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Early recollection and hypnosis.

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ABSTRACT

This study compared the contents of Early Recollections (ERs) obtained from Ss in a hypnotic state with the ERs obtained from the same Ss in a normal waking state. This comparison was done in an attempt to discover differences in the content of the ERs collected under two conditions that might be significant for a more complete understanding of personality.

Forty individuals, 20 scoring at or above the 60 percentile on the Harvard Group Scale of Hypnotic Susceptibility, Form A, and 20 scoring at or below the 19 percentile, were randomly selected for the study. The 40 Ss were administered the Stanford Hypnotic Susceptibility Scale, Form C. Subjects scoring ± 1 of their group score were selected for continuation in the investigation. Ss failing to reach criterion were replaced by randomly selected Ss matched for sex and susceptibility.

Ss participated in two different sessions approximately two weeks apart. Two ERs were initially elicited from half of the Ss in a normal waking state; another set of ERs was solicited from same Ss while in hypnosis. Hypnosis was induced by using a standard induction technique. For the other half of Ss this order was counterbalanced. The counterbalance technique was utilized to control for any carryover effects.

The statistical design for this study was a 2 (Sex) X2 (Levels of Susceptibility) X2 (Order) X2 (Condition-with or without hypnosis) factorial design, with the last factor repeated for all subjects.

After collection of ERs, scoring of protocols began. To this end the Manaster-Perryman Scoring Manual was employed. This manual contains 42 variables divided among seven categories. ERs were independently scored by 2 judges after a study of the manual. A reliability test was conducted to determine the degree of agreement between scorers.

Three scores were generated for each variable: a score on each variable for each ER and a total score (T-Score) overall two ERs on each variable. ER-T scores were analyzed by an analysis of variance procedure to determine differences, if any, across conditions.

There were no carry-over effects (the content of the ER reported earlier did not have any influence/effect on the content of the ER reported later, whether the content reported earlier was elicited while the Ss were in hypnosis or in the ordinary waking state). Carry-over effects were analyzed not only for individual items but also for clusters.

The content of the ERs of hypnotic Ss showed not only a significant increase in "themes" but also an increase in "details" when compared to non-hypnotized subjects.

In their ERs, Ss in hypnosis mentioned "mother," offered themes containing "misdeeds," "hostility," "mastery," and "mutuality"; reported "visual" and "motor" detail; and revealed "active" content significantly more often than did Ss in the "ordinary" waking state.

Irrespective of state, i.e., hypnosis or non-hypnosis, males offered more themes related to "death" than did females; on the other hand females verbalized more themes of "hostility" than did males.

In hypnosis low susceptible males and females offered more "school-relevant" settings than did high susceptible males and females. In the awakened state high susceptible males produced more "school-relevant" settings than did low susceptible males, whereas low susceptible females produced more "school-relevant" settings than did high susceptible females.

High susceptible Ss reported more themes related to "hostility" during hypnosis, whereas low susceptible Ss did not differ in reporting "hostility" across states.

Further, high susceptible males revealed more themes of "mutuality" irrespective of state than did low susceptible males; however, high susceptible females, irrespective of state, revealed significantly fewer themes of "mutuality" than low susceptible females.

The implications of these findings for a more comprehensive understanding of personality are discussed from Adlerian and non-Adlerian perspectives.

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INTRODUCTION

The value of early recollections (ERs) has been emphasized throughout the history of psychology. Hall (1899) and Titchner (1900) recognized the importance of such information in their genetic study of memory. This interest in the conscious recall of early childhood experiences has taken a variety of forms by both experimental and practicing psychologists. An example of such diversity is the belief that ERs reflect an individual life style. This orientation of utilizing early recollections as an instrument for increasing the understanding of personality was emphasized by Sigmund Freud (1912), and more specifically, by Alfred Adler (1937).

Freud and Adler differed on their views regarding the etiology and purpose of early recollections. Freud's work was primarily in understanding ERs as "screen memories" utilized as defensive behaviors. Freud (1938, 1956) stated that ERs were defensive in nature and developed to protect the individual from infantile sexual conflicts and traumatas. The avoidance of this psychological pain or danger is accomplished through the mental processes of defense mechanisms that serve both an impulsive and a defensive purpose (Freud, 1912;

A. Freud, 1936; Fenichel, 1945). Freud (1974) observed that patients experiencing anxiety, evoked by infantile sexual conflicts, were utilizing repression and isolation in their attempts to screen early childhood memories. Memories that remained conscious were constructed as screens to enable the individual to remember in a non-threatening fashion. Such a process enables the ERs to serve the purpose of disguising traumatic events or fantasies in the attempt to protect the individual from painful recall.

Adler (1931), on the other hand, believed that early memories were recalled because of a selective rather than a repressive factor. He believed that the ERs of an individual represent the story of one's life that is portrayed in daily living. Adler (1937) further stated that early recollections serve a significant purpose of illustrating the individual's fundamental view of life and the origins of his lifestyle. He believed that the early memories have an important bearing on the central interest of a person's life. An individual selectively chooses and constructs memories that are consistent with his present attitudes, fears, goals and aspirations.

Adler did not believe that early recollections were causal in nature but rather a reflection of the individual's perceptual framework from which he interprets his surrounding environment. Adler (1937) stated:

> Early recollections are most helpful in revealing what one regards as value to be aimed for, and what one senses as danger to be avoided. They help us to see the kind of world which a particular person is feeling he is living in, and the ways he early found of meeting the world. (p. 286)

This relationship between memories and a perceptual framework is empirically supported by several memory theorists (Bransford, Barclay, & Franks, 1972; Reiff & Scheerer, 1970).

The heuristic value of Adler's work is demonstrated in the research conducted (Hafner & Fakouri, 1984; Hafner & Fakouri, 1978; Hafner, Corrotto, & Fakouri, 1980; Hedvig, 1963; Jackson & Sechrest, 1962; McCarter, Schiffman, & Tomkins, 1961; and Verger & Camp, 1970) to further the utility of early recollections in the process of diagnosing, the determination of therapy prognosis, and in occupational choice decisions. Accepting the Adlerian view that early memories are a reflection of life style, it is plausible to assume that if there are changes in the early memories offered by the subject there will also be concurrent alterations in life style. This theoretical proposition has been supported in studies involving the comparison of ERs during pre- and post-therapy sessions. Nikelly (1971) noted that ERs will often change as a result of therapy. Further, this finding was empirically confirmed by Eckstein (1976) in his discovery that ERs do appear to change significantly as a result of long term therapy.

Additional findings further support the efficacy and validity of ERs as a technique for understanding the individual's present day behavior (Mayman, 1968; Mosak, 1971; Gushurst, 1972; Harder, 1979; & Barrett, 1980). ERs have also been used for differential diagnosis. Hafner and Fakouri (1978) found the ERs of paranoid schizophrenics were significantly different on one cluster of variables as compared to the schizophrenic, chronic undifferentiated group. Hafner, Fakouri, and Labrentz (1982) reported a significant difference between normal and alcoholic individuals in terms of locus of control and themes of early recollections. Alcoholics were more externally motivated and emitted fewer themes of mutuality as compared with the normal group. Jackson and Sechrest (1962) found that anxiety neurotics were characterized by themes of fear, whereas depressed patients (Dysthmic disorder, DSM-III) were characterized by themes of abandonment and gastrointestinal difficulties. Barrett (1980) and Hedvig (1965) found, however, that Adlerian clinicians utilizing ERs can only make accurate diagnostic judgments to a limited extent. It appears that the training and ability of the clinician were the important variables in the accuracy of the diagnosis.

