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A HYPNOTIC INVESTIGATION OF NEUROTIC ADAPTATIONS AND CONNOTATIVE MEANING.

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ABSTRACT

The purpose of this research was to test the assumption that hypnosis allows access to unconscious content. It was predicted that the degree of discrepancy between conscious and unconscious material would be correlated with neurotic conflict.

From an initial sample of 147 college student volunteers, 25 male and 44 female subjects were selected for participation in this study on the basis of their satisfactory level of hypnotic susceptibility.

On Day 1 of the experiment, subjects were administered a test to measure neurotic discomfort, and a semantic-differential rating task to measure conscious connotative meanings. Subjects were randomly assigned to either an experimental (hypnotic, $\underline{N}$ = 38), or a control (waking, $\underline{N}$ = 31) condition for Day 2 of the experiment.

On Day 2, control subjects were given the identical semantic-differential rating task. Experimental subjects on Day 2 were administered a standardized hypnotic induction, including assessment of hypnotic involvement, and a trance-deepening procedure designed to maximize "unconscious" focusing prior to the semantic-differential rating task. Experimental subject ratings were conceptualized as representing unconscious connotative meanings.

Comparisons between control and experimental group

semantic-differential change-scores (Day 1 to Day 2) provide consistent evidence that hypnosis allows for a significant increase in availability of more socially unacceptable unconscious content. For the experimental group, several comparisons involving shifts in meanings between waking (conscious) and hypnotic (unconscious) semantic-differential ratings were found to be significantly correlated with degree of neurotic adaptation.

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CHAPTER I

INTRODUCTION

Statement of the Problem

Freud regarded repression, a reflexive inhibition of awareness of ego-alien impulses, as the ego's fundamental defense mechanism. This mechanism was furthermore postulated as a primary dynamic factor in the neuroses. The various neuroses were regarded as involving various forms of defense adopted by the ego in a partly-unsuccessful attempt to maintain repression of the unacceptable impulses.

Freudian psychoanalytic theory stressed the importance of innate, biological and instinctual impulses in neurotic problems, while the more culturally oriented neo-Freudian viewpoint has emphasized the importance of interpersonal relationships. This latter perspective contends that anxiety appears when impulses within the person threaten his relations to significant people in his environment.

The present research derives from the psychoanalytic assumption that a personality involved in neurotic conflict is characterized both by unstable repression and dissociation. As a result, there will exist a discrepancy between conscious and unconscious levels of meaning, and the discrepancy will be proportionate to the degree of neurotic conflict.

The methodology for this research involves a central

assumption which, in effect, conceptualizes "unconscious mental activity" as analogous to the hypnotic state. In order to establish an association between hypnotic-state behavioral manifestations and the inferred characteristics evident in unconscious mental processes, it is essential to define the parameters of what is meant in this context by the construct "unconscious".

Freud, in an article entitled "The Unconscious" (1915), provides a rather straightforward definition of the unconscious:

> The unconscious comprises, on the one hand, processes which are merely latent, temporarily unconscious, but which differ in no other respect from conscious ones, and, on the other hand, processes, such as those which have undergone repression, which if they came into consciousness must stand out in the crudest contrast to the rest of the conscious mind. (pp. 104-105).

Furthermore, the repression does not eliminate the ideational representations of an instinct, but rather withholds them from becoming conscious. Therefore, one may conclude that these ideas are in a state of "unconsciousness" and are not apprehended by the conscious mind. Freud outlines the following characteristics of the unconscious: (1) primary process--condensation and displacement involving motility of cathexis; (2) mutual compatibility of contradictory impulses; (3) timelessness; and (4) substitution of psychic for external reality.

The hypnotic state, although clearly not equivalent

to an unconscious condition, shares many analogous characteristics in addition to providing greater accessibility to unconscious material. The author will now examine the four above-mentioned characteristics of the unconscious in relation to hypnotic phenomena.

There is much evidence of what appears to be primary process occurring during the hypnotic state. Two of the most obvious examples will be discussed. First of all, hypnotic dreams can be induced by suggestion, which resemble night dreams in that they involve the usual dream work mechanisms of condensation and displacement (Farber & Fisher, 1943; Fisher, 1953 a and b). Moss (1961) obtained results indicating that hypnotic subjects are better able to translate manifest dream symbols into the latent dream content, which is suggestive of a greater degree of control over the primary process translating mechanism. A second source of information stems from an hypnoanalytic technique called the "affect bridge" (Watkins, 1971), demonstrating the extreme motility of cathexis available in the hypnotic state. This technique allows a subject, experiencing a high degree of affect associated with thoughts occurring in the present, to suddenly shift, following suggestion, to latent memories of childhood where this currently-felt affect was prominent.

The mutual compatibility of contradictory impulses that is characteristic of the unconscious is in many ways analogous to the obtained results found in several hypnotically induced automatic writing experiments. Perhaps the most common example of these experiments involves an item included on the Stanford Profile Scales of Hypnotic Susceptibility (SPS). This item is essentially a posthypnotic automatic writing suggestion in which the hand writes "no" when the subject verbally answers "yes" to a question, and writes "yes" when he answers "no". Hilgard (1968) reports that 34% of his subjects (N = 59) produced this type of dissociative response. In general, it has been shown that there is an increased tolerance on the part of subjects for the contradictions posed by many forms of reality distortion occurring in the hypnotic state. Orne's (1959) rather critical experiment involving the doubling of persons led him to speak of "trance logic", denoting the peculiar acceptance of what would normally be found incompatible. These kinds of hypnotically occurring phenomena prompted Shor (1959, 1962c) to include tolerance of reality distortion as one of the dimensions of hypnotic depth.

The timelessness property of the unconscious appears to be associated with at least two consistently occurring hypnotic state behaviors. First of all, the hypnotist can dramatically induce, via suggestion, an alteration in

immediate time perception so an hypnotic subject would speed up (approaching a manic state), or slow down (approaching a depressive, immobile state). A second factor, suggestive of a loss in overall time orientation, may be a component of hypermnesia. There is substantial evidence of an increment in recall of past experience when in the hypnotic state as compared to the waking state (Stross & Shevrin, 1969), including an heightened ability for age-regression experiences (Reiff & Scheerer, 1960). Perhaps it is the loss of a general linear time perspective during hypnosis which gives rise to these behaviors.

The substitution of psychic for external reality, a fourth characteristic of the unconscious, is clearly associated with the hypnotic condition and may be magnified by suggestion. Hypnotic-state behaviors, indicative of an increment in the substitution of psychic for external reality, are made possible by a reduction in reality testing and by the heightened ability for fantasy production. These behavioral phenomena include: (1) ability to turn off sensory input in favor of cognitive/fantasy data (e.g., analgesia and anosmia); (2) production of positive and negative hallucinations involving all sensory modalities; (3) distortions in meaning (e.g., aphasia and agnosia) and self-concept; (4) hypermnesia and age-regression; (5) inhibition of voluntary control of muscles; and (6) production of dreams and posthypnotic behaviors. It is important

to bear in mind that hypnotic subjects vary considerably in their ability to become hypnotized and to experience the many hypnotic behaviors described thus far. However, the subjects who readily display, to varying degrees, these manifestations of the hypnotic state, report subjective experiences that appear to confirm that their perception is indeed one which substitutes an idiosyncratic psychic representation for a consensual external reality.

To further look at the analogy between hypnotic state phenomena and characteristics of the unconscious, one can also examine the similarity between repression, intimately associated with the unconscious, and posthypnotic suggestion. Freud (1915) writes:

> Hypnotic experiments, and especially posthypnotic suggestion, had demonstrated tangibly even before the time of psychoanalysis the existence and mode of operation of the unconscious in the mind (p. 101).

Freud (1912), in describing a posthypnotic suggestion experiment of Bernheim, states that:

> The subject awakes and seems fully conscious and in his ordinary condition; he has no recollection of his hypnotic state (amnesia) and yet at the prearranged moment there rushes into his mind the impulse to do such and such a thing, and he does it consciously, though not knowing why. It seems impossible to give any other description of the phenomena than to say that the order had been present in the mind of the person in a condition of latency, or had been present unconsciously, until the given moment came, and then had become conscious. But not the whole of it emerged into consciousness; only the conception of the act to be executed. All the other ideas associated with the conception--the order, the influence of the physician, the recollection of the hypnotic state--remained unconscious even then (p. 23).

Clemes (1964) investigated the relationship between repression and posthypnotic amnesia and found two main similarities. Subjects demonstrated greater posthypnotic amnesia for words, which on psychodynamic grounds might be candidates for repression, and once the amnesia was lifted, through suggestion, the subjects were able to recover a substantial amount of this material. Thus, the characteristic of repressed memories as recoverable memories, was demonstrated by this posthypnotic amnesia experiment.

The definition of the unconscious presented earlier included what Freud called the "preconscious system". However, at this point, such a distinction might provide for a more complete conceptual framework in which to view posthypnotic phenomena.

Rapaport (1951) points out that it is unlikely that the hypnotic experimenter can create or induce an unconscious wish. Instead, when posthypnotic suggestions are given to a subject, they may become linked to the already existent and currently active unconscious wishes. The presumed status of these posthypnotic suggestions in deep hypnosis, for which subjects are amnesic, is analogous to the traumatic memories unavailable to recall in the waking state of hysterical patients (Stross & Shervin, 1969). However, this point of view blurrs the distinction between ideas readily accessible to consciousness

(preconscious system), depending on the deployment of attention, and those which are repressed and dynamically unavailable to consciousness. The psychic mechanisms involving dream and neurotic symptom formation, apply to dynamically unconscious ideas, while the posthypnotic suggestion is conceptualized as preconscious or only descriptively, at the moment, unconscious.

However, naturally occurring amnesia for events taking place in hypnosis indicates that "the regressive state attained in hypnosis involves an activation of primitive impulses which the subject, upon emergence from trance, and for purposes of anxiety control, is motivated to hold beyond conscious acknowledgment (Rosenberg, 1959, p. 202).

Thus there are many analogies that support an association between experimental hypnotic-state behavioral data and the theoretical inferences regarding the characteristics that comprise unconscious phenomena. Furthermore, there is abundant clinical and experimental evidence to substantiate the hypothesis that the hypnotic state is one which allows for a significant gain in accessibility to unconscious material.

Hypnosis then can be conceptualized as a regressive state of consciousness which involves a major but temporary reorganization of the individual's psychic system. Gill & Brenman (1959) state that:

> The regressive process of hypnosis can be initiated either by an attack on the sensory-motor-ideational level, or by the stimulation of an intense transference. The curious fact that when one of these has been accomplished, the other soon occurs, suggests the thorough going nature of a regressive process (p. 101).

The induction phase into the hypnotic state can be described as a reciprocal process brought about by a redistribution of attention such that there is a decrease in external sensory input leading to the deautomization of the ego. Deautomization utilizes additional psychic energy so there is even less available to the ego for processing sensory input and performing synthetic functions, which further augments the regressive process. Thus, the ego is in a temporary state of disequilibrium such that there is a degree of loss in ego autonomy from both the internal, unconscious drive, motivational energies and superego derivatives, and from the external environment.

The establishment of the hypnotic state involves the creation of a subsystem within the ego resulting in a new intrapsychic equilibrium (reautomization). This newly acquired subsystem is associated with the following characteristics:

(1) It undergoes a regressive adaptation to the demands of the environment and the hypnotist.

(2) It selectively represents the entire personality and it is through this system that the hypnotist can influence other ego processes.

(3) It is under control of the overall ego which continues to maintain a reality oriented, nonregressive relationship with both internal and external events.

(4) It is this subsystem which regresses in the service of the overall ego in terms of a greater degree of primary process functioning, including a gain in accessibility to unconscious drive and superego derivatives

The economics of the process of regression in the service of the ego can be summarized as follows: Cathexes are partially withdrawn both from defense and reality testing ego functioning and used in the creation of a regressive subsystem whose maintenance requires a countercathexis of the cathexes retained in the overall ego system. Thus unconscious energies countercathected by a reduction in defensive energies (repression) likewise contribute to the enhancement of preconscious thinking in the manner in which, to quote Freud, the "unconscious becomes egosyntonic".

By reducing the state of hypnosis to observable and consistently occurring behavioral correlates, which are explainable in terms of an intrapsychic, dynamic and structural model, the assumption that there is an increment in potential availability of unconscious mental activity in the hypnotic state is made available for experimentation. There have been numerous publications of the clinical case variety which rely on this assumed association.

But these accounts have generally neglected to quantify or even operationalize the disparity between unconscious and conscious data. Instead, validation criteria are usually nebulous and often labeled "therapeutic success", which depends primarily on the patient's conscious statements and judgments. The obvious limitation here is that significant aspects of an individual's thoughts and feelings may be unverbalizable, being subject to the processes of suppression and repression.

There are few scientific investigations relevant to this research which utilize operational concepts and procedures designed to establish comparative data between the hypnotic and non-hypnotic state with regard to psychological conflict.

Moss (1953), while conducting an on-going, long term analytic oriented psychotherapy, attempted to establish an operational measure of therapeutic progress by collecting and comparing hypnotic and non-hypnotic data on the semantic differential (Osgood, Suci & Tannenbaum, 1957). Individual treatment consisted of an exploration of the patient's relationships with all family members (e.g., family of origin as well as current family), including the repeated cathartic release of long suppressed resentments. At the end of treatment, the patient was cognizant of many of the dynamic factors which had long determined his thoughts and actions. Moss cites the

following indicators to further substantiate his clinical observations: (1) patient demonstrated increased capabilities for problem solving in current life problem areas; (2) MMPI administered pre- and post-therapy reflected the alleviation of symptoms by a significant reduction in scores associated with the "neurotic triad"; (3) interpersonal relationships became less threatening and the patient was able to advance himself vocationally by securing a new job; and (4) a 10 month follow-up indicated that these gains were maintained.

