intervention. Until recently, interest in the self has been largely a theoretical rather than an empirical subject in psychology.

More recently, Fenigstein, Scheier, and Buss (1975) published the paper "Public and Private Self-consciousness: Assessment and Theory." In this paper they suggest that what is common in social psychological research, and in accord with the historical tradition of self-theorists, is the process of self-focussed attention. They distinguish between the state and trait of self-focussed attention, calling the former self-awareness and the latter self-

consciousness. Self-awareness may be due to situational variables, a chronic disposition, or both. In contrast to this, self-consciousness is defined as, ". . . the consistent tendency of the person to direct attention inward or outward" (Fenigstien et al., 1975, p. 522).

The theory's constructs are operationally defined by a three-factor self-consciousness scale. The first factor is labeled private self-consciousness, and it measures the personal or covert aspects of self. Persons who score high on this factor are said to be very aware of their feelings, thoughts, and motivations. The second factor is labeled public self-consciousness, and it measures the person's self view as a social object. A person scoring high on this factor is said to be astutely aware of others' perceptions of him/her. The third factor is labeled social anxiety, and it refers to the subjective discomfort (a reaction) a person experiences in social interactions. The public and private factors are reported to have a low positive correlation ($r=25$), and a similar correlation is reported for public self-consciousness and social anxiety. Private self-consciousness and social anxiety are reported to be uncorrelated (Fenigstein et al., 1975; Vleeming & Engelese, 1981). The discriminant/concurrent validity of the measure has also been investigated and has

held up well empirically. (Carver & Glass, 1976; Turner, Carver, Scheier, & Ickes, 1978).

Using the factorial composition of the self-consciousness scale, Fenegstein et al. Postulate a theory of self-consciousness. They propose that public and private self-consciousness factors represent dispositional individual differences in two distinct processes of self-focussed attention. They also propose that social anxiety is a reaction to the process of self-focussed attention. Public self-consciousness is said to be a necessary, but not sufficient condition to result in social anxiety. A person can frequently view him/herself as a social object and not be socially anxious. Social anxiety is said to be unrelated to private self-consciousness. Public and private self-consciousness constructs have been the subject of many investigations examining their roles as moderator variables. The results of these studies have largely supported self-consciousness theory. Self-consciousness process has been studied in relation to:attributions (Buss & Scheier, 1976); conformity (Froming & Carver, 1981); attitude change manipulations (Scheier & Carver, 1980); and memory/information processing(Turner, 1980), to name a few. The mechanisms of action responsible for these moderating effects have not been the subject of much research activity.

One way to examine the internal relations of a set of theoretical propositions is to examine the relationship of the factor structure of the theory in question along with a related theory whose factor structure is well documented. This is the approach adopted in this investigation, and the theory used is the Personality Assessment System (PAS) (Gittinger, 1983; Krauskopf & Davis, 1973; Winne & Gittinger, 1973). Saunders (1960a; 1960b; 1961a; 1961b; Klingler & Saunders, 1975) has documented the factor structure of the PAS. PAS addresses a broader personological domain than self-consciousness theory. By examining the underlying variables across theories we can gain insight into the internal structure.

Logically integrating the two theoretical positions from a self-consciousness perspective one would suspect that the PAS trait most associated with the mechanism directing "focus" of attention is the I-E trait. PAS postulates that the I-E dimension directs the focus of the individual's mental world (perceptions/ideations). Admittedly, the R-F or A-U dimensions of PAS may relate to self-consciousness. However, this is a preliminary investigation, and self-consciousness theorists' description of the mechanism responsible for its moderating effects implies that if there is a relationship between the theories it will be evident in the I-E dimension. In this investigation there are two hypotheses.

**Hypothesis One**

The primary characteristic of public self-consciousness is awareness of self as a social object. This focus of attention implicitly suggests that public self-conscious persons are environmentally attuned. In PAS theory, these individuals should function as E's at the basic level. There are two paths by which a person may function as an E at the basic level; (a) they may be uncompensated E's (Eu); or, (b) be a compensated I (Ic). The Eu tests with low digit span and low arithmetic in relation to normal level. The Ic tests high digit span and low arithmetic

in relation to normal level. The first hypothesis is that public self-consciousness will share factor space with these designated PAS variables (digit span and arithmetic).