Early recollections have also been used to assist in vocational choices. Attarian (1978), Manaster and Perryman (1974) and Hafner and Fakouri (1984) have reported a high correlation between preferred types of ERs and

eventual choice and satisfaction with employment.

Accepting Dreikurs' (1963) hypothesis that early childhood memories offer information regarding the individual's cognitive structure, private logic, and concepts of operation, then it follows that ERs may be viewed as an integrative projective technique which may in turn be used in many clinical situations. Harder (1979) constructed scales utilizing three projective instruments: ERs, Thematic Apperception Test (TAT), and Rorschach to assess the ambitious narcissistic character style. The results demonstrated an intercorrelation between scales that suggest a common dimensionality. Theses scales were also found to successfully differentiate the ambitious narcissistic subject from the non-ambitious narcissist as rated by three clinically trained raters. Other studies (Lieberman, 1957; McCarter, Schiffman, & Tomkins, 1961) further support the agreement between traditional projective techniques and early recollections. Barrett (1980) found current ER research to have at least a modest correlation between ER characteristics (social interest, degree of acting, and level of security) with scores on previously validated instruments for these traits.

The utilization of the ER as a projective may assist the clinician in several significant ways: first, the ER may be used to further confirm and support the findings of other projectives, thereby increasing validity

of the assessment. The ERs may further assist in serving as a rapid, valuable sample of the type of data likely to be elicited from more time-consuming projective batteries, i.e., TAT, Rorschach, Tompkins-Horn Picture Arrangement Test (Jackson & Sechrest, 1962; Lieberman, 1957; Taylor, 1975; Verger & Camp, 1970).

The implementation of ERs as a projective technique offers several additional advantages not readily observed in other projective instruments. ERs may serve as a valid method of personality appraisal in the areas related to work and social interests.

In addition, Hedvig (1963) discovered that ERs do not appear to be influenced by the situation of success/failure or of hostility/friendliness, as compared to the TAT. Such information may indicate that ERs reveal more stable information about personality characteristics than does the TAT. The importance of ERs as a projective procedure is further supported by Kahana, Hyman, Snyder, and Rosenbaum (1953), who state that early memories provide meaningful information regarding unconscious conflicts that are less promptly available through other clinical procedures.

In using the ERs as projective instruments it is imperative that a clear distinction be made between a recollection and a report (Dreikurs, 1954; Mosak, 1958). A recollection contains more specific detail and pertains to a single incident that is reduceable to a one-time

occurrence. A recollection might involve "I remember riding my bike for the first time and I was scared." This is in contrast to a report, "that is more general than specific and involves recurrent rather than unique events" (Gushurst, 1971, p. 4). The report involves "a collection of incidences whose individuality has been lost" (Mosak, 1958, p. 302). The following is an example of such a report: "I remember riding my bike every day after school." Dreikurs (1954) states that such a distinction is essential since recollections are reliable, whereas reports fail to reach such a criteria.

Mosak (1958) and Gushurst (1971) also stress the importance of a detailed account of the recollection that is consistent with Adler's thinking (1927, 1937). Increased detail enables the clinician to differentiate between a report and a recollection, as well as offering additional valuable information regarding the individual's affective and cognitive styles.

There has been little investigation into the means of directly increasing the details of ERs. However, one possible approach for accomplishing such a task is through the use of clinical hypnosis. Clinical hypnosis may be useful in dissipating resistance and obstructions to communication, and in heightening memory (Hilgard, 1965). Some studies related to hypnosis have demonstrated an increase in detailed memory reporting as compared to reporting obtained in the waking stage (Aarons, 1977;

Kroger, 1977; Kroger & Douce, 1979; Reiser, 1974; Schafer & Rubio, 1978). Some clinicians (Hartland, 1980; Kaplan, 1977; Kline, 1967; Kroger & Fezler, 1976; Wolberg, 1945, 1972; Edelstein, 1981) also believe that hypnosis decreases resistance, permits into consciousness more emotionally laden material, and increases the attenuation of affect.

Following this line of reasoning, with increased affect and affect attentuation together with decreased resistance and heightened memory, the ERs retrieved during hypnosis may differ in manifest content from those elicited in the normal waking state. The purpose of this study was to assess the effects of hypnotic state, hypnotic susceptibility and sex in early recollections. Thus this study compared the content of ERs obtained from Ss in a hypnotic state with the ERs obtained from the same Ss in a normal waking state. This comparison was done in an attempt to discover differences in the content of the ERs collected under the two conditions that might be significant for a more complete understanding of personality which in turn may have implications for diagnosis and treatment.

Chapter 2

METHOD

Subjects

A total of 255 student volunteers enrolled in introductory psychology classes at a large midwestern state university was screened for hypnotizability using the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) of Shor and Orne (1962) (See Appendix A). A random selection of 40 individuals, 20 scoring at or above the 60th percentile (raw score 9-12) and 20 scoring at or below the 19 percentile (raw score 0-5), was made for the study. Then each of the 40 subjects was administered the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) of Weitzenhoffer and Hilgard (1962), an individual susceptibility test (See Appendix B). Individuals scoring $\pm$ 1 of their group score were selected for continuation in the study. Any subject failing to reach criterion was replaced by a randomly selected subject matching for sex and level of susceptibility. The final 40 subjects, 20 males and 20 females, ranged in age from 18 to 46 with a mean age of 20.4. All students participating in the initial selection and the experimental phase of the experiment received extra credit points applicable to the introductory psychology course.

Instruments

Harvard Group Scale of Hypnotic Susceptibility Form A (HGSHS)

The HGSHS:A (Shor & Orne, 1962) was used to assess the individual's level of hypnotic susceptibility in a group setting. The instrument consists of a complete set of instructions for hypnotic induction to be read verbatim by the examiner, followed by 12 tasks to be completed by the subjects. The various sections of the scale are timed to indicate approximate reading rate and should be completed in approximately 50 minutes. The subjects are then requested to complete the response booklet consisting of 11 questions to be scored, with a 12th question involving a written interrogation on amnesia (See Appendix A).

The Stanford Hypnotic Susceptibility Scale Form C (SHSS:C)

The SHSS:C (Weitzenhoffer & Hilgard, 1962) was used to further assess the subject's level of hypnotic susceptibility. The instrument was administered on an individual basis and scored by the examiner. The scale consists of a complete set of instructions to be read verbatim by the examiner, followed by 12 tasks to be completed by the subject. The different sections of the scale are timed to indicate approximate reading rate.

The 12 tasks are scored positively by the examiner if the stated criteria are successfully reached (See Appendix B).

Manaster-Perryman Manifest Content Early Recollection

The Manaster-Perryman Manifest Content Early Recollection Scoring Manual (1974) was selected as the instrument of choice for scoring the manifest content of the ERs. It consists of 42 variables which are divided among seven categories: characters, themes, concern with details, setting, active-passive, internal-external control, and affect (See Appendix C). Five of the 42 variables in the instrument were deleted to enhance the precision of the instrument (Hafner, Fakouri, & Labrentz, 1982).

