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# ABSORPTION, HYPNOTIC EXPERIENCE, AND INSTRUCTIONAL SET

**Suzanne M. Roche**

*University of New South Wales*

**Amanda J. Barnier**

*University of New South Wales*

**Kevin M. McConkey**

*University of New South Wales*

On an administration of the Tellegen Absorption Scale (TAS), we first investigated the impact on absorption scores of whether subjects had or had not experienced hypnosis. On a subsequent administration of the TAS, we then investigated the impact of instructions for subjects to respond as if they were high or low hypnotisable. On the first administration, subjects who had and had not experienced hypnosis scored similarly. On the second administration, subjects instructed to respond as high or low hypnotisable increased or decreased their absorption scores, respectively. Implications for understanding the relationship between absorption and hypnotisability and the impact of instruction are discussed.

Absorption is a personality characteristic that involves an openness to experience emotional and cognitive alterations across a variety of situations (Tellegen, 1981; Tellegen & Atkinson, 1974; see also Roche & McConkey, 1990). The genesis of the construct of absorption lies in the search for reliable personality correlates of individual differences in hypnotisability. Tellegen and

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Requests for reprints should be addressed to Kevin M. McConkey, School of Psychology, University of New South Wales, Sydney, N.S.W. 2052. Email: K. McConkey@unsw.edu.au

Atkinson (1974) originally showed that hypnotisable individuals were more open and more likely to have subjective experiences in which their attention was almost wholly engaged in an altered sense of reality (see also Crawford, Brown, & Moon, 1993; Glisky & Kihlstrom, 1993). They labelled this "absorption" and introduced the Tellegen Absorption Scale (TAS) as the instrument for assessing absorption. The TAS asks respondents to consider 34 items that concern their involvement in various internal and external events (e.g., "I can sometimes recollect certain experiences in my life with such clarity and vividness that it is like living them again, or almost so," "When I listen to music I can get so caught up in it that I don't notice anything else") and to give a "true–false" response to each of those items. In the standard format, absorption is scored by summing the number of "true" responses to yield a score between 0 and 34; alternatively, a 5-point Likert-type format (0 = strongly disagree, and 4 = strongly agree) has been used for each item and then summed to yield a score between 0 and 136.

Roche and McConkey (1990) argued that absorption is central to an understanding not only of subjective experience in general, but also of particular aspects of cognition and behaviour. Consistent with this, Glisky, Tataryn, Tobias, Kihlstrom, and McConkey (1991) showed that absorption is related to "openness to experience" as indexed by the Openness to Experience subscale of the NEO Personality Inventory (Costa & McCrae,1985; McCrae,1993,1994). Most research involving absorption, however, has focused on its relationship with hypnotisability (Roche & McConkey,1990), which is a relatively stable characteristic of an individual that can be assessed through the use of standardised scales. These scales consist of an induction procedure and suggestions for various hypnotic phenomena, and subjects' responses are scored in terms of objective behavioural criteria and summed to give a measure of hypnotisability. The relationship of absorption with hypnotisability has been examined across most contemporary scales of hypnotisability, and a positive, usually modest, relationship between absorption and hypnotisability is well established (for reviews see de Groh, 1989; Roche & McConkey, 1990).

Two issues that concern the relationship between absorption and hypnotisability are the possible impact of recent experiences and the potential influence of instructions on absorption scores. In terms of recent life experiences, for instance, the absorption scores of male scientific personnel were higher shortly after, in contrast to before, a period of Antarctic isolation (Barabasz, Barabasz, & Mullins, 1983). In terms of instructions, for example, absorption scores increased when marijuana users were asked to consider their drug experiences exclusively and decreased when they were asked to exclude their drug experiences when completing the scale (Fabian & Fishkin, 1981).

Given these types of findings and given recent discussion about the reactivity of absorption scores to contextual influences (e.g., Council, Kirsch, & Grant, 1996; Oakman,Woody, & Bowers, 1996), "a determination needs to be made of whether absorption scores are influenced by the response set of subjects and by the overt and covert messages that subjects are given in different test settings"

(Roche & McConkey, 1990; p. 93). Accordingly, we investigated the relevance to absorption scores of (a) recent hypnotic experiences, and (b) instructions to respond as either high or low hypnotisable. To do this, we first administered the TAS to subjects with standard instructions. By checking the hypnotic experience of subjects, we could determine whether a recent hypnotic experience influenced the absorption scores of subjects. We then administered the TAS a second time with specific instructions that subjects should complete the scale as they believed high or low hypnotisable individuals would do so. This manipulation of instructional set was intended to determine whether subjects' perceptions of the relationship between absorption and hypnotisability would lead those instructed to respond as high or low hypnotisable to increase or decrease their absorption scores, respectively.