**Hypothesis Two**

The primary characteristics of private self-consciousness is awareness of inner thoughts and feelings. This focus of attention presumes that private self-conscious persons are ideationally attuned. In PAS theory, these persons should function as I's at the basic level. There are two paths by which a person may be ideationally dominant: (a) they may be uncompensated I's (Iu), or (b) they may be compensated E's (Ec). The Iu individual test high digit span and low arithmetic in relation to normal level. The second hypothesis is that private self consciousness will share factor space with these designated PAS variables (digit span and arithmetic).

**A Design Expansion**

The analysis in this study are based on the correlation matrix of two sets of data points, the PAS and self-consciousness variables. The interpretation of correlation data is always suspect due to the possibility that the results are being moderated by a third variable. The addition of another set of data points whose relationship to either the PAS or self-consciousness is known would aid in the interpretation of results.

Self-monitoring is a construct and theory of social behavior whose relationship to self-consciousness has been examined (Gabrenya & Arkin, 1980; Turner et al., 1978). Self Monitoring and self-consciousness are said to assess relatively independent self processes. While psycho-metrically independent, theoretically both are concerned with self-dispositions. The inclusion of self-monitoring constructs in this investigation acts as a form of statistical control and is relevant theoretically. With this logic in mind, the Self-Monitoring Scale was incorporated into this study.

Snyder (1974) proposed a theory that individuals vary in the extent to which they observe and control their expressive behavior and self- presentation. He postulates that a unideminsional construct, self-monitoring, accounts for these individual differences. Persons high in self-monitoring are said to be sensitive and aware of others' social behavior, and use others' behavior as a guideline for managing their own. Persons low in self monitoring are not as sensitive to the social appropriateness of their behavior. They pay little attention to the social behavior of others and monitor or control their behavior to a lesser extent persons high in self-monitoring.

Gabrenya and Arkin (1980) investigated the factor structure of the Self-Monitoring Scale. They determine that a relatively independent four-factor solution accounted for the majority of the variance in the scale and suggested that self-monitoring is not an unidemendional construct. Gabrenya and Arkin suggest that Factor A is concerned with the individuals acting ability. Factor B is associated with the quality of the person's social interactions and their social ability. Factor C/D assesses the degree to which the individual orients their behavior to others' social behavior, using others' behavior as a reference point for their own. Factor E is viewed as a measure of speaking/verbal ability.

Gabrenya and Arkin correlated the self-

monitoring factors they identified and the self-consciousness constructs. They found Factor A to be a correlated (low Positive) with private self-consciousness. Factor C/D was correlated (low positive) with public self-consciousness, and Factor E covaries with public self-consciousness. Due to the theoretical and statistical relationships among the constructs, the factors identified by Gabrenya and Arkin were treated as variables in this study.

## Method

### Subjects

A sample of 60 subjects was collected consisting of 27 males and 33 females. The majority of this sample (n = 45) was obtained by voluntary sign-up from introductory psychology classes at the University of Missouri-Columbia. These students received class incentive for their participation. The remainder if the sample was obtained from a pre-existing store of PAS profiles of psychology graduate students. These subjects were blind to the nature of this investigation, consciousness, and Factor E varies with public self consciousness. Due to the theoretical and statistical relationships among the constructs, the factors identified by Gabrenya and Arkin were treated as variables in this study.

### Materials

The data were derived from three instruments: The Self-Consciousness Scale, The Self-Monitoring Scale, and the complete PAS protocol. The Self-Consciousness Scale was labeled the "Buss Scale", The Self-Monitoring Scale was labeled the "Personal Reaction Inventory." The PAS was introduced and a measure of intelli-

gence and personality.

### Procedure

In this study data was collected by the first author and six assistants. Each assistant was provided a copy of "Instruction for Administering Saunders' Extended WAIS/PAS" (Krauskopf, 1982). All testers followed the same pretest, testing, and post-test procedure. Subjects were first given the Buss Scale and the Personal Reaction Inventory. Upon completion of these measures, the PAS was administered, which was followed by debriefing.

Subjects who were obtained from the pre-existing PAS pool were given a packet containing the questionnaires to complete. They received the same pretest instructions as the rest of the sample and were asked to return the questionnaires as quickly as possible. Upon return of the packet, these subjects were debriefed.