Procedure

The initial group of 255 subjects was administered the HGSHS:A (Shor and Orne, 1962). Those subjects obtaining a raw score between 9 and 12 and between 0 and 5 were coded from a table of random numbers. From the initial group, 20 subjects from the high range (9-12) and 20 subjects from the low range (0-5) were selected randomly and contacted by telephone to ascertain their willingness to continue in the study. Subjects indicating their willingness to continue were administered the SHSS:C

(Weitzenhoffer & Hilgard, 1962) during an individual session. Individuals scoring with ± 1 of the Harvard Group Susceptibility Scale were selected for continuation in the study. (See Appendix A for criteria in the scoring.) Those subjects unwilling to participate or failing to reach the criterion of ± 1 differentiation were replaced by subjects was interviewed individually by the investigator and requested to complete the consent form (See Appendix D). Any questions regarding the hypnosis or the experiment were answered by the investigator.

All subjects participated in two different sessions approximately two weeks apart. They were selected for the experiment and assigned to treatment groups in a random and independent fashion by use of a table of random numbers. The subjects were also matched on blocking variables of sex and susceptibility. During the first session, ERs were initially elicited from subjects in a normal waking state; at the second session, two weeks later another set of ERs was elicited from the <u>same subjects</u> during hypnosis, [this group was designated the Order 1 Group]. For the other 20 subjects, the order was counterbalanced with ERs reported under hypnosis in the first session and two weeks later another set of ERs was elicited from the same subjects during the normal waking state, [this group of subjects was designated the Order 2 Group]. The counterbalance technique was

utilized to control for any carry-over effects.

In order to elicit the ERs in normal waking condition, each subject in the Order 1 Group was instructed to "close your eyes and visualize the earliest incident you can recall from your childhood. Report the incident as you visualize it with all of its details" (Mosak, 1958). Also the subject was asked, "How old were you when you had this experience?" Age eight was used as a cutoff for analysis of early childhood recollections (Mosak, 1958). Recollections of incidents after age 8 are not considered belonging to early childhood. At this point, using the suggestions made by Mosak (1958), a careful distinction was made between a recollection and a report in the sense that a "recollection" refers to a single incident that can be assumed to be a "one-time" incident, whereas, a report describes more than a one-time occurrence. This procedure was repeated for the collection of a second early childhood recollection. After revealing each ER, the subject was asked these questions:

(a) "What part of the incident stands out in your mind?"

(b) "How did you feel at the time of the incident?"

(c) "Why do you think you felt that way?" (Gushurst, 1971).

The recollections were tape recorded and transcribed at a later date.

Each subject in the Order 2 group was provided

the same information as the Order 1 group prior to hypnosis. Questions regarding the experiment or hypnosis were answered by the investigator. When rapport was established, induction for hypnosis began according to a standardized procedure (See Appendix E). When the subject had reached a state of hypnosis, his/her ERs were obtained by using the same procedure as was utilized with subjects in the normal waking state in the Order 1 group.

Design & Data Analysis

The statistical design for this study was a 2(Sex) x 2(Level of Susceptibility) x 2(Order) x 2(Condition--With or Without Hypnosis) factorial design, with the last factor repeated for all subjects. The treatment of data began by the scoring of each ER. The Manaster-Perryman Manifest Content Early Recollection Scoring Manual (See Appendix C) was selected as the instrument for objective scoring.

The ERs were independently scored by two judges carefully instructed in the proper scoring of the ERs according to Manaster-Perryman Scoring Manual. A reliability test was conducted to determine the degree of agreement in scoring between the two judges. The Order 1 group had an interrater agreement of 93%; the Order 2 group a 94% of agreement between judges. Three scores (Manaster & Perryman, 1974) were generated for each variable: A score for each of the two ERs (ER_1 and

ER_2) and a total score ER_t). Scores on all variables for single ERs were dichotomous, indicating mention or absence of a given variable in the ER. Scores for a variable totaled over a subject's two ERs resulted in a continuous score from zero to two. ER_t scores were analyzed initially by clusters and individual items by an analysis of variance procedure to determine any differential order effects. Further analysis of ER-T scores involved an analysis of variance procedure to determine any differential treatment effects across sex, levels of susceptibility, and condition.

Chapter 3

RESULTS

The purpose of this study was to assess the effects of hypnotic state, hypnotic susceptibility and sex on early recollections. Repeated measures analyses of variance were performed on the 37 Manaster-Perryman variables. The variables were considered both individually and in seven previously standardized categories. The seven categories were Characters, Themes, Details, Setting, Internal-External, Active-Passive, and Affect. The categories were determined on the basis of theoretical considerations by the authors of the instrument. Three of these categories (Active-Passive, Internal-External, and Affect) consisted of mutually-exclusive and exhausive item variables. Therefore, when these variables were summed, they resulted in equal scores for all subjects. Therefore, analyses of variance of these summed scores were considered to be meaningless. In the fourth category, Settings, the total number of setting responses offered by the subjects in both the hypnotic and awakened state were nearly identical (ranging from 78 to 80), and so analyses were not performed. The remaining three categories--Characters, Themes, and Details--were analyzed in a 2(Sex) x 2(Order) x 2(Susceptibility) x 2(State) repeated measures design. The results showed a significant

main effect for State on the clusters of Themes and Details, $F(1, 32) = 30.47$, $p < .01$; $F(1, 32) = 33.20$, $p < .01$, with subjects during hypnosis offering more Themes and Details than they did in the awakened state.

Since a cluster summarizes the effects of several variables, a certain amount of potentially valuable information is lost in the clustering process. Therefore, it is desirable to analyze each variable irrespective of category. Before proceeding with the analyses of the individual variables, the data were analyzed to determine if the effect of order, i.e., the giving of early recollections in one state, had any influence or carryover effects on the giving of a second set of early recollections while in the other state. The order 1 Ss gave their first ERs in the awakened state then two weeks later gave their second set of ERs while in the hypnotic state. Order 2 Ss gave their first set of ERs in a hypnotic state then two weeks later gave their second set of ERs while in the awakened state. Due to the inability of the computer to accept the 37 individual variables, they were entered in groups of three. The analysis demonstrated no significant order effects for the 37 variables. $F(19, 18) = 1.14$, $p > .05$; $F(11, 26) = 1.40$, $p > .05$; $F(6, 31) = 1.92$, $p > .05$, or the 7 clusters, $F(1, 32) = .00$, $p > .05$; $F(1, 32) = .01$, $p > .05$; $F(1, 32) = .00$ $p > .05$. (See Appendix F for additional results.) The data were then subjected to

analysis of variance (ANOVA) using the 37 variables from the Manaster-Perryman Scoring Manual (Appendix C). Tables 1 and 2 show significant main effects results for State and Sex, respectively, involving 10 of the 37 dependent variables. The 8 significant main effects for State are reported in Table 1. During hypnosis, subjects mentioned the character of mother more frequently than they did in the awakened state, $F(1, 32) = 8.66$, $p < .01$. Further analyses of the content indicated that 4 Themes were significant for State. The hypnotized individuals offered more Themes related to misdeeds, $F(1, 32) = 9.45$, $p < .01$, mastery, $F(1, 32) = 4.88$, $p < .05$, mutuality, $F(1, 32) = 4.84$, $p < .05$, and hostility, $F(1, 32) = 4.25$, $p < .05$, as compared to the non-hypnotized individuals. Examination of early recollections details demonstrated that significantly more visual, $F(1, 32) = 30.73$, $p < .01$ and motoric, $F(1, 32) = 8.24$, $p < .01$, responses were offered by subjects when in the hypnotic state as compared to when in the awakened state. The early recollections of individuals in the hypnotic state also had more active than passive content, $F(1, 32) = 37.29$, $p < .01$. (See Appendix G for additional results.)