The procedure Moss used to obtain hypnotic and non-hypnotic semantic differential data was as follows. Prior to the waking ratings of each of 10 concepts, the patient relaxed and associated about each concept for 10 minutes. The scales of the semantic differential were then read and the patient responded with his perception of the concept's relative position with respect to the following dimensions: strong/weak, active/passive, and good/bad, representing the potency, activity and evaluation factors of meaning. Immediately following these ratings, the patient was hypnotized and again asked to associate to each concept for a period of 10 minutes, which frequently gravitated to early, emotionally laden, memories. Then Moss employed a hypno-projective procedure in which it was suggested that the patient visualize a blank movie screen with a concept to be rated at the top. He further

instructed that as the various scales were read, these would appear as if projected onto the screen, and that immediately following the appearance of a scale, a small, black indicator would appear at a point reflective of his particular mood state. It was emphasized that placement of the indicator would occur without volitional guidance to reduce feelings of responsibility for judgments. In order for this particular procedure to be effective, the hypnotized subject must be able to produce a clear visual hallucination so that the marker would seem to move without conscious direction. According to Moss, the patient had no difficulty with this procedure.

Waking ratings obtained in this manner were operationally defined as a measure of "conscious" meaning and hypnotic ratings as a measure of "unconscious" meaning.

Waking and hypnotic ratings were obtained at the beginning of therapy (session 3), during the middle phase of treatment (session 30), and at the termination of therapy (session 48).

The obtained data indicated a wide discrepancy between waking and hypnotic ratings at the beginning of therapy, and a statistically significant reduction as treatment proceeded (the Wilcoxon Signed Ranks Test for Paired Replicates was applied to the data). On the whole, the results indicate that hypnotic ratings are more negative in connotation than the paired waking

ratings. This suggests that the hypnotic condition taps an aspect of meaning which is repressed or suppressed because of a negative valence. Furthermore, a comparison of the initial and middle data-gathering sessions demonstrated that the increased correspondence between the waking and the hypnotic ratings was effected by movement of the former toward the latter. This suggests that previously negative attitudes achieved an increased recognition into awareness, which is additionally supported by clinical observation.

During the past year (1975), this author designed and completed a pilot project to this dissertation in order to develop procedures to investigate the relationship between the hypnotic and non-hypnotic state, using the semantic differential with regard to 10 concepts of psychological relevance, in relation to neurotic conflict. The general hypothesis was that there would be a positive correlation between the degree of discrepancy obtained from a comparison of hypnotic and non-hypnotic responses, as measured by the semantic differential, and psychological conflict, as measured by the Taylor Manifest Anxiety Scale (TMAS). The subject sample consisted of 10 male patient volunteers from Atascadero State Hospital, a maximum security facility in California, specializing in the treatment of criminal sex offenders. All 10 subjects were committed to the institution under the mentally

disordered sex offender statutes; their offenses primarily involving rape, child molestation, or a combination thereof.

Subjects were screened via group test data and medical records to eliminate individuals who were actively psychotic, taking anti-psychotic medication, or organically impaired. Ages ranged from 22 to 36 years, while the mean age for this group was approximately 27.

The subject sample represented a variety of ethnic backgrounds such that there were two Afroamericans, five caucasions and three of Mexican descent. In general, all subjects were of low socio-economic status.

The experimental procedure essentially involved two group sessions with a two-day time interval between sessions. During the first experimental session, subjects were exposed to sample items featuring the semantic differential scale. This included the rating of two concepts on a particular dimension while visualizing the scale with their eyes closed. Once they became familiar with this task and were provided with a brief explanation of semantic measurement, all subjects were administered a slightly modified version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (Shor & Orne, 1962). This scale, while measuring each subject's degree of hypnotic involvement, provided a standardized hypnotic induction procedure. Immediately following the

administration of this scale; the subjects were exposed to a trance-deepening exercise and then requested to rate 10 concepts on 9 dimensions on a semantic differential adapted for specific use with hypnotic subjects. The trance-deepening procedures and the instructions for the adapted semantic differential were designed to permit a greater degree of intrapsychic and particularly "unconscious" focusing.

During the second experimental session, all subjects were administered a similar version of the adapted semantic differential without hypnotic induction procedures, and requested to rate these same 10 concepts. In both sessions the subject's eyes were closed and the semantic scale was identical except for the absence of hypnotic-maintaining suggestions, and the word "unconscious", as used in the directions during the first session, was changed to the word "conscious" during the second session. Subjects were then given the Minnesota Multiphasic Personality Inventory (MMPI) from which scores were derived on the TMAS.

Hypnotic susceptibility scores (out of a total possible score of 10), semantic differential (S.D.) discrepancies between hypnotic and non-hypnotic conditions, and TMAS scores are presented in Table 1. Inspection of Table 1 indicates that all 10 subjects demonstrated a moderate to high level of hypnotic involvement.

TABLE 1

Summary of Pilot Project by Subject

Subject #	Hypnotic Susceptibility	Sum Total Semantic Differential Discrepancies (10 concepts)	Semantic Differential Discrepancies (Father, Mother, Actual Self, Hostility)	TMAS
1	7	49	13	19
2	9	124	35	36
3	9	89	16	4
4	6	87	21	14
5	8	75	26	16
6	9	125	32	18
7	6	92	10	5
8	8	199	54	22
9	9	92	27	17
10	9	71	15	5

Note: Maximum hypnotic susceptibility score = 10.

Additionally, it may be noted that there appears to be large variance in both the S.D. discrepancy and TMAS scores.

An analysis of the product-moment correlation coefficients presented in Table 2 reflects the degree of association between discrepancies on each concept and the criterion, and between discrepancies on each dimension and the criterion. Furthermore, when combining, in a post hoc fashion, the discriminating concepts and dimensions with regard to the measure of neurotic conflict, there is a trend toward statistical significance.

In addition, it was found that: (1) the degree to which the concepts "father", "mother" and "actual self" are rated as "weaker" in the hypnotic condition as compared to the non-hypnotic condition, was positively correlated ($r = .72$) with scores on the TMAS; (2) the degree to which the concepts "father", "mother" and "actual self" are rated as "weaker" in the hypnotic condition, combined with the degree of discrepancy in the rating of the concept "hostility", was positively correlated ($r = .86$) with TMAS scores; and (3) the degree of discrepancy in the ratings of the concepts "father" and "mother" was positively correlated ($r = .78$) with the degree of discrepancy in the rating of the concept "actual self".

TABLE 2

Summary of Pilot Project Correlation Statistics (Pearson)

Concept Discrepancies to Criterion

	Father	Female	Actual Self	Hostility	Male	Negative Self	Love	Mother	Fear	Ideal Self	TOTAL
TMAS	.40	.45	.42	.62**	.45	-.03	.28	.30	.20	.36	.43

Dimension Discrepancies (with regard to Concepts: Father, Mother, Ideal Self and Hostility) to Criterion

	Strong/ Weak	Sad/ Happy	Cold/ Hot	Rugged/ Delicate	Fast/ Slow	Active/ Passive	Dirty/ Clean	Fresh/ Stale	Light/ Heavy
TMAS	.67**	.51	.53*	.39	.62**	.38	-.09	-.34	.12

Concept Discrepancies (with regard to dimensions: Strong/Weak, Sad/Happy, Cold/Hot, Rugged/Delicate, and Fast/Slow) to Criterion

	Father	Mother	Actual Self	Hostility	TOTAL
TMAS	.41	.66**	.42	.59*	.65**

* $P < .10$
** $P < .05$
$N = 10$

Clinical experience has led practitioners to accept the general proposition that hypnosis provides increased access to unconscious mental activity. Although the research literature abounds with case studies describing the use of hypnosis to bring about "unconscious insight" and/or to "influence the unconscious" with the aim of alleviating many varied and complex manifestations of psychopathology, it has not been demonstrated experimentally that hypnosis does in fact provide such an avenue to gain access to repressed, unconscious material. Moss (1953) using a hypnotic procedure investigated unconscious and conscious semantic-differential ratings in relation to progress in psychoanalytic therapy. Although his findings lend support to the general notion that hypnosis can be a pathway to study unconscious processes, including symbolization, there are some rather obvious limitations which do not adequately satisfy the requirements of rigorous methodology. For instance, Moss studied only one subject and there was no control condition.

Furthermore, this single subject was a patient of the researcher. One must not ignore the possibility that the results obtained from the hypnotic and waking sessions were to some degree influenced by the intense therapeutic relationship, experimental expectancies, and desire for mutual validation.

The present study overcomes these limitations in

testing the belief that hypnosis increases access to unconscious contents. First of all, the subject sample is composed of enough subjects from a normal student population to make statistical inferences meaningful. Secondly, a control condition is employed that will define and sharpen the actual increment in availability of unconscious content which result from a standardized hypnotic induction.

This research follows from the procedures developed by the pilot project such that a normal waking (non-hypnotic) condition will provide an operational measure of the conscious state, while a hypnotic condition is conceptualized as the operational analog of the unconscious state. Hypnosis is defined as the score obtained on a slightly modified form of the Harvard Group Scale of Hypnotic Susceptibility (Shor & Orne, 1962).

In general, the reduction in repression resulting in an increment in unconscious content will be measured by changes in ratings across the waking (conscious) and hypnotic (unconscious) conditions on the semantic differential, a combination of associational and scaling procedures developed for the objective measurement of meaning (Osgood, et al., 1957). Specifically, the loosening of repression will be studied by examining the subject's semantic-differential judgments on four personally relevant concepts. The four concepts are as follows: (1) "father";

(2) "mother" (both crucial in personality formation); (3) "self" (associated with overall adaptation, i.e., superego formation, self-control, depression, self-confidence, etc.); and (4) "hostility" (representative of the subject's impulse life).

The methodology for this research involves two sessions, Day 1 and Day 2. All subjects will be administered the semantic differential and the Trait-Anxiety Inventory on Day 1. There the subjects (in groups of four to six) will be randomly assigned to either the hypnotic condition or the control condition on Day 2. The control group will provide a baseline from which to compare both the quanity and the quality of unconscious material that is allowed expression during the hypnotic state.

The Hypotheses to be Tested

The previous discussion then leads us to the following hypotheses:

1. Because hypnosis produces a greater accessibility to unconscious material, subjects who are hypnotized on the second day should have greater changes in their semantic-differential ratings of "father", "mother", "self" and "hostility" than subjects who are not hypnotized on this day.

1.A. Corollary: Because the material to which subjects have less access in the waking state is repressed

material, one expects that the ratings in the waking state will be more socially acceptable, and those in the hypnotic state, less so. Specifically, the hypnotic condition will allow a movement toward ratings of parents and of "self" as "bad" and as "weak" and the rating of "hostility" toward "good".

2. Because a subject who is more neurotic is expected to have a more unstable repression, and such instability of repression should make him susceptible to having his judgments changed by the hypnotic procedure, the more neurotic the subject, the more his semantic-differential ratings will change under hypnosis. The Spielberger Trait-Anxiety Inventory will be our measure of how neurotic the subject is. Therefore, the higher the subject's score on Spielburger's test, the more his ratings will change under hypnosis.

2.A. Corollary: For reasons cited in 1A, we expect that the changes under hypnosis will be away from socially acceptable ratings. Specifically, parents and "self" will be rated more toward the "bad" and "weak" pole. In like manner, the concept "hostility" will be rated more toward the "good" pole. Therefore, the tendency to rate "mother", "father" and "self" toward "bad" and "weak", and "hostility" toward "good", will be correlated with scores on the Spielberger test.

2.B. Corollary: The more neurotic a subject, the

more unstable his repressions, and thus the more changes in his ratings from one session to another, even when hypnosis is not used. Therefore, we expect a correlation between the Spielburger test and changes from one session to another, in the control group subjects, although without the facilitation of change by a hypnotic condition, such a correlation may be difficult to detect.

3. Because one's self-concept is formed through an interaction with the parents, it is expected that conflicts and repressions having to do with one's parents will be associated with conflicts and repressions having to do with one's self-conception. Changes in ratings between the waking and the hypnotic condition can be assumed to reflect the degree of repression the subject has. Therefore, the changes in ratings between the waking and hypnotic condition for "father" and for "mother" will be correlated with changes in ratings of "self".

CHAPTER II

METHOD

Selection of Subjects

The initial subject sample will be student volunteers from an introductory psychology course at the University of Windsor. Volunteer subjects who are selected for this experiment will be randomly assigned to either an experimental or a control group.

Measuring Instruments

Semantic Differential. C. E. Osgood and his associates (1957) describe this instrument as a combination of associational and scaling procedures for the objective measurement of connotative aspects of meaning. In construction of the instrument, a factor analysis was used to isolate three relatively independent dimensions of meaning having maximal differentiating power. An "evaluative" factor accounted for the greatest proportion of variance, while two others, interpreted as "potency" and "activity" factors, accounted for the remainder of the common variance. In setting up a multidimensional measuring instrument for use in this study, a set of five specific scales, consisting of polar adjective terms, was selected from two criteria: (1) as representative

of the three main factorial dimensions; and (2) as having enpirical utility, in terms of discriminative power, as derived from a pilot project prior to this experiment. The idea of a continuum was made explicit by use of these polar terms to indicate the ends of seven-point scales.

In practice, an individual judges a particular concept against each of these scales, this procedure constituting an operational definition of meaning of a concept, for that individual, at a given time. In this manner, changes in meaning of a concept over a period of time, and/or during varying conditions (e.g., hypnotic vs. waking), the subtle nuances in the individual differences in the meaning of a single concept may be quantitatively represented.

Four concepts were selected for use in this study ("father", "mother", "self", and "hostility"), from the following two criteria:

1. Intuitive/rational judgment. Choice of these concepts reflect the assumption that the human personality is a product of social interaction and of impulse-energy derivatives so that the development of psychological well-being or psychopathology is largely determined by the potent forces inherently represented by these concepts. In addition, these concepts were considered as especially sensitive

to alterations in meaning arising from different conditions affecting the repressive mechanism.

(a) The two most significant interpersonal figures (mother and father) contribute a substantial degree of individual variance to the psychological and emotional development of each subject.

(b) The subject's responses to the concept "self", which express the connotation this term has for the subject, generally provide a good measure of his psychological and emotional well-being.