### Analysis

To remove the effects of a general aptitude, all PAS subtest scaled scores were transformed by subtracting normal level. Orthogonal axes were determined by principal components analysis and varimax rotation. Factors were retained by the eigenvalue greater than one criterion. Oblique factor solutions using the promax method were also computed and compared to the orthogonal solutions. All solutions were evaluated by the amount of variance they accounted for and by the psychological meaningfulness of the solution.

### Results and Discussion

Prior to reporting results, some cautionary notes need to be made. The ratio between the number of subjects and the number of

**Table 1. Factor Analysis of Self-Consciencness and Self-Monitoring Rotation Methos: Varimax Rotated Factor Pattern**

| Variables | Factor 1 | Factor 2 | Factor 3 |
|-----------|----------|----------|----------|
| PRIV | -1.15 | 0.00 | 0.86 |
| PUB | 0.22 | -0.08 | 0.80 |
| SA | 0.20 | -0.83 | -0.02 |
| SMA | 0.49 | 0.65 | 0.22 |
| SMB | 0.16 | 0.63 | -0.22 |
| AMCD | 0.87 | -0.18 | 0.06 |
| SME | 0.77 | 0.39 | -0.06 |

Variance explained:

By Solution = 4.93 or 82%
Factor 1 =1.74 or 28.9%
Factor 2 =1.71 or 18.6%
Factor 3 = 1.48 or 23.8%

**Table 2. Factor Analysis of PAS and Self-Monoriting Rotation Method: Varimax Rotated Factor Pattern**

| Variance | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|----------|----------|----------|----------|----------|----------|
| D | 0.00 | 0.04 | 0.02 | -0.06 | 0.92 |
| A | 0.13 | 0.22 | 0.02 | -0.67 | 0.10 |
| I | -0.12 | -0.38 | -0.39 | 0.33 | -0.17 |
| BD | 0.17 | 0.71 | 0.32 | -0.09 | -0.05 |
| S | 0.14 | -0.11 | -0.66 | 0.14 | -0.15 |
| C | -0.06 | -0.71 | -0.15 | -0.03 | -0.15 |
| PA | -0.06 | 0.06 | 0.72 | 0.21 | -0.10 |
| PC | 0.04 | 0.13 | 0.01 | 0.67 | -0.00 |
| OA | -0.16 | 0.78 | -0.08 | -0.01 | -0.07 |
| SMA | 0.78 | 0.09 | 0.08 | -0.08 | -0.16 |
| SMB | 0.38 | 0.09 | 0.63 | -0.08 | -0.12 |
| SMCD | 0.63 | -0.00 | -0.07 | 0.49 | 0.27 |
| SME | 0.87 | -0.05 | -0.03 | -0.08 | 0.07 |

Variance explained by:

Solution = 8.08 or 62.2%
Factor 1 = 2.02 or 15.5%
Factor 2 = 1.89 or 14.5%
Factor 3 = 1.64 or 12.6%
Factor 4 = 1.37 or 10.6%
Factor 5 = 1.15 or 8.8%

variables of interest is small for the proper application of factor analytic techniques (On Kim & Mueller,1978). As such, the interpretation may be regarded only as tentative. For this reason, an analysis of all variables at one time was not computed. It was decided that a variable had to load at least .35 on some factor to be considered meaningful in the solution. PAS marker variables had to be evident in a solution for it to be reported. With these limitations in mid, factor analytic results will be reported and discussed.

**Self-consciousness and Self-monitoring**

Results of the factor analysis of self-consciousness and self-monitoring are found in Table 1. The orthogonal, three-factor solution reported accounts for 82% if the variance in the data set. This solution was the best solution statistically and in terms of its psychological meaningfulness.

Factor 1 is labeled the Social Mimic Factor, and it accounts for 28.9% of the variance in the data set. This factor is a self-monitoring factor that is predominantly defined by SMCD (using others' behavior as a reference point for one's own social behavior).

The other variables that load on this factor are SMA and SME. The self-consciousness variables and SMB (the quality and quantity of social relationships) do not load on this factor. This factor describes a self-monitoring process in which the individual's behavior is determined as he/she deems it appropriate to behave in accord with the situation. The lack of influence by either the social quality (SMB) or social anxiety (SA) gives this factor a reflective or mimic quality.