Table 2 shows the significant main effects for the Sex variable. The data indicate that males in general offered more themes related to death than did the females when analyzed irrespective of State, Order, and Susceptibility, $F(1, 32) = 5.44$, $p < .05$. Females, on the other

Table 1

Mean Responses and Levels of Significance for Main Effect of State

Measure	Hypnosis X (SD)	Non-Hypnosis X (SD)	df	MS	F
Variable 1 (Mother)	1.20(.65)	.80(.76)	1, 32	3.20	8.66**
Variable 12 (Misdeeds)	.45(.60)	.13(.40)	1, 32	2.11	9.45**
Variable 14 (Mastery)	.25(.49)	.05(.22)	1, 32	.80	4.88*
Variable 15 (Mutuality)	.48(.72)	.20(.40)	1, 32	1.51	4.84*
Variable 19 (Hostility)	.15(.36)	.03(.16)	1, 32	.31	4.25*
Variable 20 (Visual)	.72(.75)	.08(.27)	1, 32	8.45	30.73**
Variable 22 (Motor)	.73(.68)	.38(.59)	1, 32	2.45	8.24**
Variable 31 (Active)	1.50(.68)	.75(.74)	1, 32	10.51	37.29**

*$p < .05$
**$p < .01$

Table 2

The Effects of Sex on Death and Hostility Themes

Measure	Males X (SD)	Females X (SD)	df	MS	F
Variable 9 (Death)	.18(.38)	0 (0)	1, 32	.61	5.44*
Variable 19 (Hostility)	.03(.16)	.15(.36)	1, 32	.31	4.59*

*$p < .05$

hand, verbalized more themes of hostility irrespective of State, Order, and Susceptibility, $F(1, 32) = 4.59$, $p < .05$, than males.

The analyses further indicated a three-way interaction among State, Sex, and Susceptibility on the dependent measure "school setting." The mean score responses are shown in Figure 1. The data indicated that in hypnosis low susceptible males and females offered more "school-relevant settings" than high susceptible males or females. However, in the awakened state a significant interaction occurred between susceptibility and sex. High susceptible males produced more "school-relevant settings" than low susceptible males, whereas low susceptible females produced more "school-relevant settings" than high susceptible females, $F(1, 32) = 5.24$, $p < .05$.

There was a significant two-way interaction between State and Susceptibility on the hostility variable. Highly susceptible Ss during hypnosis offered more themes related to hostility than low susceptible Ss. The offering of hostility related themes by low susceptible Ss did not vary across states, $F(1, 32) = 4.25$, $p < .05$. The interaction between State and Susceptibility on the hostility variable is shown in Figure 2.

A significant interaction was also found between Susceptibility and Sex on the theme of mutuality, $F(1, 32) - 4.37$, $p < .05$. The interaction is shown in Figure

