

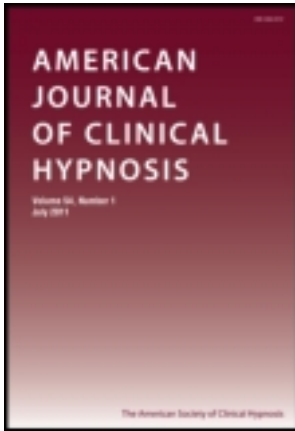
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## Personality Correlates of Hypnotic Susceptibility: Needs for Achievement and Autonomy, Self-monitoring, and Masculinity-Femininity<sup>1,2</sup>

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A total of 1300 subjects in six samples completed a short battery of personality questionnaires and the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A). Measured hypnotic susceptibility correlated significantly with scores on Tellegen's Absorption Scale (mean  $r = .27$ ), but not with the Achievement and Autonomy Scales of the PRF (mean  $r$ s =  $.11$  and  $.09$ , respectively), or with Snyder's Self-monitoring Scale (mean  $r = .01$ ). Subject gender did not moderate the correlations between personality and hypnosis; nor did achievement, autonomy, or self-monitoring scores moderate the correlation between absorption and hypnotizability. Overall, women scored slightly higher than men on HGSHS:A. A further analysis employing Bem's Sex-Role Inventory showed only that the hypnotizability scores of undifferentiated men and women were depressed relative to their androgynous counterparts.

Following a pattern established for personality research more than a half century ago, appreciable effort has been devoted to examining the relation between measured hypnotic susceptibility and other dispositional features of the person. However, hypnotizability does not appear to be correlated with the sorts of personality charac-

teristics measured by standard paper-and-pencil instruments (see reviews by Barber, 1964; Hilgard, 1965; Shor, Orne, & O'Connell, 1966). The correlations typically obtained in these studies do not even approach the magnitude of the "personality coefficient" of  $.30$  found by Mischel (1968) to be a representative correlation between scores on a personality questionnaire and actual behavior.

One way to account for these consistent

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negative findings is to hold that hypnotizability is isolated from the rest of the personality. However, a careful clinical interview study of hypnotizable and insusceptible subjects by Hilgard (1979), as well as a number of questionnaire studies (e.g., Shor, Orne, & O'Connell, 1962; Tellegen & Atkinson, 1974), indicates that hypnotizable individuals have a high capacity for involvement in imaginative and absorbing activities outside of hypnosis, and have a history of imaginative involvements reaching far back into childhood. Hilgard's (1979) study also revealed aspects of individual approaches to imaginative and absorbing experiences which were suggestive of more general patterns of motivation, interest, and attitude differentiating the hypnotizable from the insusceptible.

Another popular criticism of the past research is that the particular methods adopted have not been adequate to the task of prediction. For example, many of the instruments employed in assessing the predictor variables may be criticized from a purely psychometric viewpoint as lacking in such essential properties as internal consistency and construct validity (Jackson, 1971). Moreover, most of the studies have relied on simple bivariate correlations rather than more complex prediction models employing multiple regression and moderator or suppressor variables (Wiggins, 1973).

This paper reports some results of a continuing exploration of the personality correlates of hypnotic susceptibility, employing questionnaires tapping broad personality constructs specifically selected for their demonstrated or possible relevance to hypnosis. For example, all samples completed Tellegen's Absorption Scale (Tellegen & Atkinson, 1974). Other personality questionnaires were administered only to subsets of the entire sample. Hilgard's (1979) studies suggested that high achievement

motivation might contradict the imaginative involvements associated with hypnotic responsiveness; therefore two subsamples completed the Achievement Scale of the Personality Research Form, Form AA (PRF:AA), a "state of the art" personality questionnaire possessing high levels of internal consistency and construct validity. From a social-psychological point of view, hypnosis is fundamentally an interpersonal experience in which one individual responds to the suggestions of another; for this reason, these two same subsamples also completed the Autonomy Scale of PRF:AA. Also from a social-psychological point of view, hypnotizable individuals may be especially sensitive to contextual cues concerning the experimenter's expectations (Sarbin & Coe, 1972); therefore three subsamples completed Snyder's Self-monitoring Scale (Snyder, 1980), assessing sensitivity to cues in the social context. Finally, since the 19th century there has been a continuing debate over sex differences in hypnotic susceptibility; accordingly, some subsamples completed Bem's (1974) Sex-role Inventory, a measure of personality attributes associated with stereotyped concepts of masculinity and femininity.

