Defining Hypnosis as a Trance vs. Cooperation: Hypnotic Inductions, Suggestibility, and Performance Standards

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We compared participants’ responsiveness to a standard administration of a hypnotic suggestibility scale (CURSS; Spanos, Radtke, Hodgins, Bertrand, Stam, & Moretti, 1983) that defined the ability to experience hypnosis in terms of cooperation (SI; standard induction, N = 27) with a version of the same scale administered with all references to cooperation removed (CR; cooperation removed, N = 34) and with a version of the scale with the “induction” removed (NI; no induction, N = 35). In a fourth condition, participants were informed that the ability to experience hypnosis depended on their ability to achieve an altered state of consciousness or “trance” (AS; altered state, N = 33). Removing instructions for cooperation had an effect on objective (CR < SI) but not on subjective hypnotic responding. Removing the hypnotic induction had no appreciable effect on any dimension of hypnotic responsivity. Consistent with predictions derived from performance standards theory (Lynn & Rhue, 1991), participants who received the altered state set responded to fewer suggestions than did participants who received the standard induction (SI). Estimates of suggestions passed that were assessed before and after test suggestions were administered were, respectively, weakly to moderately correlated with objective and subjective measures of hypnotic suggestibility.

An important question that spans the empirical study of hypnosis and clinical practice pertains to the nature, role, and importance of hypnotic inductions. Inductions are communications intended to elicit hypnotic phenomena that precede clinical interventions or test suggestions contained in standardized hypnotic suggestibility scales (Edmonston, 1991). However, research has neither established the necessity nor elucidated the mechanisms of influence of inductions. Furthermore, practitioners have frequently claimed that they are able to achieve positive treatment outcomes with therapeutic suggestions in the absence of formal induction procedures (see Rhue, Lynn, & Kirsch, 1993).
Beginning in the 1950’s, T.X. Barber (1969) initiated an ambitious program of research that demonstrated that “waking” instructions that motivated participants to respond to suggestions (i.e., “task motivation instructions”) often elicited responsiveness equivalent to the identical suggestions preceded by a hypnotic induction. Barber’s contention that responses to suggestion are attributable to mundane factors (e.g., cooperation, positive motivation, and expectations) is supported by research showing that very different inductions elicit equivalent hypnotic responses. For example, participants generally respond comparably to direct versus indirect inductions, worded authoritatively versus permissively, respectively (Lynn, Mare, & Neufeld, 1993). Furthermore, hypnotic and nonhypnotic relaxation procedures elicit equivalent responsiveness across a gamut of measures (see Edmonston, 1991). Moreover, participants appear to be as responsive to an “active-alert” induction administered while they are riding a stationary bicycle as they are to a traditional relaxation-based induction (Banyai & Hilgard, 1976). Taken together, the findings reviewed are compatible with Braffman and Kirsch’s (1999) contention that expectations, positive motivation, and responsiveness to waking suggestions account for the preponderance of the variance in responding to hypnotic suggestions.

Our review indicates that the assessment of suggestibility is not dependent on the administration of a particular induction. However, the role of an induction per se has not been extensively studied. The first aim of the current study was to examine whether hypnotic responsiveness is affected by the induction that precedes suggestions in a widely used measure of hypnotic suggestibility, the Carleton University Scale of Hypnotic Responsiveness (CURSS: Spanos, Radtke, Hodgins, Bertrand, Stam, & Moretti, 1983).

The second aim of our research was to address the question of whether compliance plays a role in the assessment of hypnotizability with the CURSS. Kihlstrom (1985) has noted that, unlike other hypnotizability measures, the CURSS defines hypnosis in terms of the participant’s “willingness to cooperate rather than in terms of subjective experience” (p. 387). Indeed, the CURSS explicitly informs participants that their “ability to be hypnotized depends entirely on your willingness to cooperate.” Others (Bates & Brigham, 1990; Bowers & Davidson, 1991) have raised similar concerns about the extent that various hypnotic procedures measure compliance rather than a stable trait of “hypnotizability.” To address the role of compliance/cooperation in responding to the CURSS, we assessed subjective and objective responses elicited by a standardized administration of the CURSS in comparison with a version of the scale identical in every respect with the exception that references to compliance were eliminated.