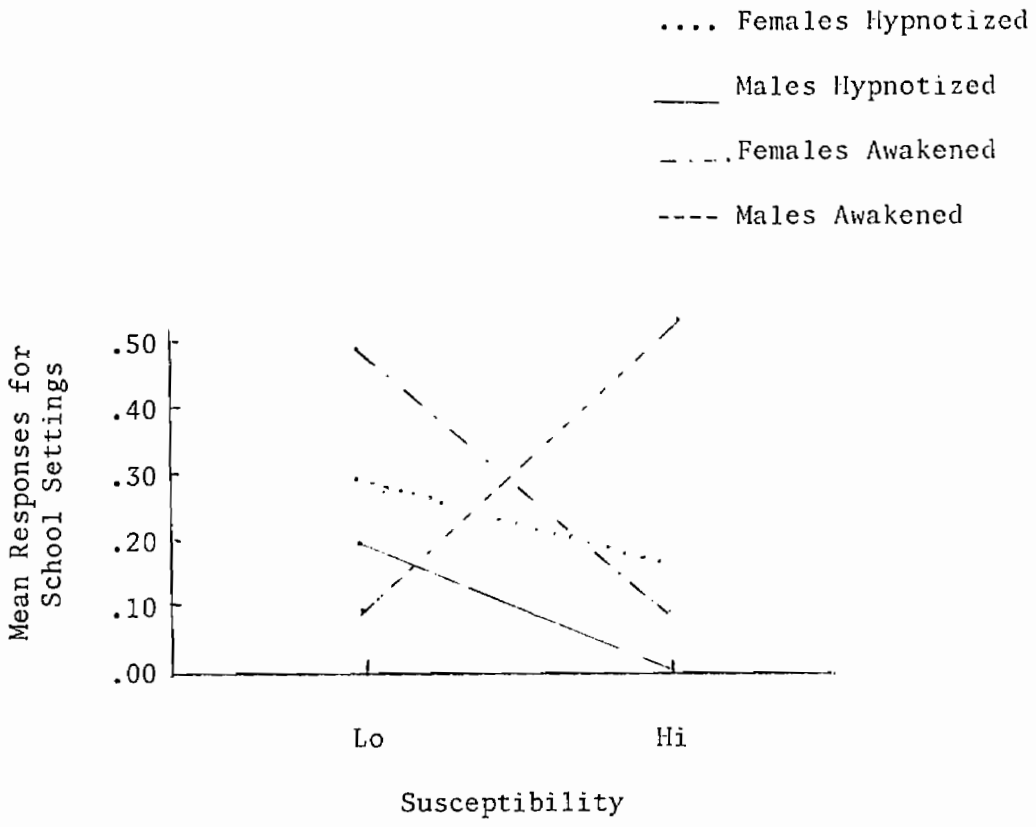

Figure 1

The Effect of Susceptibility and Sex as a Function of State

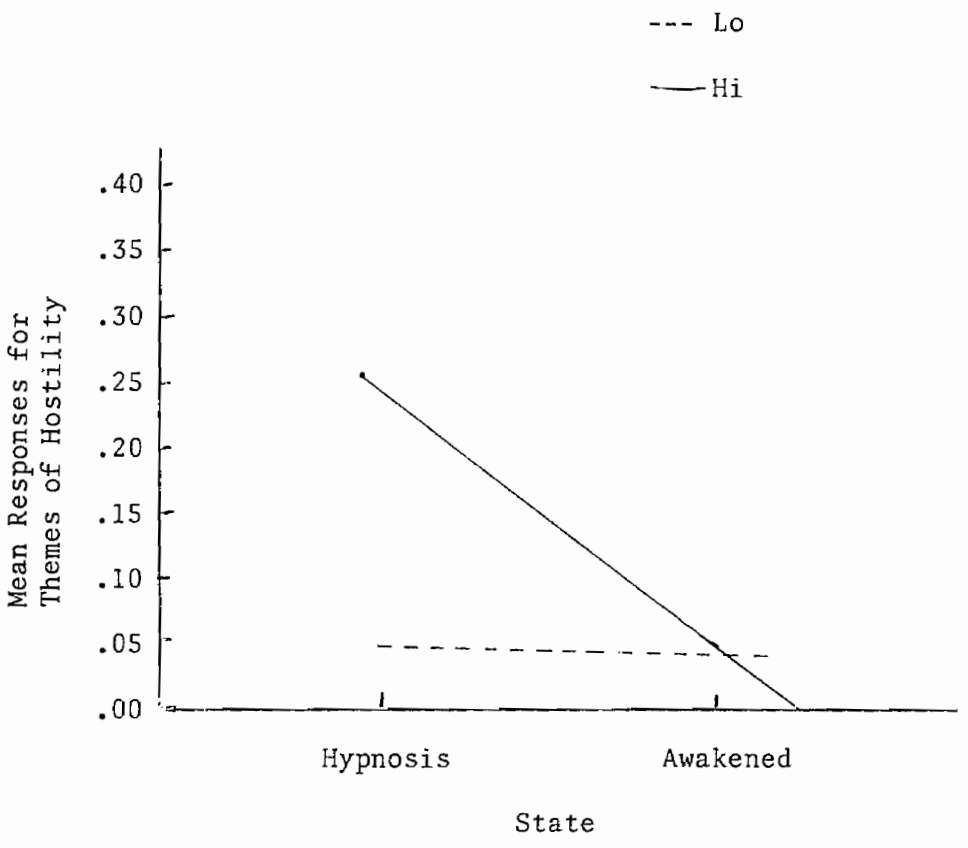

Figure 2

The Effect of State and Susceptibility on the Offering of Hostility Themes

3. Highly susceptible males, irrespective of State, offered more themes of mutuality when compared to low susceptible males, whereas high susceptible females offered significantly fewer themes of mutuality, regardless of State, than did low susceptible females (See Figure 3).

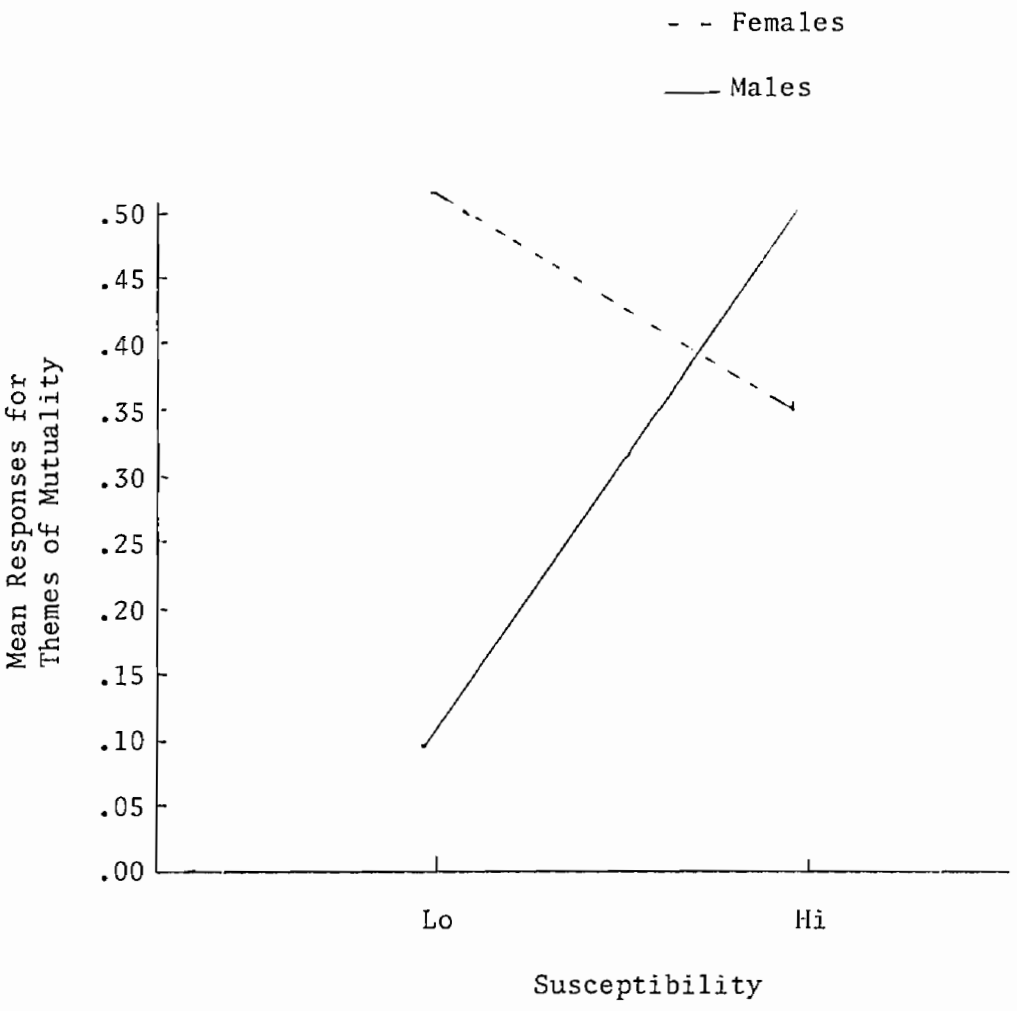

Figure 3

The Effect of Susceptibility and Sex on the Offering of Mutuality Themes

Chapter 4

DISCUSSION

The hypothesis that memories reported during hypnosis would differ in detail and manifest content from those obtained in the normal awakened state was supported. This differential effect was primarily observed in the areas of increased visual-motor details and variation of themes. The findings also demonstrated no carry-over effects. That is, the giving of early recollections in one state, i.e., hypnosis, had no influence or carry-over effects on the giving of a second set of early recollections while in the other state, i.e., awakened. It appears that the two-week latency period between the obtaining of the two sets of early recollections from the same subject in different states had no apparent influence on the results. In short, it appears that the hypnotic and awakened states were the significant variables in the differential findings.

Two of the seven clusters were significantly different during the hypnotic state when compared to the awakened state. Since a cluster covers over individual variation, potentially valuable information is lost. Therefore, it is more appropriate to focus on the individual variables instead of the clusters in order to obtain the true source of variation.

In the category "concern with detail," subjects in hypnosis offered significantly more "visual" detail in their ERs than they offered as subjects in the ordinary awakened state. Manaster and Perryman (1974, Appendix C) observed that visual detail is concerned with attention given to describing color, size, shape, etc. of a person or object, e.g., "I remember my round red beach ball." The reported emphasis of "visual" detail during hypnosis has been noted by other researchers (Binet & Fere, 1888; Hilgard, 1965; Kroger & Fezler, 1976; Sanders, 1967). Recent findings (Crawford, 1982; Crawford & Allen [in press]) further support the notion that hypnotized subjects have an enhanced ability to visualize material. This enhanced ability to visualize detail during hypnosis may be the result of hypnotic hypermnesia. According to Relinger (1984), "Hypnotic hypermnesia is defined as hypnotic improved recall of material which was learned in the waking state" (p. 212). Rosenthal (1944), hypothesized that:

> the reason for hypnotic hypermnesia lies in the relaxed calm and freedom from anxiety that characterize the hypnotic state. Under these conditions the meaningful material flows and takes proper proportions...unhampered by the overstrenuous tension of trying to remember that characterize the waking state. (p. 385)

In further discussing the individual variables within the category of "detail," subjects during hypnosis reported significantly more "motor" detail when compared to the same subjects in the awakened state. Manaster

and Perryman (1974, Appendix C) observed that "motor" detail is involved with describing some vigorous physical movement, e.g., "I ran and climbed trees in the park." It is important to speculate on the underlying mechanism in hypnosis that facilitates the production of significantly more "motor" detail by hypnotic subjects when compared to the production of the same subjects in the normal awakened state. One plausible explanation may be that subjects in hypnosis are more alert (Kroger, 1977) and awake than usual (Spiegel & Spiegel, 1978) and these hypnotic conditions may in turn favor an increase in motor responses. Another explanation may be that, during hypnosis, subjects produce more vigorous physical responses in their ERs in order to release emotions (Hafner & Fakouri, 1984). This explanation is somewhat supported by Olson (1979) in his statement that the ER is not only diagnostically useful but, "emotionally liberating and that the effect can be achieved possibly to a more heightened extent through hypnosis" (Olson, 1979, p. 224).