Factor 2 is labeled the Socially Comfort-

able Factor, and it accounts for 28.3% of the variance in the data set. The variables which load positively on this factor are SMB, SME, and SMA, while SA load negatively. This factor is primarily defined by SMB, and it describes a different self-monitoring factor than described in Factor 1. In this factor, individuals are socially adroit and not socially anxious. Their acting and speaking abilities are employed to enhance their social relationships, and the self-monitoring process identified by this factor is a socially comfortable one.

Factor 3 is labeled the Self-consciousness Factor, and it accounts for 23.8% of the variance in the data set. This factor loads on the PUB and PRIV variables exclusively. SA does not load in this factor, but does on Factor 2. SA seems more associated with self-monitoring than self-consciousness.

An interesting result of this solution is that the self-monitoring variables occupy two factor spaces. This have several implications. First, SMA and SME load on both factors, suggesting that these variables do not measure unidimensional constructs. Secondly, it suggests The Self-Monitoring Scale measures two processes. One is primarily SMCD and describes a watchful, or removed, orientation. The other is primarily defined by SMB and describes an involved, comfortable (anxiety free) self-monitoring process. Finally, SA loads in the socially involved self-monitoring factor. The shared factor space of SA with self-monitoring and not self-consciousness suggests that it is associated with the former process. The other variables that load on this factor are SMA and SME. The self-consciousness variables and SMB (the quality and quantity of social relationships) do not load on this factor.

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## PAS and Self-monitoring

Results of the analysis of the PAS variables and the self-monitoring variables are reported in Table 2, page 115.

This table reports an orthogonal five-factor solution that accounts for 82% of the variance in the data set. This solution has the expected PAS primitives strongly loading on sep

Factor 1 is a self-monitoring factor which accounts for 15.5% of the variance in the data set. All of the self-monitoring variables load positively on this factor, supporting Snyder's contention that The Self-Monitoring Scale measures one thing. However, since Gabrenya and Arkin's scales also load on other factors in the solution, their contention is that this scale is not unidimensional is also supported.

Factor 2 is PAS factor that accounts for 14.5% if the variance. BD and OA are the major contributors. No self-monitoring variables load on this factor. In other words, the psychological mechanisms or the primitive R-F dimension appear to be irrelevant to self-monitoring process.

Factor 5 is also a PAS factor that seems independent of self-monitoring. This factor accounts for 8.8% of the variance and is defined by D. This implies that primitive I-E is not relevant to self-monitoring.

Factor 3 associates SMB with PA and S. The description of SMB as the quality and quantity of social relationships resembles the PAS interpretation of PA. The association with S suggests that the basic level of R-F is also involved. Factor 4 is labeled the Socially Controlled Factor, and it accounts for 10% of the variance. PC and SMCD and A load negatively. The association of PC and A which are basic level PAS variables suggests that this factor is controlled, learned social adjustment.

It was suggested in factor analysis of the self-consciousness and self-monitoring variables that there were two self-monitoring processes. The factor analysis if the PAS and self-monitoring variables seems to have conceptually replicated the two factors. The common denominator in both factors are constructs of the A-U dimension. This result is in accord with PAS theory.

## PAS and Self-consciousness

Results of the factor analysis of the PAS and self-consciousness variables may be found in Table 3.

| Variance | Factor1 | Factor2 | Factor3 | Factor4 | Factor5 |
|---|---|---|---|---|---|
| D | 0.02 | -0.02 | -0.05 | 0.89 | -0.06 |
| A | 0.17 | -0.42 | -0.40 | 0.16 | -0.30 |
| I | -0.48 | -0.42 | 0.48 | -0.26 | -0.20 |
| BD | 0.80 | -0.04 | -023 | -0.02 | 0.18 |
| S | -0.20 | 0.38 | 0.20 | -0.26 | -0.29 |
| C | -0.61 | 0.18 | -0.16 | -0.26 | -0.10 |
| PA | 0.17 | -0.09 | -0.09 | -0.09 | 0.83 |
| PC | 0.17 | -0.02 | 0.76 | 0.00 | -0.05 |
| OA | 0.72 | -0.05 | 0.12 | -0.09 | -0.11 |
| PRIV | -0.26 | 0.68 | -0.07 | -0.30 | -0.21 |
| PUB | -0.08 | 0.89 | -0.01 | 0.24 | 0.05 |
| SA | -0.33 | 0.07 | 0.39 | 0.28 | -0.47 |