## METHOD

### Subjects

Four hundred and eighty-six (382 female and 104 male) undergraduate psychology students of mean age 22.60 years ($SD$ = 8.82) at Macquarie University voluntarily participated in the study in return for research credit. Subjects were recruited via a noticeboard announcement to participate in a "Questionnaire Study." Parallel to but independent of the "Questionnaire Study" we were conducting a "Hypnosis Testing Study" that assessed the hypnotisability of subjects through the 12-item Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A; Shor & Orne, 1962; see also McConkey, Barnier, Maccallum, & Bishop, 1996). The HGSHS: A sessions ran before the TAS sessions for three weeks, in parallel for two weeks, and after them for two weeks. By checking the date and time that subjects participated in the HGSHS:A and TAS sessions, we could determine whether they had experienced hypnosis before or after completing the TAS, or not at all. Two hundred and ninety-one (223 female and 68 male; age $M$ = 22.94 years, $SD$ = 9.16) subjects completed the HGSHS:A before they completed the TAS. Seventy-one (60 female and 11 male; age $M$ = 23.05 years, $SD$ = 10.23) subjects completed the HGSHS:A after they completed the TAS; and 124 (99 female and 25 male; age $M$ = 21.85 years, $SD$ = 6.97) subjects did not complete the HGSHS:A either before or after they completed the TAS.

### Procedure

Subjects completed the TAS twice in groups of approximately 30 in a standard classroom setting. First, they were asked to complete the TAS with routine instructions; specifically, they were asked to respond to each item "in the way that best represents your opinion or describes yourself." The completed response booklets were collected. Second, they were asked to complete the TAS

in the way in which they thought either a high (or a low) hypnotisable person would complete it; specifically, they were asked to respond to each item "in the way in which you think someone who is very [not at all] hypnotisable would complete it ... indicate the answer that someone who is very [not at all] susceptible to hypnosis and hypnotic suggestion would give." For both the first (TAS1) and second (TAS2) administration of the scale, subjects responded to each item by circling a number that ranged from 0 – 4; these numbers were summed to give absorption scores between 0 and 136.

## RESULTS

Table 1 presents the mean TAS1 scores and HGSHS:A scores together with the Pearson correlation coefficients between absorption and hypnotisability. A one-way analysis of variance of TAS1 scores yielded a significant main effect, $F(2,483) = 3.50$, $p < .05$; subjects who did not participate in the HGSHS:A testing at all scored significantly lower on absorption scores than those who participated in HGSHS:A testing before completing the TAS. The overall correlation between absorption and hypnotisability for all subjects who participated in both sessions ($n = 362$) was significant ($r = .124$, $p < .02$). Notably, the correlation between absorption and hypnotisability was significant for subjects who had participated in HGSHS:A testing before completing TAS1, but was not significant for subjects who had participated in HGSHS:A testing after completing TAS1. However, comparisons using Fisher's Z transformation revealed no significant difference between the correlations.

**Table 1:** Mean TAS1 and HGSHS:A Scores and Correlation Coefficients

| | TAS1 | HGSHS:A | $r^2$ |
|---|---|---|---|
| HGSHS:A before TAS1 ($n = 291$) | 88.35ß (16.75) | 6.56 (2.71) | .143* |
| TAS1 before HGSHS:A ($n = 71$) | 84.50 (19.94) | 6.12 (2.85) | .029 |
| No HGSHS:A ($n = 124$) | 84.04ß (16.84) | | |

Note: TAS1 = Tellegen Absorption Scale (first test); HGSHS = Harvard Group Scale of Hypnotic Susceptibility, Form A; ß indicates significant difference at $p < .05$; * indicates $p < .01$. Standard deviations appear in parentheses.