During hypnosis, subjects reported significantly more themes related to misdeeds, mutuality, and mastery. Misdeeds are acts committed by the subject which he/she knew to be wrong (Manaster and Perryman, 1974), e.g., "Mother told me to stay out of the tree, but I climbed it anyway" or "She had a crayon I wanted so I just took it." Ansbacher and Ansbacher (1956) stated that themes

involving misdeeds may reflect a strong desire to avoid further repetition of these negative behaviors.

According to this definition of misdeeds, the subject knew the acts committed were wrong when he/she committed them. Could it be that this knowledge placed the individual under stress which in turn inhibited the recall of the experience? Rosenthal (1944) found that hypnosis enhanced the recall of common words when learning occurred under stress. Relinger (1984) in commenting on Rosenthal's (1944) findings noted:

> The implications of this finding is that when learning occurs under stress, more is learned than can be exhibited by non-hypnotized subjects. Thus stress may affect retrieval more than encoding or registration. Hypnosis appears to counteract this stress-induced inhibition mechanism. This is a particularly relevant finding in terms of the forensic use of hypnosis, since much of the material be recalled on forensic cases was learned in stressful situations. (p. 213)

It appears, therefore, that through hypnosis stress is decreased and the individual is able to consciously report these behaviors and cognitions.

Edelstein (1981) noted that the use of hypnosis often enables the individual to uncover unpleasant actions or behaviors, i.e., misdeeds and emotions associated with these behaviors. This statement, along with Rosenthal's findings, may help explain the mechanism underlying the increased reporting of misdeeds during the hypnotic state.

The theme of mutuality was also noted significantly more in the early recollections of hypnotized subjects.

Manaster and Perryman (1974, Appendix C) defined the content of mutuality as "a friendly, social, reciprocal, or cooperative experience with others," e.g., "My brother and I were in the backyard playing and I was pushing him in a wagon" or "I remember all my family going to the church to get their picture taken."

> Mutuality indicates that the quality of the interpersonal relation between the subject and others is positive in that the subject is engaged in cooperative behavior in play, work, or exploration. Mutuality implies that the interaction is friendly and reciprocal. (Last & Bruhn, 1983, p. 603)

There appears to be less interpersonal anxiety or social avoidance during the hypnotic periods of reduced defensiveness/resistance and increased calm and relaxation. Rosenthal (1944) supports this by noting that calm and freedom from anxiety characterize the hypnotic state. Further, Hartland (1980) and Kroger & Fezler (1976) used hypnosis in the successful treatment of agoraphobia, stage fright, and other socially based disorders.

The ERs of hypnotic subjects revealed significantly more "mastery" themes when compared to the ERs obtained from the same subjects in the normal awakened state. Mastery themes are attempts of the subject to gain control of himself, others, or the environment by psychological or physical acts (Manaster & Perryman, 1974) e.g., "I learned how to ride my bike with no help from anyone," or "I tried to reach the cookie jar but couldn't quite make it." Edelstein (1981) noted that a hypnotized subject is more

relaxed and less defensive than a non-hypnotized subject. He further stated that during hypnosis the individual is able to experience emotionally laden thoughts not generally available to him or her. Based on this relaxation, reduced defensiveness, and increased availability to emotionally laden thoughts, the hypnotized individual may be more willing to express his need to gain control over himself, others, or the environment by physical or psychological means.

The reporting of both misdeeds and mastery themes of hypnotized subjects may be worth exploring. The recollection of misdeeds may elicit feelings of inferiority, guilt, or fear. In an attempt to effectively deal with these emotions the individual may engage in a variety of defensive behaviors. One such way of defending against these negative feelings may be to adopt thoughts and emotions that are opposite from the negative ones. Such a behavior may be observed in the reporting of mastery themes.

The mastery theme seems to indicate a behavioral direction toward control over self and others. It appears, therefore, that the significant reporting of recollections involving mastery and misdeeds may be both impulsive and defensive in nature. This is consistent with Greenson (1967) in his statement that the defense and what is defended against form a unit. Defensive behavior will

provide some discharge for that which is defended against. He further stated that all behavior has impulse and defense aspects. Therefore, the reporting of misdeeds and mastery may form a unit. Future research will be required to adequately undertake the covariate analysis of these themes.

The recollections obtained during hypnosis were significantly more active when compared to memories elicited from the same subjects in the normal awakened state. The "active-passive" category was included in the Manaster-Perryman Manifest Content Early Recollection Scoring Manual of the authors because it was seen as a dimension necessary if the ER is to be regarded as a projective technique capable of revealing information about the individual's personality structure (Manaster & Perryman, 1974, Appendix C). Manaster and Perryman (1974, Appendix C) defined the active-passive dimension as "the degree of initiation the subject has with the regards to what happens in the memory", e.g., "I remember when I tried to drive dad's car to see what it was like" or "I remember riding my bicycle." Does he or she decide to do something (active), or is the action the result of decisions or actions of others (passive)? The incidences reported by subjects in hypnosis strongly suggest that their actions were the result of their own actions and decisions. Hypnotic subjects seldom reported memories in which their actions were the result of actions or decisions of others. This

data is supported by Kroger (1977), who asserts that subjects in hypnosis are more alert, not dominated by the hypnotist, and are fully capable of making decisions at all times.

Hypnotic subjects reported in the content of their ERs significantly more themes involving open "hostility" than they did as subjects in the ordinary awakened state. An example of open hostility offered by Manaster and Perryman (1974, Appendix C) in their scoring manual is "I remember a fight my parents had." Reiser (1980) and others supporting the tape recorder or photographic view of memory, believe that individuals are perceiving and recording information consciously and unconsciously at the same time. Therefore, based on this information, some material will not be available during a routine interview. Under hypnosis, however, this unconscious material becomes more accessible and the individual is able to recover material he or she was not consciously aware of having perceived. Perhaps the perception of open hostility is recorded unconsciously because of the negative emotional component. Edelstein (1981) noted that with the use of hypnosis the individual is able to experience emotionally laden thoughts not generally available to him or her. This is further supported by Baker, Haynes, and Patrick (1983), who suggest that with a reduction in anxiety and an increase in concentration and relaxation, as in hypnosis, recall is favored. Hence,

it appears that with hypnosis, which is characterized by freedom from anxiety (Rosenthal, 1944), improved concentration (Spiegel & Spiegel, 1978), and relaxation (Edelstein, 1981), subjects are more able to report more incidents of open "hostility" in their ERs than they did as subjects in the ordinary awakened state.

The character of mother was mentioned more frequently by both high and low susceptibles during hypnosis than was any other character. Manaster and Perryman (1974) indicate that the frequency a character is mentioned by a person in his or her ERs is often indicative of the salience that character has for him or her. Ansbacher and Ansbacher (Verger & Camp, 1970) point out that mention of certain persons like the mother, the father, or the grandparents often shows not only a preference for those persons but also the exclusion of others. It appears based on these data that mother may exercise more of an unconscious and/or subtle influence when compared to other family members. The significance of maternal influence is strongly supported by the findings of many developmental theorists (Bowlby, 1966; Spitz, 1965).

