INCREASES IN HYPNOTIZABILITY RESULTING FROM A PROLONGED PROGRAM FOR ENHANCING PERSONAL GROWTH

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Hypnotizability, here conceived of as the capacity to allow an altered state of consciousness to develop in a situation of interpersonal trust, was initially reported to be highly stable for a given individual. The present study found significant increases in hypnotizability resulting from participation in a unique, 9-mo. program for enhancing personal maturity, the Esalen Residential Program. These results are congruent with a hypothesis that an ability to develop and use altered states of consciousness is a normal human capacity which is generally inhibited in western culture.

From the earliest days of work with hypnosis it was recognized that many Ss were not capable of showing deep hypnotic phenomena when first hypnotized, but it was generally believed that most Ss could become quite capable of such phenomena if given sufficiently prolonged training. With the development of scales for measuring hypnotic susceptibility in the last decade (Hilgard, Lauer, & Morgan, 1963; Shor & Orne, 1963; Weitzenhoffer & Hilgard, 1959, 1962), it was found that an S's susceptibility score remained relatively constant from testing to testing, and relatively unaffected by various changes in the hypnotic procedure, leading many investigators (Hilgard, 1965) to feel that hypnotic susceptibility was probably a relatively fixed personality trait in most individuals, which could not be easily modified. Several recent studies, however, have begun to produce evidence that hypnotizability may indeed be modifiable with special training, as was originally thought. The present study further supports this proposition that hypnotic susceptibility may be increased by showing significant increases in hypnotic behavior and experience occurring in persons participating in a special program for enhancing personal maturity.

The degree to which a given S may manifest various hypnotic phenomena is influenced by at least two major factors. The first of these is a motivational factor: interpersonal conditions which make Ss insecure, distrustful of or hostile to the hypnotist, or simply unmotivated to perform will probably decrease measured hypnotic susceptibility. Most studies of hypnotizability have set up conditions which seem to induce reasonably adequate motivation to perform and reasonable comfort of the Ss. The second factor is an ability factor, the capacity of the individual S to experience the alteration of consciousness known as hypnosis. The question of whether hypnotizability can be increased with special procedures is primarily concerned with this second factor: Given adequate motivation, can Ss' initial ability to experience the hypnotic state and demonstrate hypnotic behavior be significantly increased?

Pascal and Salzberg (1959) and Wiseman and Reyher (1962) have described techniques for enhancing hypnotic susceptibility, and have shown that these were effective for some specific hypnotic phenomena. Blum (1963), working with 2 Ss, 1 who was initially moderately susceptible and the other initially almost completely unsusceptible to hypnosis, reported that they both became as proficient as a high susceptibility S as a result of extended training. As, Hilgard, and Weitzenhoffer (1963), working about the same time as Blum, specifically attempted to increase hypnotizability in 10 Ss of moderate susceptibility. The Ss were given 4-10 sessions each of training in hypnosis, combined, as considered appropriate by the individual hypnotist, with mildly psychotherapeutic techniques. The Ss were given before and after tests on the Stanford Profile Scale of Hypnotic Suscepti-
bility (Hilgard, Lauer, & Morgan, 1963), and a significant gain was found as a result of the training. However, the gain was from a mean of 44.9 to 48.8, which, while statistically significant, is rather trivial in practical terms. Only 1 S in the sample increased as much as one standard deviation.

No further studies on this problem appeared until the last 2 yr. Cooper, Banford, Schubot, and Tart (1967) replicated the study of Ås et al. (1963), using 3 low, 2 medium, and 1 high-susceptibility Ss. The Ss were worked with more intensively, with 7-16 training sessions each. They were again assessed before and after on the Profile Scales. Five of the 6 Ss showed increases in measured susceptibility, but, while the results were statistically significant, the average increase was again so small as to be of little practical significance. Sachs and Anderson (1967) intensively trained 10 Ss to be able to experience those hypnotic effects that they had failed on the Stanford Hypnotic Susceptibility Scales, Forms A and C. The gains were highly significant on both Forms A and C, with the posttraining mean being almost double that of the initial average score for the group. The gains persisted when a different hypnotist tested the Ss on Form A, although they were somewhat reduced. Thus, the reported gain had practical as well as statistical significance. Shor and Cobb (1968) used a very elaborate training procedure with 8 Ss. After obtaining an initial score on Form C, they worked some time to optimize motivational and situational factors until Ss responsiveness seemed to plateau, that is, showed no further increase on Form C. They then initiated a second phase of training, with sensory deprivation procedures, drug placebo procedures, psychotherapeutic explorations, and specific hypnotic training procedures, designed to affect a much deeper personality level and actually alter the aptitude component of hypnotizability. Their procedure resulted in statistically significant increases, both from initial testing \((M = 3.75)\) to plateau scores \((M = 5.25)\), and from initial scores to final scores \((M = 6.88)\). As in the Sachs and Anderson study, this degree of change was of practical as well as statistical significance. Shor and Cobb also presented detailed case studies of their 8 Ss which are highly intriguing in suggesting relevant dynamic factors affecting hypnotizability.