Table 2 presents the mean TAS1 and TAS2 scores for the two experience groups (i.e., recent hypnotic experience and no recent hypnotic experience. A three-way (experience × instruction × test) mixed-model analysis of variance of absorption scores indicated significant main effects for instruction, $F(1,358) =$

450.50, $p < .001$, and for test, $F(1,358) = 60.01$, $p < .001$, and significant interactions between experience and instruction, $F(1,358) = 4.17$, $p < .05$, and instruction and test, $F(1,358) = 687.22$, $p < .001$. Subjects instructed to respond as highs gave higher absorption scores overall than those instructed to respond as lows. Those instructed to respond as highs or lows increased or decreased their absorption score on the second test; the change from the first to the second test was greater for those instructed to respond as lows than those instructed to respond as highs. Notably, the effect of instruction differed according to whether subjects had been tested on the HGSHS:A recently or not. Of subjects instructed to respond as lows, those who had recent hypnotic experience had lower absorption scores than those who had not; of subjects instructed to respond as highs, those who had recent hypnotic experience had higher absorption scores than those who had not.

**Table 2:** Mean TAS1 and TAS2 Scores

| Subjects | TAS1 | TAS2 |
|---|---|---|
| Previous hypnotic experience | | |
| High | 89.43 (14.99) | 109.78 (17.10) |
| Low | 87.25 (18.35) | 46.65 (19.62) |
| No previous hypnotic experience | | |
| High | 82.25 (16.85) | 106.80 (19.39) |
| Low | 86.69 (19.92) | 52.16 (18.85) |

Note: TAS1 = Tellegen Absorption Scale (first test); TAS2 = Tellegen Absorption Scale (second test); High = instructed to respond as high hypnotisable; Low = instructed to respond as low hypnotisable. Standard deviations appear in parentheses.

We also investigated the relevance of the measured hypnotisability of subjects. To do this, we selected a subsample on the basis of extreme scores on the HGSHS:A. We defined high hypnotisable subjects ($n = 101$) as those who scored 9–12. and low hypnotisable subjects ($n = 55$) as those who scored 0–3 on the 12-item HGSHS:A. A four-way (experience × instruction × hypnotisability × test) mixed-model analysis of variance of absorption scores was conducted with this subsample. It yielded significant main effects for instruction, $F(1,148) = 189.16$, $p < .001$, and for test, $F(1,148) = 27.77$, $p < .001$, and significant interactions between experience and instruction, $F(1,148) = 4.05$, $p < .05$, instruction and test, $F(1,148) = 245.81$, $p < .001$, and experience, hypnotisability, and test, $F(1,148) = 4.19$, $p < .05$. These findings parallel those from the previous analyses, with the additional finding that high and low hypnotisable subjects who had participated in HGSHS:A testing before and after completing the TAS responded differently across the two administrations of the TAS, irrespective of the instruction they were given. Whereas low hypnotisable subjects who had not had recent hypnotic experience before

completing the TAS (*M* change = −18.27, *SD* = 32.51; note, mean calculated as change in score from TAS1 to TAS2) decreased their absorption score from TAS1 to TAS2, those who had recent hypnotic experience (*M* change = −2.80, *SD* = 38.41) did not. In contrast, whereas high hypnotisable subjects who had recent hypnotic experience before completing the TAS (*M* change = −15.29, *SD* = 39.66) decreased their score from TAS1 to TAS2, those who had not had recent hypnotic experience (*M* change = 5.16, *SD* = 27.31) did not.

## DISCUSSION

We investigated the influence of recent hypnotic experience and the impact of instructions to respond as either high or low hypnotisable on absorption scores. In terms of recent hypnotic experience, subjects who participated in HGSHS:A testing either before or after completing the TAS gave similar absorption scores. The absorption scores of subjects who did not participate at all in the independent hypnosis sessions were lower than those for subjects who participated in those sessions before completing the absorption scale. Although the slight correlation between absorption and hypnotisability was appreciable for subjects who participated in hypnotisability testing before, but not after, completing the TAS, the correlations were not significantly different between these two groups; in other words, the absorption scores of subjects were not influenced by a recent experience of hypnosis. The absorption and hypnotisability scores are similar to those obtained in other studies that have used a Likert-type response format for the TAS (e.g., Glisky et al., 1991) and assessed hypnotisability with the HGSHS:A (e.g., Hoyt et al., 1989). Also, the modest relationship between absorption and hypnotisability for all subjects who participated in both sessions ($r = .124$, $p < .02$) is similar to that seen in other studies between the TAS and the HGSHS:A involving similar numbers of subjects (e.g., Nadon, Hoyt, Register, & Kihlstom,1991).