(c) The concept "hostility" represents the impulse life of an individual, so that the particular manner in which each subject perceives his hostility would provide critical data relating to the criterion measure for this study.

2. Empirical validity. Fluctuations in the perceptions of these four concepts across hypnotic and waking conditions, as measured by this author in a prior pilot project, involving 10 male subjects, were substantially correlated with a similar criterion measure, the Taylor Manifest Anxiety Scale. Two sets of profiles, using the five scales selected for use in this study--with invented, arbitrary data--will serve to illustrate this instrument; see Appendix A.

Trait-Anxiety Inventory (STAI)

Description. This inventory is a 20-item, multiple-choice, self-evaluation questionnaire, originally developed by Spielberger, Gorsuch, and Lushene (1970), as a research instrument for investigating anxiety phenomena in "normal" (non-psychiatrically-disturbed) adults. The instructions for the STAI-A-scale emphasize that the subject is to respond to each of the statements to indicate how he generally feels, rather than how he feels at this particular moment. The A-Trait scale has been widely used for screening high school and college students for anxiety proneness, and for evaluating the extent to which students who seek counselling and guidance services are troubled by neurotic problems.

In general, the concept "trait anxiety" refers to relatively stable individual differences in anxiety proneness. Thus, it is a measure of a latent disposition for an individual to view the world in a particular way and to manifest distress when a situation is perceived as threatening.

Reliability. According to the test manual, test-retest reliability for college undergraduates with the Trait-Anxiety scale ranged from .73 to .86, depending on the intervening time period (e.g., 1 hour to 104 days).

The alpha coefficient (a measure of internal consistency) for this scale is quite high (.86 for

college freshmen and .90 for college undergraduates). Further evidence of internal consistency for this scale is provided by item-remainder correlations for the same college samples. These groups obtained median A-Trait item-remainder correlations of .54 (college freshmen) and .46 (college undergraduates). For over half of the items on the scale, the item-remainder correlation was .50 or higher, and all but one item had item-remainder correlations of .30 or above.

Validity. Data on concurrent validity of the STAI A-Trait scale is obtained by computing a correlation coefficient between the test and other measures of trait anxiety.

Correlations between STAI A-Trait anxiety scale and these measures are as follows:

(1) With IPAT Anxiety scale (Cattell & Scheier, 1963), .75 (college females) and .76 (college males).

(2) With Taylor Manifest-Anxiety Scale (Taylor, 1953), .80 (college females) and .79 (college males);

(3) With Affect Adjective Checklist (Zuckerman, 1960), .52 (college females) and .58 (college males).

Some other correlations that are deemed pertinent to this study are the following: (1) STAI A-Trait anxiety scale correlated .70 with the Cornell Medical Index (high STAI A-Trait scores were associated with a larger number of medical complaints); and (2) STAI A-Trait

anxiety was found to be essentially unrelated to measures of intelligence (Army Beta) or scholastic aptitude (College Entrance Examination Board).

This particular scale was chosen as a criterion measure for the following reasons:

(1) Reliability and internal consistency are reasonably high.

(2) Validity (concurrent) is within acceptable limits. In particular, the correlations with the Taylor Manifest Anxiety Scale (TMAS) were .80 (college females) and .79 (college males). The TMAS was used as a criterion measure for the pilot project prior to the development of this study.

(3) It was designed for use with the normal, college student population.

(4) Convenience, shortness of time required for administration, ease of group administration, simplicity of scoring procedures.

(5) Social desirability generally lower than for most other anxiety inventories (e.g., Crown-Marlowe correlation = -.25).

(6) Multiple-choice format increases variance in total scores as compared with scales utilizing only two discrete categories.

(7) Most importantly, when one looks at the items in the STAI A-Trait anxiety scale, one judges that it

measures not only anxiety, but also additional emotional states associated with other neurotic adaptations.

Intuitively one judges that the following items reflect:

(a) Anxiety: Items 6, 7, 13, 19, and 20.

(b) Depression: Items 3, 4, 10, 11, and 15.

(c) Obsession/compulsion: Items 5, 9, 17, and 18.

(d) General emotional discomfort: Items 1, 2, 8, 12, 14, and 16.

This criterion measure is conceptualized as not only measuring anxiety but also neurotic conflict, resulting in depression, obsessive/compulsive concerns, general emotional discomfort, and physical complaints. Since all of the hypotheses presented earlier are formulated on the basis that a personality experiencing neurotic conflict is characterized by repression and dissociation such that discrepant levels of meanings (conscious and unconscious) coexist, it is expected that neurotic conflict may involve much more than the experience of anxiety. Hence, the Trait-Anxiety Scale, at least on the basis of face validity, appears to measure these other affective components of neurotic adaptation.

Procedure. Prior to experimental participation, the student population, from which the sample will be selected, will be given the following information: (1) That this is an experiment involving hypnosis and will include two

experimental sessions requiring not more than a total of two hours; and (2) that participation may include a standard hypnotic induction procedure and that a measure may be taken of your degree of hypnotic susceptibility.

First Session. The first series of scheduled sessions will take place in small groups ranging from 5 to 10 subjects.

Each subject will be assigned a code number to assure confidentiality, which is recorded by the experimenter at the beginning of the session.

Once the subjects are comfortably seated, the following test materials will be administered by the experimenter:

(1) Screening estimate of hypnotic susceptibility--see Appendix B.

(2) A fact information sheet--see Appendix C.

(3) STAI A-Trait Scale, Form X-2--see Appendix D.

(4) Semantic Differential (Form A)--see Appendix E.

Those subjects who do not pass the screening criteria (Item 1) will be thanked for their participation and excused.

The remaining subjects will be presented with a series of time blocks and dates from which they are to select a convenient time for their second experimental session. Intervals between the two series of sessions for any one subject will not exceed 11 days, or be less than 5 days. Subjects will be requested to return to the same location at the agreed upon time.

Second Session. Before the session begins, the experimenter will toss a coin; if heads, the subject group, composed of not less than four, nor more than six subjects, will receive the experimental condition, and if tails, the group will receive the control condition.

Subjects will be seated in comfortable chairs and provided with a writing table. The room is to be quiet (insulated from outside noise), and the physical arrangement designed to minimize interpersonal contact. Each subject will be supplied with a pencil and a gummed notebook. Code numbers will be recorded by the experimenter which correspond to numbers assigned during session one.

Experimental Condition (Hypnotic). Experimenter will administer the following:

(1) Preliminary remarks.

(2) Hypnotic induction.

(3) Harvard Group Scale of Hypnotic Susceptibility (HGSHS).

(4) Trance deepening.

(5) Semantic Differential (Form B) (see Appendix F).

Approximate time required for this session is estimated at just under one hour. A total of 30 subjects will receive the experimental condition.

Control Condition (Waking). Experimenter will administer the Semantic Differential (Form A)--see Appendix E. Approximate time required for this session

is estimated at 10 to 15 minutes. A total of 30 subjects will participate in these series of sessions.

In order to minimize the control subjects' disappointment by not meeting the expectation regarding their desire to experience hypnosis, subjects will be told that they will be selected at random for the control group following the collection of the semantic-differential data on Day 2. This procedure will be accomplished by a re-flip of the coin in the session so that each subject is aware that their selection to be in the control group is in fact due to the experimental design.

From an initial subject sample of 147 college student volunteers, 74 subjects were selected on the basis of their response to a measure of hypnotic susceptibility. A total of 69 subjects, 25 males and 44 females, participated in both sessions and were randomly divided into $N=38$ for the experimental group and $N=31$ for the control group. The mean age for the subject sample was 20.5 years, and all but 7 subjects were in their first academic year at the University of Windsor. For an overall view of the experimental design see Flow Chart (Figure 1).

The flow chart which follows is a schematic breakdown of the experimental procedure.

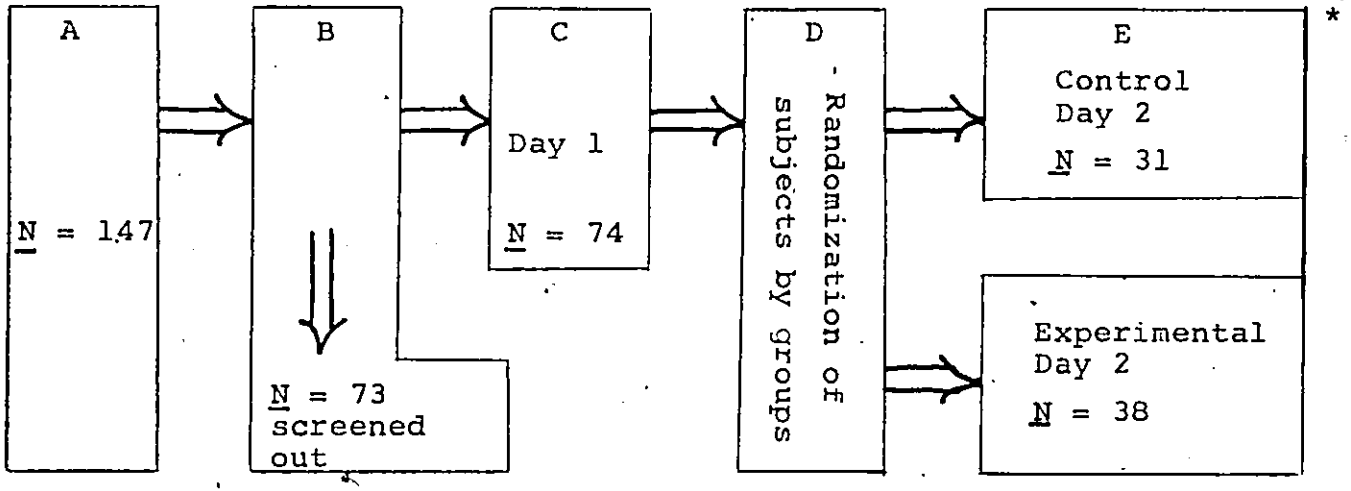


Figure 1 - Flow Chart

A = Introductory psychology students who volunteered for hypnotic research project.

B = Screening estimate of hypnotic susceptibility. Waking suggestion measurement taken as evidence of hypnotic susceptibility (groups of 7 to 10 subjects).

C = Day 1 - groups of 4 to 6 subjects were administered the Trait-Anxiety Inventory and the semantic-differential rating task. This last measurement was taken with the subjects' eyes closed.

D = All groups (of 4 to 6 subjects each) scheduled for Day 2 session were randomly assigned to either a control condition or an experimental condition.

E = Control: 7 groups with 4 to 6 subjects each were given the identical form of the semantic differential with eyes closed.
Experimental: 8 groups with 4 to 6 subjects each were administered a standard hypnotic induction procedure and a measure was taken of their degree of hypnotizability. Following a trance deepening procedure, these subjects were given the semantic-differential rating task while in the hypnotic state.

*2 subjects dropped due to data mix-up; 2 dropped due to insufficient data; 1 failed to report for Day 2.

Handling of Data

In order to obtain a measure of each subject's change in semantic-differential ratings between Day 1 and Day 2, the author used a linear-regression procedure, i.e., a method which is formally equivalent to an analysis of covariance. Such a computational procedure is designed to take account of and remove the effects of differing variances between scores on Day 1 and on Day 2, and to take account of the regression toward the mean between Day 1 and Day 2. All change-scores used in the analyses to be reported are residuals of actual scores on Day 2 from the scores predicted for Day 2 on the basis of the subject's Day 1 scores. (See Appendix A, Figure 2.)

For example, a subject's Day 1 score on "father", on the rating-scale, "good to bad", was 2. On the basis of the total sample of all 69 subjects, his predicted Day 2 score on this scale was 2.5. His actual Day 2 score was 4. The residual score is +1.5, and is computed by subtracting the predicted score from the actual score.

Scattergrams were plotted for each group of residual scores on the semantic-differential ratings with scores on the Trait-Anxiety Inventory in order to determine if the nature of the relationship could best be described by a linear function. All data analyses utilized various programs from the Statistical Package for the Social Sciences, (Nie, Hull, Jenkins, Steinbrenner & Bent, 1975). (See Appendix G for compilation of raw data.)

CHAPTER III

RESULTS

The purpose of this research is to test the hypothesis that hypnosis allows for a reduction in repression resulting in an increase in availability of unconscious content. This increase will be measured by changes in semantic-differential ratings from a waking to a hypnotic condition. Therefore, it was predicted that subjects who were hypnotized on the second day would have greater changes in their semantic-differential ratings of "father", "mother", "self" and "hostility", than subjects who were not hypnotized on this day.

The results presented in Table 3 demonstrate that the variance of change-scores in the semantic-differential ratings were greater for the subjects who received the hypnotic Day 2 session than for the subjects who were not hypnotized on the second day. The variance for the sum total of the semantic-differential ratings on all four concepts for the hypnotic group was 47.18 and for the control group, 7.02. This is a statistically significant difference at the .01 level (F (37,30) = 6.72).

A summary of the means and standard deviations of both the hypnotic and the control groups on each of the

Table 3

Variances of Changes in Semantic-Differential Ratings (Direction not Considered)[a] for Hypnotic and Control Groups

Concept	Group: Hypnotic (N = 38)	Group: Control (N = 31)	F
"Father"	5.18	1.02	5.09*
"Mother"	9.44	1.83	5.15*
"Self"	7.42	1.53	4.85*
"Hostility"	8.19	1.71	4.78*
"Father and Mother"	15.07	3.87	3.90*
Total of 4 concepts	47.18	7.02	6.72*

[a]Change-scores (Day 1 to Day 2) were computed using absolute values.

*$p < .01$

change-scores in semantic-differential ratings is shown in Table 4. The means for the hypnotic group were greater than the means for the control group on all semantic-differential ratings. All of these differences are statistically significant at the .01 level. The mean change-score for the hypnotic group on the sum-total of all four concepts was 24.67, while the control group mean change-score for these four concepts was only 14.57. This is a significant difference at the .01 level (t (49) = 8.34).

The change-score figures in both Table 3 and Table 4 were computed using absolute values so that either a negative or a positive change from Day 1 to Day 2 would be additive without regard to its direction.