## METHOD

### *Subjects*

Six separate samples comprising a total of 1300 male and female students at Harvard University (two samples) and the University of New Hampshire (four samples) volunteered to participate in experiments involving the assessment of susceptibility to hypnosis. The Harvard students were run in small groups and were paid \$3.00 for their participation in a single experimental session lasting 1-1/2 hours; the New Hampshire students were run in larger groups and received credit towards the research participation requirement of their introductory psychology course.

### Procedure

Following completion of the questionnaires the subjects received a version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A; Shor & Orne, 1962), administered by tape recording. The HGSHS:A was primarily intended by its authors for use as a preliminary screening device. However, its correlation with the Stanford Hypnotic Susceptibility Scale, Form C is about  $r = .60$  (e.g., Evans & Schmeidler, 1966), so that, with large numbers of subjects, HGSHS:A scores can serve as a satisfactory criterion for correlational studies.

The data for this study was collected over a period of five years, so that different samples received somewhat different batteries of questionnaires. In some samples the standard form of HGSHS:A was modified slightly for the purposes of other experiments; however, no modifications were inserted until after the usual test for posthypnotic amnesia, the final item which enters into scoring the scale, was carried out. No modifications were made to the self-scoring procedure.

### RESULTS

The mean HGSHS:A scores for the six samples ( $N$ s ranging from 110 to 426) ranged from 6.76 to 7.22, with an overall mean of 6.90. All the individual samples are comparable to published norms (e.g., Shor & Orne, 1963).

#### *Absorption, Achievement, Autonomy, and Self-monitoring*

For the absorption scale, each of the six correlations with hypnotizability were significant (all  $p < .05$ ); the average correlation of .27 was within the range found in other studies. The remaining scales all failed to correlate significantly with hypnotizability (Achievement: total  $N = 308$ ,

mean  $r = .11$ ; Autonomy: total  $N = 308$ , mean  $r = .09$ ; Self-monitoring, total  $N = 566$ , mean  $r = .01$ ).

The correlations between the predictors and criterion were of such low magnitude that multiple-regression analysis, including the analysis of suppressor variables, was not pursued. However, in view of the successful use of moderator variables in some past research on the personality correlates of hypnotizability, this prediction model was explored in the present data. Subject sex did not influence the magnitude or direction of any of the correlations between the personality variables and hypnotizability. Scores on the Achievement, Autonomy, and Self-monitoring scales were uncorrelated with hypnotizability, but even so one or more of these variables might moderate the relation between Absorption and hypnotizability. Therefore, the subjects in each sample were classified high or low on Achievement, Autonomy, and Self-monitoring, with cutpoints established at the medians of their respective distributions. Again, no consistent trends were observed across the samples for any ostensible moderator.

#### *Sex Differences*

There was an overall trend for women to score higher than men on HGSHS:A ( $M$ s = 7.16 vs. 6.43, respectively). The difference reached acceptable levels of statistical significance in three individual samples (all  $p < .05$ ), and when the results for the six samples were combined by the method of adding  $Z$ s (Rosenthal, 1978):  $Z = 4.32$ ,  $p < .001$ ).

The Sex-role Inventory scores available for two of the samples (total  $N = 536$ ) permitted further exploration of this finding with subjects classified in terms of both biological sex and their expression of personality characteristics associated with culturally prescribed concepts of masculinity

and femininity. Scores on the masculinity and femininity scales were split at the median, so that the subjects were classified as undifferentiated, cross-sex-typed, same-sex-typed, and androgynous according to the criteria proposed by Spence and Helmreich (1978). Table 1 presents the HGSHS:A scores for the eight subject groups produced by this classificatory scheme for the two samples combined. Analysis of variance with two between-subjects factors (gender and gender-stereotype expression) revealed significant main effects of gender ( $F(1,528) = 9.29, p < .05$ ) and gender stereotype ( $F(3,528) = 3.02, p < .05$ ), but no interaction between these factors ( $F(3,528) = .17$ ). Scheffe's test showed that the only significant group difference within the gender-stereotype factor was between the undifferentiated and androgynous subjects ( $p < .05$ ).