As noted earlier, males across states offer significantly more themes related to "death" than females. On the other hand, females across states offered significantly more themes related to "hostility" than males. It is important to note, however, that these findings seem to be the result of chance factors. If the study

were replicated and these two themes again differentiated between the sexes, then there would be sufficient grounds to take these findings seriously.

During the awakened state, highly susceptible males offered significantly more "school" settings in the memories they reported than they did as subjects in the hypnotic state. Further, there were no significant differences for highly susceptible females in either condition. This differential finding may suggest that general school experiences are more negative for males than females.

Another consideration may be that highly susceptible males, even in the awakened state, are really expressing strong unconscious motivation for school. This unconscious motivation by highly susceptible males may be a function of social conformity. Studies indicate that males are socialized to have a higher expectation for success and to set higher goals in life (Lee, Hall & Carter, 1983; Karabenick, Sweeney, & Penrose, 1983; Spence & Helmreich, 1972). Females, however, do not appear to be socialized in the same manner. Perhaps the highly susceptible male was reporting his need to conform to social expectations by concentrating on the valued belief of a good education.

Highly susceptible subjects during hypnosis offered more themes of "hostility" than did low susceptibles. This may be a function of hypnosis as well as the level

of susceptibility. As (1962) stated that highly susceptible subjects wish to indulge in emotions and sensations with the feeling of letting go. He further stated that these subjects have a tendency to view others as trusting. Such characteristics may permit the subject to express memories involving "hostility" to the hypnotist who is perceived as trusting (Hilgard, 1970). In addition, the use of hypnosis enables these individuals to experience emotionally laden thoughts not generally available to them and permits the expression of more negative affect by means of affective attenuation (Edelstein, 1981).

The theme of mutuality was specifically reported more by highly susceptible males than by low susceptible males in both the hypnotic and awakened states. One plausible explanation for this frequent reporting of mutuality themes may be related to the personality characteristics of highly susceptible subjects and the role expectations of males. Hilgard (1970) found that highly susceptible subjects possess a certain style of interacting with others. Elements of this style include a noncompetitive nature and the ability to be deeply involved in an activity. Such a style may enable these subjects to relate with others in a nonthreatening manner and permit the development of social relationships. This is consistent with the definition of "mutuality" which is a friendly, socially reciprocal and cooperative experience (Manaster-Perryman, 1974, Appendix C).

The role expectations of males is also an important factor in this finding. According to Sears (1965), once a child has labelled himself a boy he will move in that direction that offers the most reward. This male role involves activity, flexibility, aggressiveness, and adventuresomeness. Due to these characteristics, he may be capable of positively experiencing more interpersonal contact. Females, on the other hand, did not follow this pattern. This may be the function of different personality dynamics not observed in males. This writer is unable to offer a cogent explanation for the finding that highly susceptible females do not offer the same theme of "mutuality" during either state.

The importance of early recollections in the study of personality has been noted by several writers. Soul, Snyder, and Sheppard (1956) state that "early memories are absolutely specific, distinctive, and characteristic for each individual; moreover, they reveal probably more clearly than any other single psychological data the central core of each person's psychodynamics, chief motivation, form of neuroses, and emotional problems" (p. 229). This statement underscores the utility and importance of collecting the individual's early memories in order to understand personality dynamics and lifestyles. This investigation was not only concerned with collecting early recollections from the same individuals during hypnosis. Kahana, Hyman, Snyder, and Rosenbaum (1953)

asserted that early recollections provide meaningful information regarding unconscious needs that are less promptly available through other clinical procedures. This study indicated that early recollections revealed during hypnosis complements and supplements information revealed during the ordinary waking state. Therefore, such a procedure would yield a more comprehensive picture of personality dynamics and lifestyle. The present study provides only a beginning for the understanding of more accurate and efficient techniques that will be utilized in future lifestyle analysis. These findings underscore the necessity for additional research in this area of hypnosis and early recollections.

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APPENDIXES

APPENDIX A

The Harvard Group Scale of Hypnotic Susceptibility

The Harvard Group Scale of Hypnotic Susceptibility

1. Head Falling
   Score (+) if head fell forward at least two inches.

2. Eye Closure
   Score (+) if eyelids had closed.

3. Hand Lowering (Left Hand)
   Score (+) if hand had lowered at least six inches.

4. Arm Immobilization (Right Arm)
   Score (+) if did not lift hand and arm at least one inch.

5. Finger Lock
   Score (+) if fingers were incompletely separated.

6. Arm Rigidity (Left)
   Score (+) if arm was bent less than two inches.

7. Moving Hands Together
   Score (+) if hands were not more than six inches apart.

8. Communication Inhibition
   Score (+) if did not recognizably shake head "no".

9. Experiencing of Fly
   Score (+) if did make some outward acknowledgement.

10. Eye Catalepsy
    Score (+) if eyes remained closed.

11. Post-Hypnotic Suggestion (Touching Left Ankle)
    Score (+) if made at least an observable partial movement to touch left ankle.

12. Amnesia
    Score (+) if fewer than four of the items were recalled before the signal to remember was given.

(Shor & Orne, 1962)

APPENDIX B

Stanford Hypnotic Susceptibility Scale

Susceptibility Scale

1. Hand Lowering (Right Hand)
   Score (+) if hand has lowered at least six inches by end of 10 seconds.

2. Moving Hands Apart
   Score (+) if hands are six inches or more apart at end of 10 seconds.

3. Mosquito Hallucination
   Score (+) for any grimacing, movement, or acknowledgement of effect.

4. Taste Hallucination
   A. Taste of sweet
   B. Taste of sour
   Score (+) if both tastes are experienced and either one strong or one with overt movements.

5. Arm Rigidity (Right Arm)
   Score (+) if there is less than 2 inches of arm bending in 10 seconds.

6. Dream
   Score (+) if subject dreams well (i.e., has an experience comparable to a dream--not just vague, fleeting experiences, or just feelings or thoughts without accompanying imagery). It is possible to obtain a plus score, even though the subject may insist it was not a real dream, provided the hypnotist notes that the imagery and action are not under volitional control.

7. Age Regression (School)
   A. Verbal evidence: Fifth Grade
      How old are you?
      Where are you?
      What are you doing?
      Who is your teacher?
   B. Verbal evidence: Second Grade
      What is your name?
      And how old are you?
      Where are you?
      Who is your teacher?
   C. Handwriting evidence
      Fifth grade
      Second grade
   Score (+) if clear change in handwriting between the present and one of the regressed ages.

8. Arm Immobilization (Left Arm)
   Score (+) if arm rises less than one inch in 10 seconds.

9. Anosmia to Ammonia
   Smell of ammonia
   Overt signs
   Score (+) if odor of ammonia denied and overt signs absent.

10. Hallucinated Voice
    Score (+) if subject answers realistically at least once.

11. Negative Visual Hallucination: Three Boxes
    Subject reports 3 boxes
    Score (+) if hallucination is present, whether or not sustained. Sometimes the third box is perceived vaguely as a colored spot or shadow. The score is still (+).

12. Post-Hypnotic Amnesia
    Score (+) is subject recalls 3 or fewer items before "Now you can remember everything."

(Weitzenhoffer & Hilgard, 1962)

APPENDIX C

Manaster-Perryman Manifest Content Early Recollection

Scoring Manual

Manaster-Perryman Manifest Content Early Recollection

Scoring Manual

The scoring variables for ERs developed and utilized in connection with the study are listed below. Explanations and examples will appear after each item and/or category where necessary in order to clarify the meaning and method for scoring the variable.