Thus the prediction that subjects who are hypnotized on the second day would have greater changes in their semantic-differential ratings on these four concepts, than subjects who were not hypnotized on the second day is found to be confirmed.

The corollary to this first hypothesis predicted that the ratings in the waking state would be more socially acceptable than the ratings in the hypnotic state. Specifically, the hypnotic condition would allow a movement toward ratings of parents and of "self" as "bad" and as "weak" and toward the rating of "hostility" as "good".

Table 4

Means and Standard Deviations of Changes in Semantic-Differential Ratings (Direction not Considered)[a]

Concept		Group: Hypnotic (N = 38)	Group: Control (N = 31)	df	t
"Father"	Mean	6.63	3.55		
	(S.D.)	(2.28)	(1.01)	53	7.48*
"Mother"	Mean	5.46	3.49		
	(S.D.)	(3.07)	(1.35)	53	3.55*
"Self"	Mean	5.72	3.44		
	(S.D.)	(2.72)	(1.24)	54	4.60*
"Hostility"	Mean	6.86	4.09		
	(S.D.)	(2.86)	(1.31)	53	5.34*
"Father" + "Mother"	Mean	12.09	7.04		
	(S.D.)	(3.88)	(1.97)	57	6.99*
Total of 4 Concepts	Mean	24.67	14.57		
	(S.D.)	(6.87)	(2.65)	49	8.34*

[a]Change-scores (Day 1 to Day 2) were computed using absolute values.

Note: Behrens-Fisher statistic was used because variances within groups are unequal.

*$p < .01$

Inspection of Table 5 indicates that the variances of semantic-differential change-scores for the concepts, "father" + "mother" + "self", toward the "bad" and "weak" pole on Day 2 was significantly larger for the subjects who were hypnotized (F (37, 30) = 5.90). When one added the change in the concept "hostility" toward the "good" pole on Day 2, the difference between the hypnotic and control-group variances was increased (F (37, 30) = 6.48).

Table 5

Variances of Changes in
Predicted Direction on Semantic Differential

Concept	Group		
Day 1 to Day 2	Hypnotic (N = 38)	Control (N = 31)	F
"Father" + "Mother" + "Self" (toward "Bad", "Weak")	31.49	5.33	5.90*
"Father" + "Mother" + "Self" (toward "Bad", "Weak") + "Hostility" (toward "Good")	32.60	5.02	6.48*

*$p < .01$

Table 6 illustrates that the means and standard deviations of semantic-differential change-scores for these same predicted directional ratings were greater for the hypnotic group than for the control group (t (50) = 2.70 and 3.41).

Table 6

Means and Standard Deviations of Changes in Predicted Direction on Semantic Differential

Concept		Group			
Day 1 to Day 2		Hypnotic (N = 38)	Control (N = 31)	df	t
"Father" + "Mother" + "Self"(toward "Bad", "Weak")	Mean	1.25	-1.46		
	(S.D.)	(5.61)	(2.31)	51	2.70*
"Father" + "Mother" + "Self"(toward "Bad", "Weak") + "Hostility" (toward "Good")	Mean	1.60	-1.84		
	(S.D.)	(5.71)	(2.24)	50	3.41*

*$p < .01$

Therefore, the prediction that more socially unacceptable semantic-differential ratings would occur on Day 2 for the hypnotic group but not for the control group is confirmed.

The means of both the hypnotic and control groups on the Trait-Anxiety Inventory, obtained from administration of

the test on Day 1, before random assignment to the treatment condition, are shown in Table 7. The difference in means, although not reaching statistical significance at the .05 level, is greater for the control group than for the experimental group. This difference works against the findings presented by this research, and, in fact, adds to their credibility.

Table 7

Means and Variances of Hypnotic and Control Subjects on Trait-Anxiety Inventory

Group	Mean	t	Variance	F
Hypnotic (N = 38)	37.63	-1.98	37.82	1.94
Control (N = 31)	41.26		63.44	

One might wonder whether some of the differences here reported could be the result of chance differences in characteristics of the subjects assigned to experimental and control conditions. Although the randomization procedure in general takes care of such a concern, it may be of interest to look at whether there is a disproportion of males or females in one group or the other. A check on this indicated that there was no statistically significant difference between the hypnotic and control groups with regard to proportions of male and females (t (67) = .16).

Hypothesis 2 predicted that the more neurotic the subject is, as measured by the Trait-Anxiety Inventory, the more his semantic-differential ratings would change under hypnosis. The correlations between anxiety and change-scores (direction not considered) are shown in Table 8. In order to eliminate the effect of direction of change-scores, all computations made use of the absolute value of the residual scores (absolute difference between Day 2 predicted-score and Day 2 actual-score). For the hypnotic group, changes in the ratings of "father" and "self" were significantly correlated with the Trait-Anxiety Inventory, while changes in the ratings of "mother" and "hostility" were not. When the sum-total of the four concepts were compared to the Trait-Anxiety Inventory, the correlation was .45, which is significant at the .01 level. The variance of the change-scores contributed more than 20% of the variance associated with scores on the criterion for the hypnotic group. Thus Hypothesis 2 is supported by these findings.

Corollary 2.A predicted that the degree to which "father", "mother" and "self" were rated more toward the "bad" and "weak" pole and "hostility" was rated more toward the "good" pole during the hypnotic session, would be correlated with Trait-Anxiety Scores.

Table 8

Correlations of Change-Scores[a] (Direction not Considered)[b] with Trait-Anxiety Inventory Scores for Hypnotic and Control Groups

Change-score variable Day 1 to Day 2	Correlations with Anxiety Inventory Group	
	Hypnotic (N = 38)	Control (N = 31)
"Father"	.40*	.33
"Mother"	.17	.38*
"Self"	.35*	.03
"Hostility"	.25	-.17
"Father" + "Mother" + "Self" + "Hostility"	.45**	.25

[a]Change-scores were computed by estimating from the Day 1 rating the expected Day 2 rating, using a linear-regression procedure and subtracting the expected score from the actual Day 1 rating.

[b]Absolute values.

*$p < .05$

**$p < .01$

Table 9 shows that the correlation coefficients between the directional change-scores and the criterion are statistically significant so that the prediction that more socially unacceptable ratings would occur during the hypnotic condition for subjects with greater anxiety is confirmed.

Corollary 2.B postulated that the more neurotic the subject, the more his ratings would change from one session to another, even when hypnosis was not used. However, this relationship may be difficult to detect without the facilitation of the hypnotic condition. Table 8 indicates that in the control group only the change-score ratings of "mother" were significantly correlated with the Trait-Anxiety Inventory, while "self", "hostility" and "father", and the combined sum total of these concepts were not. Table 9 shows clearly that the directional predictions for the control group were not significantly related to the Trait-Anxiety Inventory.

Hypothesis 3 predicted that the changes in ratings between the waking and hypnotic condition for "father" and for "mother" would be correlated with changes in ratings of "self" This was true for the hypnotic group but not for the control group. Table 10 shows that in the hypnotized group there was a significant linear relationship ($r = .41$) between the absolute value change-score ratings of "father" + "mother" and the absolute value change-score ratings of "self". The difference between the hypnotic and control group with

Table 9

Correlations of Change-Scores[a] in the Predicted Direction with Trait-Anxiety Inventory Scores for Hypnotic and Control Groups

Directional Change-Score Variable Day 1 to Day 2	Correlations with Anxiety Inventory Group: Hypnotic (N = 38)	Control (N = 31)
"Father" + "Mother" + "Self" (toward "Bad", "Weak")	.37*	-.20
"Father" + "Mother" + "Self" (toward "Bad", "Weak") + "Hostility" (toward "Good")	.45**	-.09

[a]Change-scores were computed by estimating from the Day 1 rating the expected Day 2 rating, using a linear-regression procedure and subtracting the expected score from the actual Day 1 rating.

*$p < .05$

**$p < .01$

Table 10

Correlations of "Father" and "Mother" Change-Scores[a] with Change-Scores on the Concept "Self"

Change-Scores Absolute Value Day 1 to Day 2	Group Hypnotic (N = 38)	Group Control (N = 31)	Z of Difference Between r's
"Father" + "Mother"	.41**	-.10	2.14*
"Father"	.37*	.25	.52
"Mother"	.25	-.33	2.37*

[a]Absolute values.

*$p < .05$

**$p < .01$

regard to this linear relationship was statistically significant (Z (67) = 2.14). When one considered the "father" and "mother" change-score ratings separately, "father" was significantly correlated with change-score ratings of "self" for the hypnotic group but not for the control group. The difference between the hypnotic and control group with respect to this linear relationship was not significant. The change-score rating of "mother" did not correlate significantly with the change-score rating of "self" for either the hypnotic or the control

groups. Therefore, Hypothesis 3 is given optimum support by the fact that the combination of "father" + "mother" ratings was significantly correlated with ratings of "self" for only the hypnotic group.

The author wishes to call the reader's attention to the fact that all subjects (control and hypnotic) who participated in this project were selected on the basis of their positive response to a measure of hypnotizability on Day 1. This procedure eliminated approximately 50% of the initial volunteer sample. In addition to this requirement each subject who was hypnotized on Day 2 was administered a modified version of the Harvard Group Scale of Hypnotic Susceptibility (HGSHS). The range of hypnotizability scores was from 4 to 10 while the mean for the entire group was 8.4 out of a maximum of 10. This mean score is quite high and according to the HGSHS normative data (Shor & Orne,1962) these subjects as a group would be classified as "highly hypnotizable".

CHAPTER IV

DISCUSSION

It is clear that the results of this investigation are consistent with the hypothesis that hypnosis allows for an increase in the availability of unconscious content. For every semantic-differential variable, the subjects who were hypnotized on Day 2 had significantly greater change-scores than those subjects who were not hypnotized. Change-scores measure the discrepancy between hypnotic and waking levels of meaning pertaining to one's parents, one's hostility, and oneself. Since the hypnotic condition is conceptualized as "akin to an unconscious level" of responsiveness, it can be reasoned that the hypnotic condition contributed to the partial removal of the intra-psychic defense mechanism of repression so that unconscious meanings would be given expression. It might be argued that the greater change-scores for the hypnotic group were due to the nature of the hypnotic instruction rather than that they were a reflection of unconscious derivatives. However, when one considers that the hypnotic ratings were significantly more negatively valenced than were the waking ratings, as predicted by Hypothesis 1, Corollary A, this argument loses its impact. For example, the instructions for the hypnotic group throughout the semantic-differential ratings stressed the experience of being relaxed, asleep

and comfortable, e.g., "nothing will bother you". Considering these instructions, if subjects were in fact responding to a task-motivating instructional set, there is no reason to expect them to report consistently more socially unacceptable material (negatively valenced) during the hypnotic condition. Rather, the most reasonable explanation follows the theory from which the hypotheses were derived, namely, that unconscious content has been repressed primarily because it represents the more socially unacceptable or negatively valenced, connotative aspects of meaning. Hence the results demonstrate that the hypnotic condition not only accounted for greater change-scores but that these greater change-scores were associated with a movement toward more negative ratings during the hypnotic session.

The second major finding to come out of this research is that subjects who were judged to have a weak or unstable repressive defense mechanism, as evidenced by higher scores on the Trait-Anxiety Inventory, were the subjects who tended to show the greatest change in their semantic-differential ratings during the hypnotic condition. Again, as predicted by Hypothesis 2, several independent semantic-differential change-score measures were found to be significantly correlated with degree of neurotic adaptation for subjects exposed to the hypnotic condition.

Hypothesis 2, Corollary A, predicted that the tendency

for subjects to rate their parents and themselves more negatively, and to rate their hostility more favorably, during the hypnotic session, would be correlated with their degree of neurotic conflict. The results were consistent with this prediction, contributing additional evidence in support of the argument that hypnosis involves a weakening of the repressive forces of the personality such that there is greater accessibility to negatively valenced, unconscious content. If the assumption is made that change-scores reflect the instability of repressive forces within the personality structure, it follows then that the degree to which the defense mechanism of repression is weakened under hypnosis, will be associated with the degree to which the individual experiences neurotic discomfort. However, a contingent possibility is that the change-scores simply measure the discrepancy between conscious and the more negatively valenced, unconscious, connotative aspects of meaning. Therefore, the greater change-scores which result from the hypnotic procedure may not only be due to a weakening of repression but may reflect greater dissociation within the neurotic personality, so that wider differences between conscious and unconscious connotative meanings will be found. It follows then that for the neurotic personality the defense mechanism of repression against awareness of the more unacceptable meanings is inadequate to cope with such wide discrepancies in mental content.

Another empirical finding is related to Hypothesis 3 which predicted that individuals who expressed more discrepant meanings between the two states of consciousness about their parents would tend also to express more discrepant meanings about themselves. This relationship was found for the hypnotic subjects but not for the control subjects (who were not exposed to the hypnotic procedure). One interpretation for this empirical association is that it may simply mean that subjects who responded to the hypnotic procedure by a weakening of the repressive barrier do so consistently without regard to subject matter. Another possible but slightly different explanation follows from the idea that children who have been punished more for unacceptable (negatively-valenced) behavior directed toward parental objects, learn to restrain or inhibit their behavior and to suppress or repress the associated negative thoughts. This process of teaching children to repress even the thoughts associated with negative behaviors directed toward parents is internalized (superego formation) and the censorship becomes widespread, keeping negative thoughts about oneself from conscious awareness. It follows then, that children who are not punished a great deal for displaying negative behaviors toward parental objects, do not develop as strict a censorship, and hence have less need to repress material about both parents and oneself.

It is unfortunate that much theorizing about hypnosis, including the present author's earlier statements in this work, has dichotomized human consciousness. It is probably much more accurate to describe the hypnotic state as falling along a fluid continuum from unconscious to full conscious awareness. It may be argued that the hypnotic state induced by the standard procedure reported in this study is one level of consciousness for a particular subject that may be more or less "unconscious" relative to the level of consciousness of another subject. This difference may be only remotely associated with our present-day instruments which measure hypnotic involvement through a motoric-oriented medium.