Absorption and hypnotisability were assessed in independent programs of research in the present experiment, and the relationship between them was found to be positive, and consistent in magnitude with that reported in other studies (see Council et al., 1996; Roche & McConkey, 1990). This is not supportive of the view of Council, Kirsch, and Hafner (1986; see also Council et al., 1996) that the relationship between absorption and hypnotisability is an artefact of the context in which absorption is measured. In contrast, our findings suggest that the context of the administration of the TAS has relatively little effect on the relationship between absorption and hypnotisability (see also Nadon et al., 1991). It is reasonable to ask what does affect this relationship, if not context. More parsimoniously, perhaps, the variation in the size of the correlations, both in this experiment and others, may reflect random sampling error due to differences in sample sizes. Nadon (1997) argued that, regardless of administration contexts, studies of the relationship between absorption and hypnotisability that involve relatively small samples produce both small and

large population correlation estimates, whereas studies that involve larger samples produce mid-range estimates that more closely estimate the population correlation coefficient. Notably, in the present experiment, although the correlations were not significantly different, the smaller correlation (.029) was associated with a much smaller subgroup sample size ($n$ = 71) than the larger correlation (.143; $n$ = 291).

Whereas our results demonstrate that the context of testing, at a general level, does not necessarily influence the relationship between absorption and hypnotisability, there is little doubt that subjects rely on aspects of the situation to guide their interpretation of experimental tasks. This is seen clearly in our findings about the impact of instructions to respond as high or low hypnotisable. Those subjects instructed to respond as highs increased, and those instructed to respond as lows decreased, their absorption scores. This suggests that subjects held particular beliefs about the relationship between absorption and hypnotisability.

Arguably, their responses to the second administration of the TAS, under the special instructions, indicated that they saw the relationship between absorption and hypnotisability to be a strong and positive one. Notably, subjects' perceptions of that relationship are stronger than the actual relationship. In other words, subjects' responses indicated that the TAS scores of lows would be lower, and those of highs would be higher than were found in this experiment. This pattern of response may have been influenced by the general views that people typically hold about the characteristics of those who are high or low in hypnotisability, and it may have been influenced by the wording of some of the items on the TAS. For example, items such as "If I wish, I can imagine that my body is so heavy that I could not move it if I wanted to" convey a positive relationship between absorption and the capacity of people to experience items that assess hypnotisability. Whatever the specific reasons, the absorption scores of subjects changed significantly when they were asked to adopt a particular level of hypnotisability while they were completing the TAS.

These findings demonstrate that TAS scores can be influenced substantially by the instructional set that subjects are given or the response set that subjects adopt (see also Fabian & Fishkin, 1981), and this finding is consistent with the views of Roche and McConkey (1990) and Tellegen (1981). As Tellegen (1981) argued, personality variables, such as absorption and hypnotisability, are inherently contextual in the sense that they become apparent in settings that are consistent with and encouraging of their existence and expression. In other words, the capacity for absorption becomes apparent when the situation is one that encourages the individual to display that capacity. That is what occurred in the present experiment when subjects were asked to complete the TAS as a high (rather than low) hypnotisable individual would. In this sense, there is no question that certain contextual factors (such as instructional set) will play a role in the assessment of absorption, the assessment of hypnotisability, and the relationship of absorption and hypnotisability. However, that role is an integral

rather that an artifactual one.

Finally, to better understand the interactive nature of absorption and its relevance as a personality characteristic, research is needed to clarify the specific private and public situations in which absorption is manifested. As Glisky et al. (1991) pointed out, openness to experience, and absorption as a salient aspect of that trait, is one of the major factors of the "big five" dimensions of personality (McCrae, 1993, 1994). Given this, a more complete understanding of absorption and the factors that influence its assessment and expression can contribute towards our understanding of personality structure, as well as its relationship to hypnotisability and hypnosis.