The third aim of our study was to examine specific predictions derived from performance standards theory (Lynn & Rhue, 1991). Performance standards are defined as the criteria that participants use to evaluate their experiences with regard to a particular response or outcome. Two participants could have comparable expectations for hypnosis and even have similar experiences during hypnosis, yet evaluate their experiences quite differently as a result of divergent performance standards (Barber, 1969). When participants’ experiences fail to meet their personal standards for successful hypnotic responding, they are likely to experience diminished role involvement (e.g., performance-related concerns, dissatisfaction) and dampened response expectancies that, in turn, inhibit performance. In contrast, when participants
have suggestion-related experiences that meet their personal standards, then their expectancies for responding successfully should be bolstered and subsequent responding enhanced accordingly.

Support for predictions derived from this model was forthcoming from a study (Lynn, Green, Jacquith, & Gasior, in press) in which a difficult or stringent performance standard was established by informing participants that individuals who were responsive to hypnotic procedures respond immediately and imagine realistically. Individuals who received this response set were less responsive to hypnotic suggestions than were participants who received standard instructions that accompany a standardized scale of hypnotic suggestibility.

In keeping with the hypothesis that performance standards can influence suggestibility, McConkey (1986) found that 80% of low suggestible participants believed that hypnosis was a dramatically altered state of consciousness. In contrast, medium and high suggestible individuals generally believed that hypnosis was a normal state of focused attention. Presumably, low suggestible participants were unable to achieve the high level of hypnotic performance established by their prehypnotic beliefs, and their responsiveness declined as a result.

In the current study, we informed a group of participants that their ability to respond to the CURSS suggestions depended entirely on their ability to experience an altered state of hypnosis, or what is known as an hypnotic “trance.” We hypothesized that providing participants with this information would diminish their responsiveness to hypnosis relative to the condition in which participants were informed that their ability to respond depended on their ability to cooperate. We expected that the cooperation set would constitute a relatively “lenient” or easy performance standard insofar as most participants would be able to cooperate with the hypnotist if they were motivated to do so.

**Method**

*Participants*

Participants were 132 undergraduate students enrolled in an introductory psychology course who volunteered to participate in exchange for course credit. Participants were not screened for hypnotic suggestibility prior to taking part in the experiment. All signed up for an experiment entitled, “Hypnosis” and participated in one of the following four conditions: Standard Induction (SI; N = 30, Males = 10, Females = 18), Cooperation Removed (CR; N =34, Males = 15, Females = 19), Altered State (AS; N = 33, Males = 15, Females = 18) or No Induction (NI; N = 36, Males = 10, Females = 26).

*Measures*

Carleton University Responsiveness to Suggestion Scale (CURSS; Spanos, Radtke, Hodgins, Stam, & Bertrand, 1981). The CURSS includes an introduction to hypnosis, a hypnotic induction, and seven hypnotic suggestions. It provides scores for hypnotic suggestibility on three separate scales: objective, subjective, and involuntariness. Scores on the CURSS correlate well with scores on other well-known measures of hypnotic suggestibility, such as the Harvard Group Scale of Hypnotic Suggestibility and the Stanford Hypnotic Suggestibility Scale (Spanos, Radtke, Hodgins, Bertrand, Stam, & Moretti, 1983).
Hypnotic Attitudes Questionnaire (HAQ; Spanos, Brett, Menary, & Cross, 1987). The HAQ is a 14-item psychometrically reliable instrument that has been shown to have adequate internal validity (Spanos, et al., 1987) as a measure of participants’ attitudes toward hypnosis. The HAQ was used in this study to assess participants’ beliefs regarding hypnosis prior to any experimental manipulation.