The reader may recall that the hypnotic induction, including the measuring of each subject's degree of hypnotic involvement, was a standardized group induction procedure developed by (Shor & Orne, 1962) and used widely in research settings. It had been the author's intention to examine the differences between those subjects judged to be highly susceptible to hypnosis and subjects of lesser susceptibility. However, the screening estimate of hypnotizability administered on Day 1 of this experiment resulted in a 50% dropout rate. Therefore, a good percentage of those subjects who would be in the low and medium hypnotic groups were screened out and the mean score on the HGSHS for all 38 subjects exposed to the

hypnotic condition was quite high. This finding lends support to the notion that susceptibility to waking suggestion (screening estimate on Day 1) is strongly associated with susceptibility to hypnosis.

The trance-deepening procedure developed by this author was designed to maximize "unconscious focusing". (See Appendix E for details.) After the subject made the semantic-differential ratings, the experimenter gave a partial-amnesia suggestion, so that if a subject had become aware of disturbing (traumatic) unconscious content under the safety of hypnosis, he would find it easy, if not automatic, to repress this material again upon awakening.

The effectiveness of the hypnotic-induction and the trance-deepening procedures is demonstrated not only by the findings reported in the previous chapter, but also by qualitative, observational data. First, it was observed that four female subjects began sobbing during the hypnotic ratings of "father". Two of these four subjects were so disturbed by their "unconscious memories" that they were unable to complete the rating task, and their data were not included in the analyses. Such intense emotional responses did not occur during any of their waking ratings. Secondly, two subjects who were in the hypnotic state failed to respond to the first hypnotic measurement which required them to raise their arm. To

overcome this motoric inhibition, the experimenter took hold of the subject's arm to initiate the first arm movement; no other problems were encountered with these subjects. It is believed that they failed to raise their arms because the trance was so deep. The third observation was that following the partial-amnesia suggestion and immediately upon arousal, a good majority of the subjects looked puzzled, at least six subjects making comments such as "My goodness, we have been in this room for an entire hour; where did the time go?". The fourth, rather revealing observation was that since this investigation, the author has been approached individually by 7 of 38 hypnotic subjects. These subjects all requested the experimenter to tell them what had transpired during the hypnotic session. The author's reaction was to question them regarding what they could recall. Four of the seven subjects were unable to recall any of the ten hypnotic-scale items, or even to recall that they had rated concepts on the same semantic-differential that they had been exposed to on Day 1. The remaining three subjects remembered vaguely that they had rated some concepts, but could not recall which particular concepts. However, four of the seven subjects were able to recall the partial-amnesia suggestion, "You may not want to remember or talk about your experience during the last hour. In fact, it will be hard for you to remember any of it

unless you try very hard." These observations of a qualitative nature are congruent with the hypothesis that the hypnotic state can indeed increase the accessibility to unconscious content and that once the waking state is restored, the content expressed while hypnotically involved is easily, if not automatically, repressed from conscious awareness.

A major implication of the findings of this investigation is that experimental evidence exists now which supports the central assumption underlying a great deal of the published clinical-case reports that rely on hypnotic techniques. The assumption, largely obscured by clinical authors, is that the hypnotic state does provide greater accessibility to unconscious content. It must be noted here that this study in no way demonstrates that an individual can gain "unconscious insight" or even be "influenced via the unconscious" through the use of hypnosis. However, these two clinically-derived explanations become much more plausible in the light of presented evidence.

Another implication of this research arises directly from the experimental methodology, namely, from a comparison of the control and hypnotic conditions. Hypnosis is not simply a reduction in external sensory input because, as the reader may recall, the control group also rated the concepts with their eyes closed and under

the same auditory stimulus conditions. Likewise, the argument that hypnotic-state behaviors result from the task-motivating instructions (Barber, 1960 and Barber & Glass, 1962) does not find support from these findings.

Furthermore, the role theory espoused by Sarbin (1950) and by Sarbin and Anderson (1967) does not find support from these findings. For example, in this study role behavior was not defined or explicit to the subjects, so that the norms indicative of passive acceptance of the hypnotist's suggestions were not given. Yet hypnotic subjects still responded consistently in a way that was different from the control subjects on the semantic-differential ratings, where no role definitions or expectations were delineated.

Another implication of this research is that hypnosis may provide the psychologist with additional diagnostic information pertinent to desirable intrapsychic change in order to bring about a reduction in psychological pain. The haunting problem regarding the unreliability and lack of validity of the client's verbal responses may be substantially decreased through the use of hypnosis. For if the clinician can measure levels of meaning, outside the client's awareness, free from external censorship and to a certain degree of internal censorship, he may be better equipped to understand and make predictions without resorting to theoretical inferences far removed

from the individual patient. Perhaps precision with regard to human response predictability would be enhanced through the use of sampling different levels of consciousness. Now that it has been established that hypnosis provides greater accessibility to another level of human consciousness, the door is open for scientific investigators to map and measure individual differences across different levels of consciousness.

APPENDIX A

SEMANTIC MEASUREMENT

CONCEPT: FATHER

Rating I: Waking _____•

Rating II: Hypnotic _____▫

strong	_ • _ ▫ _ _ _	weak
slow	_ _ _ ▪ _ _ _	fast
sad	_ _ ▫ _ • _ _	happy
hot	_ _ • ▫ _ _ _	cold
good	_ • _ ▫ _ _ _	bad

Figure 2. Illustration of Application of the Differential for Measuring the Meanings of Concepts.

The following sequence of procedures were used to obtain the change-score for this subject on the concept "father": (1) Calculate the mean predicted Day 2 scores ($\overline{X}_1 \ldots \overline{X}_5$) for each of the five dimensions based on the linear regression equations from all 69 subjects. (2) Subtract the mean predicted scores ($\overline{X}_1 \ldots \overline{X}_5$) from the actual Day 2 scores to obtain the five residual scores. (3) Add up the five residual scores, one for each dimensional rating. This is the total change-score for the concept "father".

NOTE: Hypotheses 1, 2, Corollary 2.B and 3 involve the use of only the absolute value change-scores while Hypotheses 1, Corollary A, and 2, Corollary A, make use of the direction of the change-score (i.e., the higher the change-score, the more negative the rating on Day 2).

APPENDIX B

FACT INFORMATION SHEET

NAME _____

AGE _____ ACADEMIC YEAR _____

MAJOR _____

CODE # _____ STUDENT ID # _____

HOME TELEPHONE #_____

MALE/FEMALE - circle one

HAVE YOU BEEN HYPNOTIZED BEFORE?_____. IF YES,

PLEASE INDICATE CIRCUMSTANCES:

APPENDIX C

SCREENING ESTIMATE OF HYPNOTIC SUSCEPTIBILITY

To be read by the E as follows:

I want you to sit back comfortably and close your eyes and hold both of your arms straight out in front of you. That's right, straight out in front of you...hands about one foot apart.

Now imagine that you are holding in your right hand a wire handle attached to an empty 5-gallon pail. Just visualize the pail held by your right hand (5").

Now imagine that I am going to pour some sand into your pail....

Okay, I am now pouring one pound of sand into your pail...and now two pounds of sand (3").

Now, three pounds of sand are in the pail and it's getting heavier and your arm is beginning to feel the strain.

Imagine now that I am going to fill up the pail to the top so that your right hand and arm are now holding 10 pounds of sand and the pail is very heavy, almost too heavy to hold up any longer (5").

(SCORE EACH SUBJECT'S RESPONSE)

Okay, good. You may put your arms down now and open your eyes.

Scoring Criteria: If either hand moves more than 3" up or down relative to the other hand the S is selected for further experimental participation.

PREVIOUSLY COPYRIGHTED MATERIAL,

IN APPENDIX D, LEAF 63,

NOT MICROFILMED.

SELF-EVALUATION QUESTIONNAIRE, STAI Form X-1, developed by C.D. Spielberger, R.L. Gorsuch and R. Lushene. Published by Consulting Psychologists Press, 577 College Avenue, Palo Alto, California 94306, U.S.A., 1968.

APPENDIX E

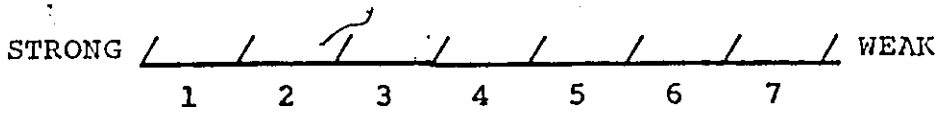
SEMANTIC DIFFERENTIAL (FORM A)

Before we begin with the next task, I would like each of you to have a pad of paper and a pencil. Also, I am passing out two sheets of paper for you to examine closely. At the top of the first page is the concept or idea "automobile". You are to rate that concept using the 7-point scale for the dimension "strong to weak", but first close your eyes and visualize the scale as you see it on the page. "Strong" is on the left end of the scale at 1, and "weak" is on the right end of the scale at 7. Now open your eyes. The number you write down in one of the 7 spaces on the scale should indicate your perception of the concept's position with respect to the dimension "strong to weak". For example, if you perceive of the concept "automobile" as being very strong, with little weakness, you might rate it 1 or 2. Likewise, if you perceive the concept "automobile" as weak, with few strengths, write the number 6 or 7. In the same manner, if you perceive the concept "automobile" as in between, neutral or just as strong as it is weak, you would write the number 4, which is exactly between 1 and 7 on the scale.

On the second page, the concept is "automobile". The dimension you are to rate this concept on is "fast

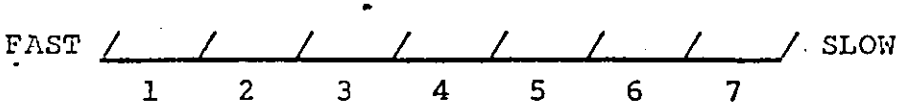
CONCEPT OR IDEA: AUTOMOBILE

DIMENSION # 1 - STRONG/WEAK



CONCEPT OR IDEA: AUTOMOBILE

DIMENSION # 2 - FAST/SLOW



to slow". Close your eyes and visualize the scale as you see it on the page (30 seconds). Now open your eyes and rate the concept "automobile" on the dimension "fast to slow", by writing down a number from 1 to 7 in one of the 7 spaces on the scale. Are there any questions about this procedure?

Okay, pick up your pencil, and think about what the concept "father" means to you. Close your eyes and on the first page of your tablet you are to rate the concept "father" with respect to the dimension "strong to weak", with "strong" on the left end of the scale at 1, and "weak" on the right end of the scale at 7. Write a number on the top page of your tablet between 1 and 7, indicating your perception of the concept "father", with respect to the dimension "strong to weak". Good. Now tear off the top page and place it on the table in front of you. Rate the concept "father" on the dimension "slow to fast". "Slow" on the left end of the scale at 1, and "fast" on the right end of the scale at 7. Write down a number on the top page of your tablet between 1 and 7, indicating your perception of the concept "father" with respect to the dimension "slow to fast". You are to tear off the top page and place it in front of you each time you have rated a dimension.

Now rate the concept "father" on the 7-point dimension "sad to happy". Remember, "sad" is on the

left end of the scale at 1, and "happy" is on the right end of the scale at 7.

On the next page you are to rate the concept "father" on the dimension "hot to cold". "Hot"is on the left end of the scale at 1, and "cold" is on the right end of the scale at 7.

On the next page you are to rate the concept "father" on the dimension "good to bad". "Good" is on the left end of the scale at 1, and "bad" is on the right end of the scale at 7.

Good. You may open your eyes and check to see if the number at the top of your tablet is 6.

Okay, the next concept you are to rate will be "self". Think about what the concept "self" means to you...what you think and feel about yourself. Close your eyes and rate the concept "self" with respect to the dimension "strong to weak", with "strong" on the left end of the scale at 1, and "weak" on the right end of the scale at 7. Write a number on the top page of your tablet between 1 and 7, indicating your perception of the concept "self", with respect to the dimension "strong to weak". Good. Now tear off the top page and place it on the table in front of you. Rate the concept "self" on the dimension "slow to fast", "slow" on the left end of the scale at 1, and "fast" on the right end of the scale at 7. Write down a number on the top page of your tablet between 1

and 7, indicating your perception of the concept "self" with respect to the dimension "slow to fast". You are to tear off the top page and place it in front of you each time you have rated a dimension.

Now rate the concept "self" on the 7-point dimension "sad to happy". Remember, "sad" is on the left end of the scale at 1, and "happy" is on the right end of the scale at 7.

On the next page you are to rate the concept "self" on the dimension "hot to cold". "Hot" is on the left end of the scale at 1, and "cold" is on the right end of the scale at 7.

On the next page you are to rate the concept "self" on the dimension "good to bad". "Good" is on the left end of the scale at 1, and "bad" is on the right end of the scale at 7.

Good. You may open your eyes and check to see if the number at the top of your tablet is 11.

Okay, the next concept you are to rate will be "hostility". Think about what the concept "hostility" means to you. Close your eyes and on the first page of your tablet you are to rate the concept "hostility" with respect to the dimension "strong to weak", with "strong" on the left end of the scale at 1, and "weak" on the right end of the scale at 7. Write a number on the top page of your tablet between 1 and 7, indicating your

perception of the concept "hostility" with respect to the dimension strong to weak". Good. Now tear off the top page and place it on the table in front of you. Rate the concept "hostility" on the dimension "slow to fast". "Slow" on the left end of the scale at 1, and "fast" on the right end of the scale at 7. Write down a number on the top page of your tablet between 1 and 7, indicating your perception of the concept "hostility" with respect to the dimension "slow to fast". You are to tear off the top page and place it in front of you each time you have rated a dimension.

Now rate the concept hostility" on the 7-point dimension "sad to happy". Remember, "sad" is on the left end of the scale at 1, and "happy" is on the right end of the scale at 7.

On the next page you are to rate the concept "hostility" on the dimension "hot to cold". "Hot is on the left end of the scale at 1, and "cold" is on the right end of the scale at 7.

On the next page you are to rate the concept "hostility" on the dimension "good to bad". "Good" is on the left end of the scale at 1, and "bad" is on the right end of the scale at 7.