The question of whether hypnotic susceptibility could be increased by training arose for the present investigator while working with the Stanford Susceptibility Hypnotic Scale. It seemed plausible that Ss would be able to do better with more prolonged and individualized hypnotic inductions, and with suggestions of deepening between items when Ss seemed to lessen their degree of hypnotic depth. Four Ss were tested this way, using 2 hr. instead of 1 to administer Form A, and striving to get reports from the Ss of the maximum hypnotic depth they could reach (using a self-report depth scale, described in Tart, 1963, 1964, 1966, 1968) before giving the various suggestibility items. They reported that their experience was generally more profound than previously, but there was no overall increase in score on Form A. This suggested that in future studies it would be important to assess systematically the experience for each S.

The present study was an assessment of increase in hypnotizability concurrent with participation in a unique and unusually intensive growth program, the Esalen Institute Residential program.

**Method**

Esalen Institute is an experimental center on the Big Sur coast of California for education and exploration in what Aldous Huxley called the "nonverbal humanities," areas of human potentiality largely neglected by our culture. The institute has been conducting weekend seminars since 1964, primarily in the fields of psychology, philosophy, and religion, particularly as these fields suggest potential human resources ordinarily incompletely realized. The Esalen Residential Program arose from a belief that prolonged, in-depth contact with techniques for developing human potentialities would have far more effect on the persons involved than weekend work alone. The program is aimed at making the Residential Fellows more creative, mature, and self-actualizing.

The present study was based on the hypothesis that such an intensive and unique program would probably produce profound changes in personality structure and, insofar as hypnotizability is a personality factor, it should be modified. More specifically, it should increase, for reasons described herein.

The curriculum the Residential Fellows were exposed to included: (a) bioenergetic analysis, a mod-
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...en version of Wilhelm Reich's (1949) psychotherapeutic methods of working through the body (Lowen, 1958, 1967); (b) acquiring operant, voluntary control over some involuntary functions, such as one's own brain waves (Kamiya, 1968, 1969); (c) depth psychological techniques, particularly directed imagery and fantasy techniques (Assagioli, 1965; Progoff, 1956, 1959, 1963); (d) sensitivity groups (T groups) (Bradford, Gibb, & Benne, 1964; Schein & Bennis, 1965); (e) encounter groups (Haigh, 1967; Rogers, 1967; Schutz, 1958, 1967); (f) gestalt therapy (Perls, Hefferline, & Goodman, 1964); (g) meditation (Dekman, 1963, 1966a, 1966b; Kretschmer, 1962; Maupin, 1965, 1969, Noyes, 1965); (k) psychodrama (Moreno, 1934); (j) self-actualization techniques (Maslow, 1962, 1964, 1967; Otto, 1966); (j) synectics training (Gordon, 1961); and (k) sensory awareness (Gunther, 1968).

The residential program emphasized personal experience with these areas, rather than simply intellectual acquaintance: in many ways, the program was a combination of intensive psychotherapies and spiritual disciplines. Judging on the basis of the present investigator's personal acquaintance with a number of the Fellows, there was indeed marked personality change over the course of the program. More exact specification of this change will eventually be available.6

Fifteen persons were enrolled in the residential program for the 1966-1967 year (the first year of the program). Complete before and after testing of hypnotizability was possible for 7 of these Residential Fellows although all of them participated in the initial testing. A random combination of limited time by the investigator and involvement in outside activities by many Fellows precluded retesting the entire group. After establishing rapport and explaining the purpose of the study, the Fellows were given the Harvard Group Scale of Hypnotic Susceptibility (Shor & Orne, 1963). This was primarily to provide some initial hypnotic experience before the main measures were taken.

Each of the Fellows was then assessed individually on a slightly modified form of the Stanford Hypnotic Susceptibility Scale, Form C. Two items were omitted from the standard form (Items 3 and 10, mosquito hallucination and hallucinated voice) in order to shorten administration time. Norms for this form have been described elsewhere (Hilgard & Tart, 1966). Testing was discontinued if S failed three consecutive items; according to the test manual, passing any items after three consecutive failures is highly unlikely.