Procedure

The experiment was conducted in four separate group sessions, with each group corresponding to one of the four conditions. The sessions were run by one of two female graduate students in clinical psychology. Participants were told that “we were interested in studying hypnosis and how hypnotized subjects respond to a standardized scale of hypnotizability which thousands of other students have undergone.” For all groups, the session began with participants reading and signing an informed consent document, followed by completion of the HAQ, in order to ensure that there were no between-group differences in prehypnotic attitudes. The experimenter then read the following instructions specific to each experimental group.

Standard Instructions. “Why do people respond to hypnosis? Your ability to be hypnotized depends entirely on your willingness to cooperate. It has nothing to do with your intelligence. As for your will power—if you want to, you can pay no attention to the suggestions you will hear and remain awake all the time. On the other hand, if you pay close attention to what is said, you can easily fall into a hypnotic sleep. Hypnosis is nothing fearful or mysterious. It is merely a state of strong interest in some particular thing.

In a sense you are hypnotized whenever you see a good show and forget you are part of the audience, but instead feel part of the story. Your interest is what I ask for. Nothing will be done that will in any way cause you the least embarrassment.”

Cooperation-Removed (CR). The instructions were identical to the standard instructions with the exception that all references to cooperation were removed.

Altered State (AS). This condition was identical to the standard instructions with the exception that it replaced the sentence regarding cooperation with the statement, “Your ability to be hypnotized depends entirely on your ability to experience an altered state of hypnosis, or what is known as a hypnotic trance.” It also replaced the statement regarding what the hypnotist “asks for,” with the statement, “Your involvement in an hypnotic trance is what I ask for. Your ability to be hypnotized is a measure of your involvement in this trance state.”

No Induction (NI). Participants in this group received instructions identical to those in the “Cooperation-removed” group. The session was defined as hypnosis during the introductory information; however, the portion of the CURSS containing the hypnotic induction was omitted.

After listening to the instructional set, participants were given a brief written description of the seven suggestions they would be given. They were then instructed to indicate the estimated number of suggestions they would pass during the induction. All groups except the NI group then received the CURSS hypnotic induction via audiotape. All groups then listened to an audiotaped presentation of the seven CURSS suggestions. After completing the seven suggestions but before participants scored their CURSS protocols, they were instructed to estimate the number of suggestions that they passed. Participants then self-scored the objective, subjective, and
involuntariness scales of the CURSS and completed a post-test question that assessed their belief in hypnosis as an altered or trance state on a scale ranging from 1 (not at all true) to 5 (entirely true). At this point, participants were debriefed and given their course credit to complete the experimental session.

Results

Preliminary analyses

Prior to analysis, data were screened for the presence of univariate and multivariate outliers. Boxplots and tests of Mahalanobis distance failed to reveal significant outliers. Tests of normality and homogeneity of variance were satisfactory. All data were retained for analysis. We also found no significant main effects or interactions for gender, so the data were collapsed across that factor in the analyses that follow.

Hypnotic attitudes

A one-way analysis of variance (ANOVA) was performed to test for initial group differences on hypnotic attitudes. No significant across-group differences were found, indicating that groups did not differ on beliefs and attitudes toward hypnosis prior to the administration of the instructional set appropriate to each group.

Perceptions of hypnosis as an altered state

To test for the effectiveness of the experimental manipulation, a one-way ANOVA was conducted on participants’ responses to the posttest questionnaire. The mean of the AS group mean numerically greater ($M = 4.03, SD = 1.10$) than the mean of the SI ($M = 3.81, SD = 1.15$), CR ($M = 2.35$).