Good. You may open your eyes and check to see if the number at the top of your tablet is 16.

Okay, the next concept you are to rate will be

"mother". Think about what the concept "mother" means to you. Close your eyes and on the first page of your tablet you are to rate the concept "mother" with respect to the dimension "strong to weak", with "strong" on the left end of the scale at 1, and "weak" on the right end of the scale at 7. Write a number on the top page of your tablet between 1 and 7, indicating your perception of the concept "mother", with respect to the dimension "strong to weak". Good. Now tear off the top page and place it on the table in front of you. Rate the concept "mother" on the dimension "slow to fast". "Slow" on the left end of the scale at 1, and "fast" on the right end of the scale at 7. Write down a number on the top page of your tablet between 1 and7, indicating your perception of the concept "mother" with respect to the dimension "slow to fast". You are to tear off the top page and place it in front of you each time you have rated a dimension.

Now rate the concept "mother" on the 7-point dimension "sad to happy". Remember, "sad" is on the left end of the scale at 1, and "happy" is on the right end of the scale at 7.

On the next page you are to rate the concept "mother" on the dimension "hot to cold". "Hot" is on the left end of the scale at 1, and "cold" is on the right end of the scale at 7.

On the next page you are to rate the concept "mother" on the dimension "good to bad". "Good" is on the left end of the scale at 1, and "bad" is on the right end of the scale at 7.

Thank you for participating in this first phase of the experiment. Please do not discuss the experiment among yourselves or your classmates, as it may adversely influence the results.

APPENDIX F

HYPNOTIC EXPERIMENTAL CONDITION

Preliminary Remarks by E

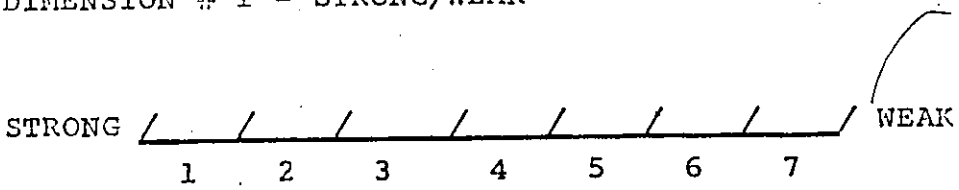
Before we begin with the experiment, I would like each of you to notice the pad of paper and pencil in front of you, and to examine carefully the sheet of paper that I am now passing out. As you can see, the sheet of paper is a rating task for the concept "house". The dimension you are to rate the concept "house" on is "strong to weak". Close your eyes and visualize the scale as you see it on the page. Now open your eyes and rate the concept by writing down a number between 1 and 7 indicating your perception of that concept's position with respect to the dimension "strong to weak". Good.

In a few mintues I am going to administer a standard procedure for measuring your hypnotic ability. I want you to be quite at ease, and it may help if I tell you something about hypnotism. I am assuming that for some of you this is the first time you are experiencing hypnotism.

People experiencing hypnosis for the first time are sometimes a little uneasy because they do not know what the experience will be like, or because they may have a distorted notion of what it is like. It is very natural to be curious about a new experience. Your curiosity will be satisfied before we are through, but you can

CONCEPT OR IDEA: HOUSE

DIMENSION # 1 - STRONG/WEAK



best get the answers you want by just letting yourself be a part of what goes on, and by not trying to watch the process in detail."

Some people, however, have a tendency to allay their initial uneasiness in a new situation by laughing, talking, or whispering. I must request that you refrain from this type of response for the duration of the procedures here so as not to disrupt the concentration of the individuals around you.

To allow you to feel more fully at ease in the situation, let me reassure you on a few points. First of all, the experience, while a little unusual, may not seem so far removed from ordinary experience as you have been led to expect. Hypnosis is largely a question of your willingness to be receptive and responsive to ideas, and to allow these ideas to act upon you without interference. These ideas we call suggestions.

Second, you will not be asked to do anything that will make you look silly or stupid, or that will prove embarrassing to you. We are here for serious scientific purposes.

You may wonder why we are doing these experiments. Hypnotism is being used more and more by physicians; for example, by dentists to relieve pain, by obstetricians to make childbirth easier, by psychologists to reduce anxiety. If we can understand the processes involved,

we will know more about the relationship between ideas and action, more about the way in which personality operates. So in participating here you are contributing to scientific knowledge of a kind that can be used to help other human beings. We are trying here merely to understand hypnotism. Probably all people can be hypnotized, but some are much more readily hypnotized than others, even when each of them cooperates. We are studying some of these differences among people.

You might recall the other day during the first session you were asked to close your eyes and imagine holding a pail which I was filling with sand. A suggestion was given that the pail of sand was getting harder and harder to hold up. All of you responded with some arm movement, indicating that you were responsive to the suggestion. From this example you can see how thinking about a movement produces a tendency to make the movement. You learn to become hypnotized as you bring yourself to give expression to your action tendencies. At this point, you have the idea of what it means to accept and act upon suggestions.

Now please make yourself comfortable in your chair. Those of you who wear glasses should keep them on. If, however, you are wearing contact lenses, it might be more comfortable to remove them. In order to help keep our main procedures constant, they will be read to you.

1. Eye Closure (total time: 15'25")

I want you to be comfortable and to rest your left hand in your lap. That's right. Rest your left hand in your lap. Now look at your left hand and find a spot and just focus on it. It doesn't matter what spot you choose; just select some spot to focus on. I shall refer to the spot which you have chosen as the target. That's right ...hands relaxed...look directly at the target. I am about to give you some instructions that will help you to relax and gradually to enter a state of hypnosis. Just relax and make yourself comfortable. I want you to look steadily at the target and while keeping your eyes upon it to listen to what I say. Your ability to be hypnotized depends partly on your willingness to cooperate and partly on your ability to concentrate upon the target and upon my words. You have already shown yourself to be cooperative by coming here today, and with your further cooperation I can help you to become hypnotized. You can be hypnotized only if you are willing. I assume that you are willing and that you are doing your best to cooperate by concentrating on the target and listening to my words, letting happen whatever you feel is going to take place. Just let it happen. If you pay close attention to what I tell you, and think of the things I tell you to think about, you can easily experience what it is like to be hypnotized. There is nothing

fearful or mysterious about hypnosis. It is a perfectly normal consequence of certain psychological principles. 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 you are part of the story. Many people report that becoming hypnotized feels at first like falling asleep, but with the difference that somehow or other they keep hearing my voice as a sort of background to whatever other experience they may have. In some ways, hypnosis is like sleepwalking; however, hypnosis is also an individual experience and is not just alike for everyone. In a sense, the hypnotized person is like a sleepwalker, for he can carry out various and complex activities while remaining hypnotized. All I ask of you is that you keep up your attention and interest and continue to cooperate as you have been cooperating. Nothing will be done that will cause you any embarrassment. Most people find this a very interesting experience.

(Time: 3'55")

Just relax. Don't be tense. Keep your eyes on the target. Look at it as steadily as you can. Should your eyes wander away from it, that will be all right...just bring your eyes back to it. After a while you may find that the target gets blurry, or perhaps moves about, or again, changes color. That is all right. Should you get sleepy, that will be fine, too. Whatever happens,

let it happen and keep staring at the target for a while. There will come a time, however, when your eyes will be so tired, will feel so heavy, that you will be unable to keep them open any longer and they will close, perhaps quite involuntarily. When this happens, just let it take place. (Time: 1'10")

As I continue to talk, you will find that you will become more and more drowsy, but not all people respond at the same rate to what I have to say. Some people's eyes will close before others. When the time comes that your eyes have closed, just let them remain closed. You may find that I shall still give suggestions for your eyes to close. These suggestions will not bother you. They will be for other people. Giving these suggestions to other people will not disturb you but will simply allow you to relax more and more.

You will find that you can relax completely but at the same time sit up comfortably in your chair with little effort. You will be able to shift your position to make yourself comfortable as needed without it disturbing you. Now just allow yourself to relax completely. Relax every muscle of your body. Relax the muscles of your legs...relax the muscles of your feet...relax the muscles of your arms...relax the muscles of your hands...of your fingers...relax the muscles of your neck, of your chest...relax all the

muscles of your body.... Let yourself be limp, limp, limp. Relax more and more, more and more. Relax completely. Relax completely. Relax completely. (Time: 2'15")

As you relax more and more, a feeling of heaviness perhaps comes over your body. A feeling of heaviness is coming into your legs and your arms...into your feet and your hands...into your whole body. Your whole body feels heavy, heavier and heavier. Like lead. Your eyelids feel especially heavy. Heavy and tired. You are beginning to feel drowsy, drowsy and sleepy. Your breathing is becoming slow and regular, slow and regular. You are getting drowsy and sleepy, more and more drowsy and sleepy, while your eyelids become heavier and heavier, more and more tired and heavy. (Time: 1'25")

Your eyes are tired from staring. The heaviness in your eyelids is increasing. Soon you will not be able to keep your eyes open. Soon your eyes will close of themselves. Your eyelids will be too heavy to keep open. Your eyes are tired from staring. Your eyes are becoming wet from straining. You are becoming increasingly drowsy and sleepy. The strain in your eyes is getting greater and greater, greater and greater. It would be so nice to close your eyes, to relax completely, and just listen sleepily to my voice talking to you. You would like to close your eyes and relax

completely, relax completely. You will soon reach your limit. The strain will be so great, your eyes will be so tired, your lids will become so heavy, your eyes will close of themselves, close of themselves. (Time: 1'20")

Your eyelids are getting heavy, very heavy. You are relaxed, very relaxed. There is a pleasant feeling of warmth and heaviness all through your body. You are tired and drowsy. Tired and sleepy. Sleepy. Sleepy. Sleepy. Listen only to my voice. Pay attention to nothing else but my voice. Your eyes are getting blurred. You are having difficulty seeing. Your eyes are strained. The strain is getting greater and greater, greater and greater. (Time: 50")

Your lids are heavy. Heavy as lead. Getting heavier and heavier, heavier and heavier. They are pushing down, down, down. Your eyelids seem weighted, weighted with lead, heavy as lead.... Your eyes are blinking, blinking, blinking...closing...closing.... (Time: 35")

Your eyes may have closed by now, and if they have not, they would soon close of themselves. But there is no need to strain them more. Even if your eyes have not closed fully as yet, you have concentrated well upon the target, and have become relaxed and drowsy. At this time you may just let your eyes close. That's it, eyes completely closed. Close your eyes now. (Time: 35")

Your are comfortably relaxed, but you are going to relax even more, much more. Your eyes are now closed. You will keep your eyes closed until I tell you otherwise, or I tell you to awaken.... You feel drowsy and sleepy. Just keep listening to my voice. Pay close attention to it. Keep your thoughts on what I am saying--just listen. You are going to get much more drowsy and sleepy. Soon you will be deep asleep but you will continue to hear me. You will not awaken until I tell you to do so. I shall now begin to count. At each count you will feel yourself going down, down, into a deep, comfortable, a deep restful sleep. A sleep in which you will be able to do all sorts of things I ask you to do. One--you are going to go deeply asleep.... Two--down, down into a deep, sound sleep.... Three--four---more and more, more and more asleep.... Five--six--seven--you are sinking, sinking into a deep, deep sleep. Nothing will disturb you. Pay attention only to my voice and only to such things as I may call to your attention. I would like you to keep on paying attention to my voice and the things I tell you.... Eight--nine--ten--eleven--twelve--deeper and deeper, always deeper asleep--thirteen--fourteen--fifteen--although deep asleep, you can clearly hear me. You will always hear me no matter how deeply asleep you may feel yourself to be.... Sixteen--seventeen--eighteen--deep asleep, fast asleep. Nothing will disturb you. You are going to experience

many things that I will tell you to experience.... Nineteen, twenty. Deep asleep! You will not awaken until I tell you to do so. You will wish to sleep and will have the experiences I shall presently describe. (Time: 3'40")

2. Hand Lowering (Left Hand) (Total Time: 5'05")

Introduction. As you become even more drowsy and sleepy, it will not disturb you to make yourself comfortable in your chair and put your head in a comfortable position.

Now that you are very relaxed and sleepy, listening without effort to my voice, I am going to help you to learn more about how your thoughts affect your actions in this state. Not all people experience just the same things in this state, and perhaps you will not have all the experiences I describe to you. That will be all right. But you will have at least some of the experiences and you will find these interesting. You just experience whatever you can. Pay close attention to what I tell you and watch what happens. Just let happen whatever you find is happening, even if it is not what you expect.

Instruction proper. Please extend your left arm straight out in front of you, up in the air, with the palm of your hand down. That's it. Left arm straight out in front of you...palm down. I want you now to pay

close attention to this hand, the feelings in it, and what is happening to it. As you pay attention to it you are more aware of it than you have been--you notice whether it is warm or cool, whether there is a little tingling in it, whether there is a tendency for your fingers to twitch ever so slightly.... That's right, I want you to pay close attention to this hand because something very interesting is about to happen to it. It is beginning to get heavy...heavier and heavier...as though a weight were pulling the hand and the arm down... you can picture a weight pulling on it...and as it feels heavier and heavier it begins to move...as if something were forcing it down...a little bit down...more and more down...down...and as I count it gets heavier and heavier and goes down more and more...one, down...two, down... three, down...four, down, more and more down...five, down...six, down...seven...eight...heavier and heavier, down and more and more...nine...down...ten...heavier, and heavier...down more and more (Allow 10").

That's fine...just let your hand now go back to its original resting position and relax. Your hand back to its original resting position and relax. You must have noticed how heavy and tired the arm and hand felt; much more so than it ordinarily would if you were to hold it out that way for a little while; you probably noticed how something seemed to be pulling it down. Now just relax...your hand and arm are quite comfortable

again...quite comfortable again. There...just relax. Relax.