DISCUSSION

This research employed mostly new personality constructs, but the findings have a familiar ring. A disposition to naturally occurring hypnotic-like experiences correlated significantly with hypnotizability, as has been found many times (e.g., Hilgard, 1979; Shor et al., 1962; Tellegen & Atkinson, 1974). However, the correlations with achievement motivation, need for au-

tonomy, and self-monitoring were vanishingly small, paralleling the findings with other constructs lying outside the immediate domain of hypnosis and imaginative involvement (Barber, 1964; Hilgard, 1965; Shor, Orne, & O'Connell, 1966). The negative findings with respect to achievement, autonomy, and self-monitoring cannot be attributed to the psychometric properties of the measuring instruments involved. All three predictor measures, like the Absorption Scale, were rigorously constructed according to the principles of construct validity, and all three have been successfully employed as predictors in other domains. The HGSHS:A does not provide the optimal assessment of hypnotizability, but the fact that significant correlations were obtained between it and the Absorption Scale suggests that parallel relationships with the other constructs, if they existed in the real world, should have emerged from the present data.

The finding of no correlation between hypnotizability and self-monitoring seems inconsistent with the role-theoretical analysis of hypnosis proposed by Sarbin and Coe (1972). They argue that the first step in role-enactment is "role location," or attending to cues in the social context which provide information concerning the behavior expected of participants in a social

TABLE 1  
HYPNOTIZABILITY OF SUBJECTS  
CLASSIFIED BY GENDER AND GENDER-STEROTYPE EXPRESSION

Gender	Not Differentiated	Cross-Sex Typed	Same-Sex Typed	Androgynous
Male				
<i>N</i>	48	14	84	37
<i>M</i>	6.02	5.93	6.35	7.05
<i>SD</i>	2.56	2.67	2.52	2.45
Female				
<i>N</i>	69	60	116	108
<i>M</i>	6.51	6.93	6.84	7.44
<i>SD</i>	2.52	2.56	2.49	2.64

encounter. Self-monitoring reflects just this kind of sensitivity to the expectations of others and wider social demands, and use of these contextual cues in the regulation of social behavior. Yet individual differences in self-monitoring do not correlate with hypnotic responsiveness. Other variables are also important in role theory, however, and the theory makes no specific predictions concerning self-monitoring and role-location, so this finding by itself is not critical. At any rate, the lack of correlation between hypnosis and self-monitoring should reassure those who — like Orne (1979) himself — worry that the real-simulator paradigm may be compromised by differences in sensitivity to situational demands between the hypnotizable subjects who are assigned to the hypnotic condition and their insusceptible counterparts who serve as simulators.

The research did reveal a small but significant sex difference in hypnotic susceptibility. The belief that women are more hypnotizable than men is quite commonly held, even though reviews by Hull (1933) and Weitzenhoffer (1953) offer very little evidence favoring the claim. Hilgard (1965) and London and Cooper (1969), examining large normative samples, found no suggestion of a sex difference; however, Morgan and Hilgard (1973), examining a large cross-sectional sample of subjects, found an age-by-sex interaction with women aged 21–32 scoring higher than their male counterparts. In the only previous study of this issue employing measures of masculinity and femininity, Weitzenhoffer and Weitzenhoffer (1958a&b; see also Weitzenhoffer, 1961) found a small sex difference but no correlation between hypnotizability and any of five questionnaire measures of femininity. It should be noted that in all six samples reported here the proportion of women participating in the study was greater than the proportion of

women in the undergraduate populations from which the subject samples were drawn, suggesting that the apparent sex difference may be an artifact of volunteer bias (Boucher & Hilgard, 1962). Nevertheless, the present results strongly suggest that sex differences in hypnotic susceptibility — if indeed they exist at all — do not reflect the importance of “feminine” over “masculine” personality attributes (Spence & Helmreich, 1978), because the only significant difference obtained was between those subjects, male or female, who attributed *neither* masculine or feminine attributes to themselves on the one hand, and those who attributed *both* types of attributes to themselves on the other.

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