After the standard administration of Form C, a detailed inquiry as to the nature of the hypnotic experience for each item was carried out. This produced a hypnotic susceptibility score which is called the experiential score, or C-experiential. The usual scoring of Form C will be termed C-behavioral. The properties of this scoring are described in detail elsewhere.8 Briefly, the Fellows rated every item on Form C as to the intensity of the experience (ranging from 0 points for no effect to 4 points for "very strong, like the real experience") and also rated the degree to which the experience and response were involuntary versus voluntary on a second 4-point scale. The two scales were considered additive for this scoring, that is, a response that was very strong and completely automatic would be rated 8, whereas one in which S felt no hypnotic effect would be rated 0. For the scoring procedure used here, the maximum possible C-experiential score was 116, and the minimum was 0.

The initial testing was carried out during the second week of the residential program, when the Fellows had done little more than move in and get settled. The final testing was done a couple of weeks before the end of the residential program, so the Fellow had undergone approximately 8 mo. of the experimental treatment.

Testing conditions were generally fair to poor, in that there was often a great deal of noise from outside the testing room which, however, remained relatively constant for both initial and final tests. Rapport with Ss was excellent: the investigator was able to achieve a fair degree of personal friendship with almost all of the Fellows prior to the initial testing.

Six of the Fellows were in the 25-40 age range, with one being in his 50's. Two were engineers, one a psychological research technician, one an artist, one a lawyer, one a contractor, and one a casino dealer from Nevada. Three were female, four were males.

Demand Characteristics

As Orne (1959, 1962) and Rosenthal (1966) have strikingly demonstrated, the expectations of E, as understood by Ss, can powerfully affect the outcome of most psychological studies, often without E being aware of this factor.

The E explicitly told the Fellows before beginning the initial testing that he was interested in the degree to which their hypnotizability would change as a result of the residential program and, further, that he suspected that it would increase. The E mentioned his hypothesis that hypnosis can be conceived of as the ability to experience an altered state of consciousness in a context of interpersonal trust, and that the residential program would undoubtedly help them to achieve greater proficiency on both of these things.

Ordinarily, one does not make the expectations of an experiment so clear to S, but there was little choice in this situation. The Fellows were an exceptionally intelligent group of people, who would have figured out the purpose of the study and resented any deception. To balance this clear-cut demand for improvement, E stressed to the Fellows that the honesty and accuracy of their responses and reports were far more important than his expectations. Whether any changes found in the Fellows' hypnotic

6 Frank Barron carried out extensive before and after testing on this residential group, which will eventually be published.

8 C. T. Tart, manuscript in preparation.
responsiveness should be attributed to changes in hypnotizability or to response to demand characteristics is difficult to assess. It was E's belief in the re-testing that the Fellows were exceptionally honest and frank in commenting on their hypnotic experiences, compared to the usual college student Ss. Further, the Esalen program stressed total honesty in interpersonal relationships and the value of openness to immediate experience, such that experience should not be distorted by intellectual values or goals. It thus seems likely that any changes found should be attributed to genuine changes in the Fellows.

RESULTS

Table 1 presents all the data on initial and final testing, on both the Harvard Group Scale and the behavioral and experiential scores for Form C.

In terms of general hypnotizability, as assessed by the Harvard Group Scale, the mean score of the group falls within the range of norms for various college populations (Coe, 1964; Shor & Orne, 1963).

Five of the seven Fellows increased their scores on C-behavioral, with a mean increase of 2.0 for the entire group. This was statistically significant by a t test for dependent samples, p < .02 (one-tailed). Two Fellows stayed constant, two Fellows increased 1 point, and three Fellows increased 4 points each.

Six of the seven Fellows increased on C-experiential, and the difference was significant (p < .005, one-tailed).

The C-experiential and C-behavioral scores were highly correlated in this sample: for the initial testing, the rank-order correlation coefficient was .95 (p < .01, one-tailed), and for the second testing, it was .90 (p < .01, one-tailed). However, there were some marked individual differences: for example, Ss D and E both scored 2 on C-behavioral, initial test, but scored 39 and 74 on C-experiential.

A's et al. (1963) and Cooper et al. (1967) both reported that the degree of improvement in susceptibility was positively correlated with initial scores, that is, the better Ss gained more from the training. This was not the case in the present study, where the rank-order correlation between initial susceptibility and the size of the gain in susceptibility for C-behavioral was -.09.

In spite of the gains in hypnotic susceptibility by most of the Fellows, their relative susceptibility remained quite stable. The rank-order correlation between C-behavioral scores for initial and final testing was .84 (p < .05, one tailed), and for C-experiential it was .82 (p < .05, one-tailed). All the studies reviewed in the preceding paragraphs reported this sort of stability also.