3. Arm Immobilization (Right Arm) (Total Time: 2'55")

You are very relaxed. The general heaviness you have felt from time to time you now feel all over your body. Now I want you to pay close attention to your right arm and hand.... Your right arm and hand share in the feeling of heavines...how heavy your right hand feels...and note how as you think about this heaviness in your hand and arm the heaviness seems to grow even more.... Now your arm is getting heavy...very heavy. Now your hand is getting heavy...so heavy...like lead... perhaps a little later you would like to see how heavy your hand is...it seems much too heavy to lift...but perhaps in spite of being so heavy you could lift it a little although it may now be too heavy even for that.... Why don't you see how heavy it is.... Just try to lift your hand up, just try. Just try to lift your hand up, just try. (Allow 10")

That's fine...stop trying...just relax. You notice that when you tried to lift it, there was some resistance because of the relaxed state you are in. But now you can just rest your hand again. Your hand and arm now feel normal again. They are no longer heavy. You could lift them now if you wanted to, but don't try

now. Just relax...relax completely. Relax. Just relax.

4. Finger Lock (Total Time: 1'40")

Now let us try something else. Put your fingers together. Interlock your fingers together. Interlock your fingers and press your hands tightly together. That's it. Put your fingers together. Interlock your fingers and press your hands tightly together. Interlock tightly...hands pressed tightly together. Notice how your fingers are becoming tightly interlocked together, more and more tightly interlocked together...so tightly interlocked together that you wonder very much if you could take your fingers and hands apart.... Your fingers are interlocked, tightly interlocked...and I want you to try to take your hands apart...just try.... (Allow 10")

That's right. Stop trying and relax. You notice how hard it was to get started to take them apart. Your hands are no longer tightly clasped together.... You can take them apart. Now return your hands to their resting position and relax. Hands to their resting position and relax...just relax.

5. Arm Rigidity (Left) (Total Time: 2'25")

Please extend your left arm straight out in front

of you, up in the air, and make a fist. Arm straight out in front of you. That's right. Straight out, and make a fist. Arm straight out, a tight fist...make a tight fist. I want you to pay attention to this arm and imagine that it is becoming stiff...stiffer and stiffer... very stiff...and now you notice that something is happening to your arm...you notice a feeling of stiffness coming into it.... It is becoming stiff...more and more stiff...rigid...like a bar of iron...and you know how difficult...how impossible it is to bend a bar of iron like your arm...see how much your arm is like a bar of iron...test how stiff and rigid it is...<u>try</u> to bend it... <u>try</u>. (<u>Allow 10"</u>)

That's good. Now just stop trying to bend your arm and relax. Stop trying to bend your arm, and relax. I want you to experience many things. You felt the creeping stiffness...that you had to exert a good deal of effort to do something that would normally be very easy. But your arm is not stiff any longer. Just place your arm back in resting position...back in resting position. Just relax and as your arm relaxes, let your whole body relax. As your arm relaxes, let your whole body relax.

6. <u>Hands Moving (Together) (Total Time: 1'45")</u>

Please hold both hands up in the air, straight out in front of you, palms facing inward--palms facing toward

each other. Hold your hands about a foot apart...about a foot apart. Both arms straight out in front of you, hands about a foot apart...palms facing inward...about a foot apart.

Now I want you to imagine a force attracting your hands toward each other, pulling them together. As you think of this force pulling your hands together, they will move together, slowly at first, but they will move closer together, closer and closer together as though a force were acting on them...moving...moving... closer, closer.... (Allow 10" without further suggestion.)

That's fine. You see again how thinking about a movement causes a tendency to make it. Now place your hands back in their resting position and relax...your hands back in their resting position and relax.

7. Communication Inhibition (Total Time: 1'25")

You are very relaxed now...deeply relaxed...think how hard it might be to communicate while so deeply relaxed...perhaps as hard as when asleep...I wonder if you could shake your head to indicate "no". I really don't think you could.... You might try a little later to shake your head "no" when I tell you to...but I think you will find it quite difficult.... Why don't you try to shake your head "no" now...just try to shake it. (Allow 10")

That's all right...stop trying and relax. You see again how you have to make an effort to do something normally as easy as shaking your head. You can shake it to indicate "no" much more easily now. Shake your head easily now.... That's right, now relax. Just relax.

8. Hallucination (Fly) (Total Time: 1'30")

I am sure that you have paid so close attention to what we have been doing that you have not noticed the fly which has been buzzing about you.... But now that I call your attention to it you become increasingly aware of this fly which is going round and round about your head...nearer and nearer to you...buzzing annoyingly... hear the buzz getting louder as it keeps darting at you .... You don't care much for this fly.... You would like to shoo it away...get rid of it.... It annoys you. Go ahead and get rid of it if you want to... (Allow 10")

There, it's going away...it's gone...and you are no longer annoyed...no more fly. Just relax, relax completely. Relax...just relax.

9. Eye Catalepsy (Total Time: 2')

You have had your eyes closed for a long time while you have remained relaxed. They are by now tightly closed, tightly shut.... In a few moments I shall ask

you to try to open your eyes. When you are told to try, most likely your eyes will feel as if they were glued together...tightly glued shut. Even if you were able to open your eyes, you would, of course, only do so momentarily and then immediately close them again and relax, so as not to disturb your concentration. But I doubt that you will be able--even momentarily--to open your eyes. They are so tightly closed that you could not open them. Perhaps you would soon like to <u>try</u> to open your eyes momentarily in spite of their feeling so heavy and so completely...so tightly closed. Just try...<u>try</u>--to open your eyes. (<u>Allow 10"</u>)

All right, stop trying. Now again allow your eyes to become tightly shut. Your eyes, tightly shut. You've had a chance to feel your eyes tightly shut. Now relax. Your eyes are normal again, but just keep them closed and relax. Normal again...just keep them closed and relaxed...relaxed and shut.

<u>Trance deepening</u>. I want you to picture a stairway with 10 steps decending down into a basement that represents your unconscious thoughts and feelings. As I count down from 10 you will gradually experience going down the 10 steps, until you reach the bottom step. With each step you will relax even further and become more deeply involved in your awareness...10...9...going down ...8, 7, 6, 5...deeper, 4...deeper...3, 2...deeper, 1.

You are now completely relaxed and comfortable. You are becoming aware of thoughts and feelings that are universal to all human life. Unconscious feelings and thoughts that will not disturb you, but will come to mind, and you will observe them and be in touch with them in a way that you do not usually experience. For instance, you may experience feelings and thoughts that were experienced very early in childhood within the family situation. Some of these feelings may be pleasant and some not so pleasant, but they will not bother you... for you are only to observe them and allow them to give way to other thoughts and feelings that have been buried deep in your unconscious experience. (1 minute)

Now that you are in touch with your deep unconscious experience and are comfortably observing thoughts and feelings that are there, I am going to ask that you attend and listen carefully to the following instructions. Keep your eyes closed. You may adjust your position in your chair and make yourself comfortable without interfering with your present feeling of deep relaxation.... You will be able to perform the required task with little effort by listening carefully to my voice as you are now doing, and by following the instructions that I will now give you.

In front of you is a tablet and pencil. Reach out with your writing hand and pick up the pencil. Good.

(Repeat if necessary.) With your other hand, touch the pad so that you know exactly where it is. That's right.

Semantic Differential Form B

Let your unconscious thoughts and feelings center around the concept "father"--what the word "father" means to you. Just observe your deep, unconscious thoughts about "father"...they may even be of early memories from your childhood, which have long since been forgotten. But you will be able to recall these memories easily. (1 minute)

Now picture in your mind, as you already have done, a 7-point scale with the word "strong" on the left at 1, and the word "weak" on the right at 7. You are to rate the concept "father" on this scale by writing down on the first page of the tablet a number between 1 ("strong") and 7 ("weak"), indicating your unconscious perception of the concept "father", with regard to the dimension "strong to weak". Good. Now tear off the top page of your tablet and place it on the table in front of you. On each of the following dimensions you will be in touch with your unconscious thoughts and feelings.... Remember, each time you begin to write a number on the tablet you will be in touch with your unconscious thoughts and feelings. Rate the concept "father" on the dimension

"slow to fast". "Slow" on the left end of the scale at 1, and "fast" on the right end of the scale at 7. Write down a number on the top page of your tablet between 1 and 7 indicating your unconscious perception of the concept "father", with respect to the dimension "slow to fast". You are to tear off the top page and place it in front of you each time you have rated a dimension.

Let your unconscious experience rate the concept "father" on the 7-point dimension "sad to happy". Remember, "sad" is on the left end of the scale at 1, and "happy" is on the right end of the scale at 7.

On the next page you are to let your unconscious experience rate the concept "father" on the dimension "hot to cold". "Hot" is on the left end of the scale at 1, and "cold" is on the right end of the scale at 7. Good, On the next page you are to let your unconscious experience rate the concept "father" on the dimension "good to bad". "Good" is on the left end of the scale at 1, and "bad" is on the right end of the scale at 7.

You are all performing well--so well that I'd like you to sit back and relax and become in touch with your unconscious feelings and thoughts for the next minute before we proceed with the next concept which will be "self". Let your unconscious thoughts center on the concept "self"...what you think and feel about yourself as you relax even more. (1 minute)

Adjust yourself in your chair so that you are

comfortable and able to listen carefully and use the tablet and pencil as you have been doing. Each time you allow your unconscious experience to rate a concept on the 7-point scale, it will become easier and will require less effort.

Each time you begin to write a number on the tablet on the following dimensions you will be in touch with your unconscious thoughts and feelings about "yourself".

Let your unconscious experience rate the concept "self" on the dimension "strong to weak". "Strong" is on the left at 1 and "weak" on the right at 7.

On the next page, let your unconscious experience rate the concept "self" on the dimension "slow to fast". "Slow" is on the left end of the scale at 1, and "fast" is on the right end of the scale at 7.

On the next page, let your unconscious experience rate the concept "self" on the dimension "sad to happy". "Sad" is on the left end of the scale at 1, and "happy" is on the right end of the scale at 7.

On the next page, let your unconscious experience rate the concept "self" on the dimension "hot to cold". "Hot" is on the left end of the scale at 1, and "cold" is on the right end of the scale at 7.

On the next page, let your unconscious experience rate the concept "self" on the dimension "good to bad". "Good" is on the left end of the scale at 1, and "bad"

is on the right end of the scale at 7. Good.

Just sit back and relax.... Let your entire body relax so that you feel no tension at all.... The next concept will be "hostility". Allow your unconscious awareness to think about the concept "hostility". Again, your thoughts and feelings may go back to an earlier time in your life, but these memories will not bother you as you will only observe them and be in touch with them in a way you may not have experienced before. (1 minute)

You may adjust yourself so that you are comfortable and able to listen carefully and use the tablet and pencil as you have been doing.

Each time you begin to write a number on the tablet on the following dimensions you will be in touch with your unconscious thoughts and feelings about "hostility".

Let your unconscious experience rate the concept "hostility" on the dimension "strong to weak". "Strong" is on the left at 1 and "weak" on the right at 7.

On the next page, let your unconscious experience rate the concept "hostility" on the dimension "slow to fast". "Slow" is on the left end of the scale at 1, and "fast" is on the right end of the scale at 7.

On the next page, let your unconscious experience rate the concept "hostility" on the dimension "sad to happy". "Sad" is on the left end of the scale at 1, and "happy" is on the right end of the scale at 7.

On the next page, let your unconscious experience rate the concept "hostility" on the dimension "hot to cold". "Hot" is on the left end of the scale at 1, and "cold" is on the right end of the scale at 7.

On the next page, let your unconscious experience rate the concept "hostility" on the dimension "good to bad". "Good" is on the left end of the scale at 1, and "bad" is on the right end of the scale at 7. Good.

Just sit back and relax...let your arms and hands relax, and your entire body relax so that you feel no tension at all.... The next concept will be "mother". Allow your unconscious awareness to think about the concept "mother"...what you think and feel about "mother". Your thoughts and feelings may return to an earlier time in your life, perhaps to your childhood. You will be in touch with memories which you haven't thought about for quite some time. (1 minute)

Each time you begin to write a number on the tablet on the following dimensions, you will be in touch with your unconscious thoughts and feelings about "mother".

Let your unconscious experience rate the concept "mother" on the dimension "strong to weak". "Strong" is on the left at 1 and "weak" on the right at 7.

On the next page, let your unconscious experience rate the concept "mother" on the dimension "slow to fast". "Slow" is on the left end of the scale at 1, and "fast"

is on the right end of the scale at 7.

On the next page, let your unconscious experience rate the concept "mother" on the dimension "sad to happy". "Sad" is on the left end of the scale at 1, and "happy" is on the right end of the scale at 7.

On the next page, let your unconscious experience rate the concept "mother" on the dimension "hot to cold". "Hot" is on the left end of the scale at 1, and "cold" is on the right end of the scale at 7.

On the next page, let your unconscious experience rate the concept "mother" on the dimension "good to bad". "Good" is on the left end of the scale at 1, and "bad" is on the right end of the scale at 7. Good.

You may now relax. You have all performed well. In a moment I am going to awaken you. You may not want to remember or talk about your experience during the last hour. In fact, it will be hard for you to remember any of it unless you try very hard. When you awaken you will have the feeling of accomplishment and growth. You will feel just as good about yourself as when you woke up this morning. In fact, this feeling will last all day until you finally lay down to sleep.

I am going to count down from 5. When I say the number 2, you will open your eyes and when I say the number 1, you will be wide awake, but will feel very good. Okay, ready, 5, coming up, 4, 3, 2, open your

eyes, 1, wide awake.

Thank you very much for participating in this research project. I hope you all have enjoyed the experience. Please do not discuss your experiences here today with other students in the class as this may adversely influence the results. This is your final session.