Table 1: Intercorrelations Among Response Variables

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Note: PRE = Pre-estimate of number of suggestions will pass; POST = Post-estimate of number of suggestions passed; SU1 = Subjective feelings of involvement (CURSS); SU2 = Subjective feelings of involuntariness (CURSS); OBJ = Total objective score. * $p < .05$  ** $p < .01$. All $p$ values are two-tailed.
3.5, SD = 1.13) , and NI (M = 3.23, SD = 1.25) groups on the post-test item regarding perceptions of hypnosis. Significant group differences, as determined by planned comparisons, emerged between the AI and no induction group, t (125) = 2.6, p < .01, and a strong trend emerged for the AI and the CR group (p = .056) on this measure.

Estimated responsiveness

Intercorrelations among dependent variables appear in Table 1. As expected, participants’ estimates of the number of suggestions they would pass, made prior to the administration of the CURSS but after hearing the instructional set (PRE), were significantly related to estimates of the number of suggestions passed, made immediately after administration of the CURSS (POST) (r = .37, p < .001). Both PRE and POST estimates were positively associated with subjective and objective scores on the CURSS.

A one-way analysis of variance was performed to test for group differences on PRE and POST estimates of hypnotic suggestibility. An ANOVA revealed that groups differed significantly on PRE [F (3,123) = 3.99; p < .01]. There were no significant differences across groups on POST. Planned comparisons were performed to test the hypothesis that subjects in AS would provide significantly lower estimates than subjects in the SI, CR, and NI conditions. As predicted, T-tests revealed significant between-group differences for AS versus SI [t (55) = 2.22; p < .05]; AS versus CR [t (59) = 1.99; p < .05]; and AS versus NI [t (61) = 3.43; p < .01]. The relevant means for the above analyses and those that follow below are presented in Table 2.

Hypnotic responding

T-tests for independent samples were performed to evaluate the a priori

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Note: SI = Standard Induction; CR = Cooperation Removed Induction; AS = Altered State Induction; NI = No Induction; PRE = Pre-estimate of number of suggestions will pass; POST = Post-estimate of number of suggestions passed; SU1 = Subjective feelings of involvement (CURSS); SU2 = Subjective feelings of involuntariness (CURSS); OBJ = Total objective score.
hypothesis that participants who received the AS instructional set would report less hypnotic responding than subjects in the SI condition. Consistent with our prediction, participants in the AS group scored significantly lower on the objective response measure than subjects in the SI group ($t(128) = -1.70; p < .05$). No differences were found in terms of subjective reports of experiences.

T-tests of objective and subjective responsiveness in the SI and CR groups were conducted to test our hypothesis that hypnotic responsiveness on the CURSS is not attributable to simple subject compliance with hypnotic suggestions and instructions. T-tests revealed that subjects in the CR group differed to a small, but significant, degree from those in the SI group on objective responding [$t(62) = 2.18; p < .05$], with CR subjects reporting slightly less behavioral responding. There were no significant differences between the groups on subjective feelings of involvment or involuntariness, although a trend was observed for a significant difference between the CR group and the SI group ($p < .057$).

To examine the role of a hypnotic induction, we conducted planned comparisons of the SI and NI groups on objective and subjective responding to the CURSS. T-tests revealed that there were no significant differences between the two groups on either objective or subjective responsiveness.

**Discussion**

Our manipulation of prehypnotic beliefs about hypnosis as an altered state of consciousness was successful insofar as the numerical score of participants on the posttest measure (of perceptions of an altered state) who were told that hypnosis involved an altered state of consciousness exceeded the scores of participants in the comparison groups. Not surprisingly, when we performed planned comparisons, we found that participants who received information that hypnosis is an altered state endorsed this belief to a significantly greater extent than individuals who received no hypnotic induction. These findings are consistent with the idea that a hypnotic induction plays a role in establishing the perception that hypnosis involves an altered state of consciousness (see Kirsch & Lynn, 1999). This conclusion is supported by the fact that individuals who received the standard induction (but were not explicitly informed that hypnosis involved an altered state of consciousness) could not be statistically distinguished from individuals who received prehypnotic “altered state” information on their posthypnotic ratings of hypnosis involving an altered state of consciousness.