As participation in the Esalen Residential Program was designed to produce a great deal of personality change, increases in hypnotizability related to personality change were of interest. A clinical psychologist, Edward Maupin, who was one of the Residential Fellows in the first year program and is now Director of the Residential Program, ranked the seven Fellows in terms of degree of global personality change resulting from the program. The rank-order correlations of the degree of change with C-behavioral and C-experiential change scores were .53 and .38, respectively, neither of which attain statistical significance with this small sample, but which are suggestive.

In informal interviews after the final testing, all the Fellows but one (C) spontaneously remarked that their experience was considerably more profound than in the initial testing. Most of them further elaborated that they felt more comfortable in the hypnotic

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<th>SHSS C-experiential Initial (maximum = 116)</th>
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Note.—HGSHS = Harvard Group Scale of Hypnotic Susceptibility; SHSS = Stanford Hypnotic Susceptibility Scale; SHF = SHSS C-behavioral, t = 2.78, p < .02; for SHSS C-experiential, t = 4.71, p < .005; all probabilities are one-tailed.

* The Ss have been ordered by initial score on C-behavioral.
situation, trusted the investigator more, and felt that their general capacity to allow altered states of consciousness to occur had increased over the year.

**DISCUSSION**

Although there was no control group of Ss tested and retested after the course of 8 mo. to check for spontaneous changes in hypnotizability, all the normative data on behavioral measures of hypnotic susceptibility (Hilgard, 1965; Hilgard, Lauer, & Morgan, 1963; Shor & Orne, 1963; Weitzenhoffer & Hilgard, 1959, 1962) indicated that it was quite stable. Thus, the C-behavioral gains in the present study may be attributed to changes in Ss resulting from participation in the Esalen Residential Program.

Gains in hypnotizability (C-behavioral) assessed from Form C of the SHSS could be due to an increase in hypnotic role playing. The significant gains on C-experiential, however, suggest that the gains seen were in the ability to experience hypnosis. This finding also demonstrates the importance of evolving sophisticated methods for scaling the experience of hypnosis. Judging from data on the C-experiential measure (see Footnote 3), it is highly correlated with the behavioral measure overall, but there are individual Ss who do show large discrepancies in their scores, and this deserves further investigation.

The degree of increase in hypnotizability was statistically significant in the present study, and seems of practical significance. Three of the seven Fellows increased their scores quite substantially; these 4-point gains are greater than the standard deviation of Form C (Weitzenhoffer & Hilgard, 1962). This is comparable to the gains reported by Sachs and Anderson (1967) and by Shor and Cobb (1968), and larger than the gains reported in the initial studies by Ås et al. (1963) and Cooper et al. (1967). Thus it seems likely that with proper techniques, hypnotizability can be increased substantially for some Ss.

Sachs and Anderson (1967) found larger gains for behavioral scores than for an experiential score in their Ss, but their technique for scoring hypnotic experience was quite restricted compared with the present technique.

It is not possible to assess the mechanisms by which hypnotic susceptibility increased with the data available in the present sample. In comparison with other studies of this problem, the present Ss underwent an extremely powerful psychological treatment, probably more powerful than several years of conventional psychotherapy. On the other hand, this treatment was not specifically aimed at increasing hypnotizability, as were the treatments of Sachs and Anderson (1967) or Shor and Cobb (1968).

The following hypothesis, deriving from the present data and other studies, is suggested as a stimulus to further investigation. The nature of human beings is such that they have an innate ability to experience a variety of altered states of consciousness, with concurrent experiential and behavioral alterations. Our culture, as well as many others, has a strong belief that only certain types of consciousness are normal and that other forms of consciousness are pathological. Thus most individuals lose or inhibit this innate ability to function in a variety of states of consciousness in the course of becoming acculturated. The special program at Esalen Institute encouraged the Residential Fellows to overcome many of the inhibitions about experiencing, reporting, and acting on other states of consciousness, and one consequence of this was increase in hypnotizability. Hypnosis, however, is only one special form of an altered state of consciousness, so if some general instrument were available for assessing a person's ability to experience and function in altered states of consciousness, scores on this test would increase markedly as a result of techniques such as the Esalen Residential Program. Hypnotizability is the only altered state of consciousness for which we have reasonably adequate psychometric instruments in our culture, however.

In conclusion, the results of the present study confirmed those of several other recent studies in indicating that hypnotizability can be definitely increased with special training techniques in a significant number of Ss. Further research to develop and validate such techniques would be highly profitable. The

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6 The variety of states of consciousness is discussed elsewhere (Tart, 1969).
experiential aspects of hypnosis are as important as the behavioral aspects, and reliable ways of assessing such experiences need to be developed.

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