APPENDIX G

RAW DATA

Raw semantic-differential change-scores according to following variable format:

```
RUN NAME          COMPUTATION OF RESIDUALS
FILE NAME         HYPNOSIS
VARIABLE LIST     WFASW,WFASF,WFASH,WFAHC,WFAGB,WHOSW,WHOSF,WHOSH,WHOHC,WHOGB,
                  WMOSW,WMOSF,WMOSH,WMOHC,WMOGB,WSESW,WSESF,WSESH,WSEHC,WSEGB,
                  HFASW,HFASF,HFASH,HFAHC,HFAGB,HHOSW,HHOSF,HHOSH,HHOHC,HHOGB,
                  HMOSW,HMOSF,HMOSH,HMOHC,HMOGB,HSESW,HSESF,HSESH,HSEHC,HSEGB
INPUT MEDIUM      CARD
INPUT FORMAT      FIXED(3X,40F1.0)
```

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

*VARIABLE	FORMAT	RECORD	COLUMNS
WFASW	F 1. 0	1	4 - 4
WFASF	F 1. 0	1	5 - 5
WFASH	F 1. 0	1	6 - 6
WFAHC	F 1. 0	1	7 - 7
WFAGB	F 1. 0	1	8 - 8
WHOSW	F 1. 0	1	9 - 9
WHOSF	F 1. 0	1	10 - 10
WHOSH	F 1. 0	1	11 - 11
WHOHC	F 1. 0	1	12 - 12
WHOGB	F 1. 0	1	13 - 13
WMOSW	F 1. 0	1	14 - 14
WMOSF	F 1. 0	1	15 - 15
WMOSH	F 1. 0	1	16 - 16
WMOHC	F 1. 0	1	17 - 17
WMOGB	F 1. 0	1	18 - 18
WSESW	F 1. 0	1	19 - 19
WSESF	F 1. 0	1	20 - 20
WSESH	F 1. 0	1	21 - 21
WSEHC	F 1. 0	1	22 - 22
WSEGB	F 1. 0	1	23 - 23
HFASW	F 1. 0	1	24 - 24
HFASF	F 1. 0	1	25 - 25
HFASH	F 1. 0	1	26 - 26
HFAHC	F 1. 0	1	27 - 27
HFAGB	F 1. 0	1	28 - 28
HHOSW	F 1. 0	1	29 - 29
HHOSF	F 1. 0	1	30 - 30
HHOSH	F 1. 0	1	31 - 31
HHOHC	F 1. 0	1	32 - 32
HHOGB	F 1. 0	1	33 - 33
HMOSW	F 1. 0	1	34 - 34
HMOSF	F 1. 0	1	35 - 35
HMOSH	F 1. 0	1	36 - 36
HMOHC	F 1. 0	1	37 - 37
HMOGB	F 1. 0	1	38 - 38
HSESW	F 1. 0	1	39 - 39
HSESF	F 1. 0	1	40 - 40
HSESH	F 1. 0	1	41 - 41
HSEHC	F 1. 0	1	42 - 42
HSEGB	F 1. 0	1	43 - 43

THE INPUT FORMAT PROVIDES FOR 40 VARIABLES. 40 WILL BE READ
IT PROVIDES FOR 1 RECORDS ('CARDS') PER CASE. A MAXIMUM OF

43 'COLUMNS' ARE USED ON A RECORD.

*KEY - W = waking H = hypnotic

01 1536217276334213562317274772762211131274
02 1572126117166213672213521171172621136732
03 2652716117262612662223322152163612624552
04 1664135216226412664214527223631361116657
05 1455153177676111564112541121474342214452
06 1373354177255212562313714761772661124613
07 6544126327245312454312742741572643136722
08 1156154177154312534335171113177352516417 3
09 3254252236534344663424431322572561256724
10 2453314117457112563316611373132572126713
11 2564163177156423353212531721771472121632
12 2664362337356326464377643244374663245554
13 3553327125266533675255535261564665235622
14 2546163126346412575214461233343565116652
15 4731161572164512751237311617711746227512
16 3533214177226332552254254261774262543343
17 2432235573176211655253364264432652216543
18 4452151157354125464367714611775172175654
19 2353153117515424242216111331176343216221
20 3554642456254353664342352753452433535443
21 1663163227256312664215711711171771117711
22 2425562116146356564226173111177711756471
23 2564276127346312564255324335523544155352
24 4464177177457514576167344771474774134721
25 6775767377665127554445543362663652245522
26 2671274177256122562217611741771661126512
27 3633255333452322556445233343325523225554
28 2265166325415342656325652253253453352645 5
29 4544276745164132543244547261231725636526
30 2755216177246523475427363171475346254655
31 2673217117166114561117711271761731162625
32 5422231125363652461231232165342726423611
33 1162177177177112671117621771771771116721
34 1672161177167123672216721771772611126676
35 2573147216536322663316712171111651127741
36 3265161177176111652132451611177751716022
37 2423226177343521363225347361163636253642
38 3472225356256222562267635353363654364553
39 1542164224546314554315622251255562225632
40 1542126117456212662225522171117356211662 2
41 4545326226434443564444543262274344335633
42 1544174177226322663216441631773453225522
43 1473217113237213472223722171151272126712
44 1763171117746611457212772173177267116672 1
45 1634216213375414564425641164233653135453
46 1753125366176213653217621353553671125632
47 1522635326254324432215226252173543235622
48 2533235534434224533235352363233353233322
49 1443124227233422634214542162162334236553
50 1225223127276323563222243151272662155623
51 1463167177347312364225631671774562125532
52 2664423167234433465332543224127155322563 4
53 4433256335353525343433433552355343343443
54 2772152277166214562217621522671562125722
55 1533316216526426464225433361164563256542
56 2526341155155212453225332411561761124522
57 1352165117556213552215521641162562125622
58 5264225263326424264253642652355464254642
59 1565117117454315663315631171174553126622
60 1422117117121612722126231171172216127221
61 2362156217256213534325632661172653235523
62 3356172356354133652225622532462652225622
63 2552177117245213352126622771172652122621
64 6353235357344313543333421364252354233322
65 3254231147326424563332631311466463144633
66 3453147425256324662224631354342564146531
67 2654217246257514564226641164372573236742
68 2354415247274222553233643351472361125532
69 4635354176167115553346333641771471154533

Residual transformation change-scores according to the following variable format:

SUBFILE LIST HYPNO(38) WAKE(31)
INPUT FORMAT FIXED(3X,19F4.2/3X,F4.2,1X,F1.0,1X,F2.0,1X,F2.0)

ACCORDING TO YOUR INPUT FORMAT, VARIABLES ARE TO BE READ AS FOLLOWS

* VARIABLE	FORMAT	RECORD	COLUMNS
FSW	F 4. 2	1	4- 7
FSF	F 4. 2	1	8- 11
FSH	F 4. 2	1	12- 15
FHC	F 4. 2	1	16- 19
FGB	F 4. 2	1	20- 23
HSW	F 4. 2	1	24- 27
HSF	F 4. 2	1	28- 31
HSH	F 4. 2	1	32- 35
HHC	F 4. 2	1	36- 39
HGB	F 4. 2	1	40- 43
MSW	F 4. 2	1	44- 47
MSF	F 4. 2	1	48- 51
MSH	F 4. 2	1	52- 55
MHC	F 4. 2	1	56- 59
MGB	F 4. 2	1	60- 63
SSW	F 4. 2	1	64- 67
SSF	F 4. 2	1	68- 71
SSH	F 4. 2	1	72- 75
SHC	F 4. 2	1	76- 79
SGB	F 4. 2	2	4- 7
SEX	F 1. 0	2	9- 9
ANX	F 2. 0	2	11- 12
HSS	F 2. 0	2	14- 15

THE INPUT FORMAT PROVIDES FOR 23 VARIABLES. 23 WILL BE READ
IT PROVIDES FOR 2 RECORDS ('CARDS') PER CASE. A MAXIMUM OF
79 'COLUMNS' ARE USED ON A RECORD.

*KEY - F = "father" H = "hostility"

M = "mother" S = "self"

SW = "strong/weak" ANX = "anxiety"

SF = "slow/fast" HSS = "hypnotic susceptibility"

SH = "sad/happy"

HC = "hot/cold"

GB = "good/bad"

```
01 -066 205-132 198 169 505 054 004 145 033-091-214-296-096-032 044-396-367 442
01  108 2 40 10
02 -066-195-122-010-099-150 125-045-080 048-020 020-352-096-032 004 041 061 042
02 -035 2 28 10
03 -026-239-177-010-192-095-075 055-080-052-055 020-131-293 458-038-159-067 242
03 -035 1 36 09
04 -066-139-050-156 501-106-305 104 420-267-153-058 038-244-032-138 041 033 135
04  465 1 45 10
05 -066-252 023-029-099-317-163-045-155 048 003-335-162 078 058-080-096-167 135
05  021 1 28 09
06 -066-108 078-183 136 283 166-045 145 048-055 076 121-096-032-038-096 033-158
06  008 1 38 09
07 -368-295 295 044 007 450-175-146 258 048-055 131-079 030-032 062 167 206-165
07 -092 2 33 10
08  134 180-377 198-099-317-134-045 145 048 080-024-196 230-032 362-096-249 335
08  008 2 35 10
09 -087 036-077-056-131 083-093 004 195 133-161 086 204-170-175 145 041 133-212
09  052 2 36 09
10 -126 148 122-183-164 105 266 155-080-352-126-024 056 078-032-038 104 133-212
10  008 2 32 05
11 -126-295-050-056-099 227-163-045 145 048-120-124 138-144-113-095-270 106-012
11 -035 1 36 09
12  474 161 050 044 036-273 107 154-005 048 109 076 038 030-013-071 067-067 135
12  108 2 49 09
13  213 005 023 017 236-050-046-045 258 117 145 020 038 081-094 004-059-039-219
13 -035 2 31 07
14 -126-095-005 098-099-273-063 154 058-167 009 031 038 156-032-138 104-039 081
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16  213-095-132 217 169 005 166-045 145 048 145-158 038-070 206 162-196-194 141
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17  274-152-032 390 169-106 095 052-155-144-020-035-062 004 053-080 041 006-019
17  065 1 44 10
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18  108 2 38 09
19 -126 192-377-183-099-117-063-045-080 048 239-003-079-044-012-255 293-221-058
19 -135 2 45 09
20  113-295-250 144-160 339 207 003-030-067-055-124-096 030 044 004 041-167 035
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21 -135 2 38 10
22 -026 148-160 271-028-373-193-045-080 133 480 231-462-170 244 029 104-167 335
22 -135 2 38 06
23  274 005-250 156 169-228-275 455 258-452 009 131-162 129-032 362 004-267 135
23 -035 2 45 10
24  253 248-250 044 201 172 054-045-155 048 074 176 056-019-032 145-096 061-272
24 -079 1 35 10
25 -068-083-122-029-092-173-046-046 045-052-097 020 021 078-013-129 004 006-165
25 -148 1 42 08
26 -126 161-022-037-131 172-034-045 145 048-155 020 038-022-138-038 104-067-158
26 -035 2 28 06
27  113-039-132 017 069-117-105 054-005-114 174-024-031 030-013-038 004 006 028
27  052 2 31 08
28 -026 136 050 071 007-273-075 054-042 017-026 097 021 030 125-038 041-094 028
28  208 1 31 08
29  053-095 095 044 469-328 025-349-167-183-120 120-196 230 306 002 104 079-112
29  365 2 52 07
30 -026 117-177 171 069-095 125-045-155 048 245-169-162 181-013 204-033-039 081
30  152 2 35 06
31 -126 161 078-183-131 005 054-045 520-052-120 120-262-022-032 245-296 033-005
31  321 2 45 08
32 -107-352-060 090-031-206 378 355 058-083-091 120-113 107-055-038-133 033-105
32 -135 2 35 08
33 -066 380 050-010-099 171 054-045 145 048-120 065 056-022-032-138 041 061-005
33 -079 2 33 10
34 -066 061 078-010-099 227 478-045 145 048-020 020-044-022-113-095 041-039 442
34  365 2 33 08
35 -126 105 078-183 007-261 054-095-080-467-261 186 038-170-113-038 141 133 088
35 -192 1 48 09
36  013-164-150 071-099 127-122-045-455 048 480 065-052-022 058-080 041 106-058
36  021 1 38 10
37 -026 048 040 117 469 050 025-045-455-052 009 131-013 181-013 120-070 033 088
37 -035 1 41 09
38  313 248-022 090 269 050-005 054-130 033 045 076-062 204 037 302-096-067 242
38  065 2 37 07
39 -066 003 195-010 007-273 056-096-042 101 139 031 038-070 053-155 004 106-069
39 -092 1 38
40  034 005 095-010 007-150 129-045-080 048-025-024 038 004-032-138 041 033-059
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41  053-095 095-029 036-050 025 004-042 133 074-114 004 056-075 004 004 033-065
41 -048 1 36
42 -066 105-005 044-099 072-134-045 145 048 045 042-062 030-013-038-059-067-112
42 -035 2 29
43  034-152 078-083-031-095 054-045-080 186-155-214 056 004-032-096 167 061-158
43 -035 2 37
44  034 117 150-083-099 172 078-045 145 048-126 020 138-022-032 245 104 061-058
44 -079 2 40
45  034-039 268 044-131-095 025 204 020-044 009-035 021-044-032-055 104-167 135
45 -048 1 34
46 -066 117 122-083-099 050-005 054 008-067 080-035 138-096-032-095 041 106-019
46 -035 1 39
47 -066 005-060-010 240-106-005-046-142 133 045-024 004 030-013-055 067 251-058
47 -035 2 49
48  074 005-032 217-031-006 095-048-105-099-026-114 104 104-013-055-196-049-112
48 -035 1 48
49 -066-052-095 117 007-150 166 004-142-032-055-114-013 056-013 062 041 151 135
49  065 1 37
50  034-164-060-029 069-150 137-045-042 048-055-035 038-070-113 204 004 033-112
50  065 2 35
51  034 048 050 017-099 127 054-045 145 048 109 031-044-070-032-038 130-067-065
51 -035 1 26
52 -026-039-150-056-096-050 037-045-292 048-155 085 204-044-094-096 067 033-012
52  108 1 53
53 -047-152 068 017 069 083-075-046-003 017 200-024 047-119 037-013-070-021 088
53 -048 2 52
54 -126 117-022-010-099 083-093 004 045 048-120 020 038 004-032-155 004 133-058
54 -035 1 40
55  034 005 068 017 036 105 025-096-080 033 039 085 038-044-013 029 167-067 035
55 -035 2 45
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