Variance explained by:
   Solution = 7.48 or 62.4%
   Factor 1 = 2.08 or 17.3%

Factor 2 = 1.62 or 13.5%
Factor 3 = 1.28 or 10.6%
Factor 4 = 1.27 or 10.6%
Factor 5 = 1.23 or 10.3%

Table 3 reports an orthogonal five-factor solution that accounts for 62.4% of the variance. This solution has the expected PAS primitive variable factor loadings.

Factor 1 in this solution is a PAS factor that accounts for 17.3% of the variance. The variables that load this factor are BD and OA positively, and I and C negatively. No self-consciousness variables load on this factor with the possible exception of SA, which misses our interpretative criterion by .02. The inverse relation between SA and OA is consistent with PAS interpretation of OA as related to primitive R-F.

Since Factor 2 more directly addresses the hypotheses of this investigation it will be discussed after Factors 3, 4, and 5.

Factor 3 is another PAS factor that shares factor space with SA, and it accounts for 10.6% of the variance. PC, S, and I load positively on this factor and A loads negatively. This suggests that social anxiety is partially a function of one's basic adjustment on I-E and A-U.
Factor 4 in this solution accounts for 10.6% of the variance, and the only variable that loads on it is D. This result disconfirms our hypothesis that primitive I-E is important in self-consciousness.

Factor 5 accounts for 10.3% of the variance The highest positive loading is for PA, indicating primitive A adjustment. Primitive A's are described as being innately responsive to social cues and not easy to embarrass. SA load negatively on this factor. We interpret this as a meaning that primitive

A's are not socially anxious, a result consistent with PAS theory.

**The Hypotheses and Factor 2**

Factor 2 is labeled the Self-consciousness Factor, and it accounts for 13.5% of the variance. The variables that load positively on this factor are PRIV, PUB, and S. A loads negatively on it. This is the only factor on which the two self-consciousness variables meet our interpretive loading criteria so it directly addresses the hypotheses. Hypothesis One states that publicly self-conscious persons should function as E's on the basic level of adjustment in PAS terms. This hypothesis would be supported by a factor that loads on PUB and either (a) - D and - A, or (b) + D and +A. Hypothesis Two states that private self-conscious persons should function as I's on the PAS basic level. This hypothesis would be supported by a factor that has positive loading for PRIV and either (a) + D and - A, or (b) - D and + A.

In this solution the self-consciousness variable both load on the same factor, so these hypotheses were not supported. Both hypotheses imply that A should be related to the self-consciousness constructs. This does occur on Factor 2, implying that compensation, or the lack of it, is more important in self-consciousness than the I-E direction.

The loading of S on this factor suggests that the basic level adjustment of the R-F dimension is also relevant to basic F adjustment whichever direction the primitive takes. Basic F is associated with natural or acquired sensitivity. It seems reasonable that sensitive persons might be self-conscious.

## Conclusions

Prior to drawing conclusions the reader should be reminded of two problems with this study. First, the ratio of subjects to the number of variables of interest is low. Second, there was not any manipulation, or even systematic selection, of independent variables, so we have a study of associated or related variables. While the readers of this journal will favor an interpretation of the PAS as causal, the evidence does not say one way or the other. With these cautions in mind we will now turn to our conclusions.

The first conclusion pertains to the structure of self-consciousness. Fenigstein et al. (1975) state that public and private self-consciousness are two relatively independent processes, and we reasoned that they should separate in factor space supporting their independent description. However, in these data they emerge together on one factor. Social anxiety does not appear any more related to one than the other. The second conclusion concerns the nature of the psychological mechanism responsible for self-consciousness. We favor an explanation that the basic levels of the I-E and R-F dimensions determine whether and how a person is self-conscious and that the A-U dimension is more relevant to social anxiety, particularly that primitive A people are not very socially anxious, and that high PC and low OA are characteristic of socially anxious persons.

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