## REFERENCES

Barabasz, M., Barabasz, A. F., & Mullins, C. S. (1983). Effects of brief Antarctic isolation on absorption and hypnotic susceptibility — preliminary results and recommendations: A brief communication. *International Journal of Clinical and Experimental Hypnosis*, *31*, 235–238.

Costa, P. T., & McCrae, R. R. (1985). *The NEO Personality Inventory: Manual.* Odessa, FL: Psychological Assessment Resources.

Council, J. R., Kirsch, I., & Grant, D. L., (1996). Imagination, expectancy, and hypnotic responding. In R. G. Kunzendorf, N. P. Spanos, & B. Wallace (Eds.), *Imagination and hypnosis* (pp. 41–65). Amityville, NY: Baywood.

Council, J. R., Kirsch, I., & Hafner, L. P. (1986). Expectancy versus absorption in the prediction of hypnotic responding. *Journal of Personality and Social Psychology*, *50*, 182–189.

Crawford, H. J., Brown, A. M., & Moon, C. E. (1993). Sustained attentional and disattentional abilities: Differences between low and highly hypnotizable persons. *Journal of Abnormal Psychology*, *102*, 534–543.

de Groh, M. (1989). Correlates of hypnotic susceptibility. In N. P. Spanos & J. F. Chaves (Eds.), *Hypnosis: The cognitive-behavioral perspective* (pp. 32–63). Buffalo, NY: Prometheus.

Fabian, W. D., & Fishkin, S. M. (1981). A replicated study of self-report changes in psychological absorption with marijuana intoxication. *Journal of Abnormal Psychology*, *90*, 546–553.

Glisky, M. L., & Kihlstrom, J. F. (1993). Hypnotizability and facets of openness. *International Journal of Clinical and Experimental Hypnosis*, *41*, 112–123.

Glisky, M. L., Tataryn, D. J., Tobias, B. A., Kihlstrom, J. F., & McConkey, K. M. (1991). Absorption, openness to experience, and hypnotisability. *Journal of Personality and Social Psychology*, *60*, 263–272

Hoyt, I. P., Nadon, R., Register, P. A., Chorny, J., Fleeson, E., Grigorian, E. M., Otto, L., & Kihlstrom, J. F. (1989). Daydreaming, absorption, and hypnotisability. *International Journal of Clinical and Experimental Hypnosis*, *37*, 332–342.

McConkey, K. M., Barnier, A. J., Maccallum, F. L., & Bishop, K. (1996). A normative and structural analysis of the HGSHS:A with a large Australian sample. *Australian Journal of Clinical and Experimental Hypnosis, 24*, 1–11.

McCrae, R. R. (1993). Openness to experience as a basic dimension of personality. *Imagination, Cognition and Personality, 13*, 39–55.

McCrae, R. R. (1994). Openness to experience: Exploring the boundaries of Factor V. *European Journal of Personality*. [Special Issue: The Fifth of the Big Five], *8*, 252–272.

Nadon, R. (1997). What this field needs is a good nomological network. *International Journal of Clinical and Experimental Hypnosis, 45*, 314–323.

Nadon, R., Hoyt, I. P., Register, P. A., & Kihlstrom, J. F. (1991). Absorption and hypnotisability: Context effects re-examined. *Journal of Personality and Social Psychology, 60*, 144–153.

Oakman, J. M., Woody, E. Z., & Bowers, K. S. (1996). Contextual influences on the relationship between absorption and hypnotic ability. *Contemporary Hypnosis, 9*, 35–41.

Roche, S. M., & McConkey, K. M. (1990). Absorption: Nature, assessment and correlates. *Journal of Personality and Social Psychology, 59*, 91–101.

Shor, R. E., & Orne, E. C. (1962). *Harvard Group Scale of Hypnotic Susceptibility, Form A*. Palo Alto, CA: Consulting Psychologists Press.

Tellegen, A. (1981). Practicing the two disciplines for relaxation and enlightenment: Comment on "Role of the feedback signal in electromyograph biofeedback: The relevance of attention" by Qualls and Sheehan. *Journal of Experimental Psychology: General, 110*, 217–226.

Tellegen, A., & Atkinson, G. (1974). Openness to absorbing and self-altering experiences ("absorption"), a trait related to hypnotic susceptibility. *Journal of Abnormal Psychology, 83*, 268–277.