Our results imply that simple directions and explanations of hypnosis prior to an experiment cannot counteract years of media suggestion that hypnosis is, to some extent, an altered state of consciousness. However, when we made the idea that hypnosis involves an altered state of consciousness salient prior to hypnosis, we found that this information resulted in participants both estimating that they would respond to fewer suggestions and responding to fewer suggestions than did individuals who received the standard instructions that emphasized cooperation.

Our findings are consistent with the hypothesis, derived from performance standards theory (Lynn & Rhue, 1991), that participants’ expectancies about successful responding are dampened by the prospect of entering a trance state, and that when experience fails to conform to the performance standards they adopt, participants experience diminished suggestibility. Future research should ascertain whether the
response dampening effect of the “trance state” instructional set was a function of implicit or explicit performance standards that participants adopted, fears and negative attitudes elicited by the prospect of entering a “trance” (e.g., loss of control), or some combination of these factors.

Our study also addressed the question of whether deleting references to cooperation, which are included in the standard induction, would diminish responsiveness on the CURSS. We found that participants who did not receive the cooperation-based rationale responded to fewer suggestions than did participants who received the standard instructions that emphasize cooperation. Interestingly, the emphasis on cooperation did not affect reports of subjective involvement in suggestions. In fact, there was a trend ($p = .057$) for participants in the standard administration condition to report greater subjective involvement in suggestions, compared with individuals in the cooperation-removed group. Apparently, exhorting participants to cooperate does not merely elicit compliance with suggestions in the absence of subjective alterations in responses to suggested events.

Our results imply that it would behoove clinicians to inform clients that their active cooperation is integral to optimizing their responses to hypnotic procedures. It is noteworthy that aggressively educating participants about hypnosis and disabusing them of common misconceptions about hypnosis (e.g., it is an altered state of consciousness), is part and parcel of Gorassini and Spanos’s (1986) multi-faceted hypnotic suggestibility enhancement program, which results in large magnitude increases on objective and subjective measures of hypnotic responsiveness (see Spanos, 1991). However, clinicians may have to work quite hard to educate their clients about hypnosis prior to its use in order to “undo” years of media influence and sidestep the fact that defining hypnosis as an altered state of consciousness or “trance” can be counterproductive.

The finding that the no-induction group was statistically indistinguishable from all of the other groups in terms of measures of behavioral and subjective responding, should reassure clinicians who use suggestive approaches yet do not rely on elaborate inductions to enhance responsibility to suggestions (see Lynn, Kirsch, & Rhue, 1996). Future studies should examine the effects of “no induction” when the procedures are described as hypnotic in comparison with administering waking suggestions in the absence of an induction, to pinpoint not only the role of the hypnotic induction but the role of defining the context of the administration of the suggestions as “hypnotic.”

Our findings are also consistent with Kirsch’s (1997) contention that expectancies about hypnotic responding play a role in determining hypnotic responsiveness. Across all groups, prehypnosis estimates of suggestibility were correlated with dimensions of objective and subjective dimensions of hypnosis in the range of $r = .22$ to .30. However, after the suggestions were administered, the correlations between response estimates and measured responsiveness rose to .46 to .47 across objective and subjective dimensions of responsiveness. These findings indicate that the experience of hypnosis constitutes a basis for evaluating hypnotic suggestibility, however future research will be necessary to determine why there is a considerable discrepancy (as indicated by only moderate correlations) between self-perceptions and more objective measures of hypnotic responsiveness.
In conclusion, our results constitute a challenge to the traditional view of hypnotic responsiveness as an altered state of consciousness that is largely determined by the administration of a hypnotic induction. Rather, our findings indicate that hypnotic inductions are no more effective than suggestions alone elicited in a hypnotic context and that emphasizing cooperation does not dampen but, rather, increases responsiveness to suggestions relative to the traditional practice of defining hypnosis as a trance state.

References


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