A. Characters (Persons mentioned in the ER)
   1. Mother
   2. Father
   3. Siblings
   4. Other family members (uncles, aunts, grandparents, etc.)
   5. Non-family members (individuals specifically mentioned in the ER, but not members of the family: e.g., "My friend and I . . .")
   6. Group (References to a group or groups of people: e.g., "My class went on a field trip.")
   7. Animal
   * Number of character types mentioned in ER (may range from 07). (Category A concerns the characters mentioned in the memory, whether they played an active role in the memory or not. The fact that they are mentioned by the subject indicates their salience for him. Score "character" variables on a presence or absence basis, except for #8 which receives a numerical score.)

B. Themes (What the memory is about)
   8. Birth of a sibling ("I remember when my brother was born we . . .")
   9. Death (of a person or animal)
   10. Illness/injury (to self, another person, or an animal: "My brother was hit by a car and we took him to the hospital.")
   11. Punishment (of the subject or another person)
   12. Misdeeds (acts committed by the subject which he knew to be wrong.)
   13. Givingness (generosity or kindness, either overt or covert felt by the subject toward another: e.g., "The old lady looked very ill and I wanted to help her.")
   14. Mastery (attempts by the subject to gain control of himself, others, or the environment by psychological or physical acts: e.g., "I knew he was going to hit me so I played dumb." "I tried to reach the cookie jar, but couldn't quite make it.")
   15. Mutuality (a friendly, socially reciprocal, or co-operative experience with others: e.g., "My family went to the beach and everyone had a good time.")

16. Attention-getting (the subject receives or wants special attention: e.g., "I screamed and yelled when mother wouldn't take me skating." "I remember getting lots of presents.")
17. New or unfamiliar situation causing excitement (e.g., "I remember the first day of school." "We got caught in a storm and it was very exciting."
18. Fear or anxiety provoking or threatening situation (e.g., "The old man chased me and I was badly scared." "My mother was late coming home and I was afraid she had left me.")
19. Open hostility (e.g., "I remember a fight my parents had.")

* Other (list other themes separately)

* Number of themes in the ER (may range from 1-13) (Category B concerns the theme or plot of the ER. Score "theme" variables on a presence-absence basis, except for #22 which receives a numerical score. More than one theme may be scored.)

C. Concern with detail

Visual (attention given to a describing color, size, shape, etc. of a person or object, e.g., "I remember my pink and yellow swimsuit.")

21. Auditory (attention given to describing volume, quality of sound or something heard.)
22. Motor (attention given to describing some vigorous physical movement, e.g., "We ran and jumped around the yard.") (Category C concerns the attention the subject gives to describing something seen, or heard, or to describing vigorous physical movement. Score "detail" variables on a presence-absence basis. More than one variable may be scored.)

D. Setting (where the situation remembered took place)

23. School (inside or out)
24. Hospital/doctor's office
25. Inside the home-family or relatives
26. Outside in the subject's neighborhood
27. Traveling (in a car, airplane, boat, etc.)
28. Inside the home of a non-family member
29. Outside, away from family home or neighborhood
30. Unclear (no clear indication is made in content of ER)

* Others (list separately)

* Number of settings in the ER (may range from 1-9) (Category D concerns the place the situation remembered took place. Score "setting" variables on a presence-absence basis, except for #35 which receives a numerical score. More than one setting may be scored.)

E. Active-Passive

31. Active (Subject initiates action; he acts rather than is acted upon: e.g., "I remember when I tried to drive dad's car to see what it was like."

32. Passive (Subject initiates little or no action; he is acted upon rather than acts; e.g., "I watched the workmen building the house next door.") (The "active-passive" category is concerned with the degree of initiation the subject has with regard to what happens in the memory. Does he decide to do something (active), or is his action the result of decisions or actions of others (passive). Score "active-passive" variables on a presence-absence basis. One or the other, but not both, variables should be scored.)

F. Control
   33. Internal (Subject accepts responsibility for what happens in the ER.)
   34. External (Subject disassociates himself from any consequences or outcomes of the ER.)
   (The "control" category is concerned with whether the subject assumes responsibility for what happens in the ER. Score "control" variables on a presence-absence basis. One or the other, but not both, variables should be scored.)

G. Affect
   35. Positive (overall feeling tone of the ER is pleasant)
   36. Negative (overall feeling tone of the ER is unpleasant)
   37. Neutral (no indication of affect in the ER) (The "affect" category is concerned with the pleasantness or unpleasantness or lack of these the subject felt about what happened in the ER. Score "affect: variables on a presence-absence basis. Only one of the variables should be scored.)

* These items will not be utilized in the study.

APPENDIX D

Consent Form

Consent Form

A comparison of the content of early recollections elicited during hypnosis with the content of early recollections elicited from subjects in the normal state of wakefulness.

TO: Persons who agree to participate in this study.

The following information is provided to inform you about the research project and your participation in it. Please read this form carefully. Any questions that you may have about procedures in this study will be answered. Please feel free to ask any questions that you may have about this study and/or the information given below.

The main purpose of the study was to make a comparison of the content of early recollections elicited during hypnosis with the content of early recollections elicited from subjects in the normal waking state. To this end, in part of the study two early recollections will be elicited from you during hypnosis, and two early recollections will be elicited from you in the normal state of wakefulness. You will be asked to verbally report each ER as you visualize it. After each ER you will then be asked to answer four questions relative to this memory. They are: (1) How old were you when you experienced the incident? (2) What part of the memory stands out? (3) How did you feel when you had the experience? (4) What caused you to feel that way?

You as a subject, will be "at risk" only insofar as you are revealing your early recollections.

Only Gregory J. Coram, M.S. and his assistants will have access to the data. Experimenters will be carefully trained to insure the confidentiality of the subject.

I have read this consent form. All my questions have been answered, and I freely and voluntarily choose to participate. I understand that I may withdraw my consent and discontinue participation at any time.

If the results of this experimenter are published at any time in the future, I understand that participants' identity will not be disclosed.

Signature_____Date_____

Signature of Witness_____

APPENDIX E

Induction by Eye Closure

Hypnotic Induction Procedure

I want you to be as comfortable as you possibly can. Place your hand on each arm of the chair, and your feet flat on the floor. I would like you to concentrate and focus all of your attention on this target point (point to the target). I am about to give you some instructions that will help you to relax and feel very comfortable. Please look steadily at the target and while staring at it keep listening to my words. You can become hypnotized if you are willing to do what I tell you to, and if you concentrate on the target and on what I say. Just do your best to concentrate on the target, to pay close attention to my words, and let happen whatever you feel is going to take place. Just let yourself go. Pay close attention to what I tell you to think about; if your mind wanders bring your thoughts back to the target and my words, and you can easily experience more of what it is like to be hypnotized. What I want from you is merely your willingness to go along and to let happen whatever is about to happen. Nothing will be done to embarrass you.

Now take it easy and just let yourself relax. Keep looking at the target as steadily as you can, thinking only of it and my words. If your eyes drift away, don't let that bother you . . . . just focus again on the target. Pay attention to how the target changes, how the shadows play around it, how it is sometimes fuzzy, sometimes clear. Whatever you see is all right. Just give way to whatever comes into your mind, but keep staring at the target a little longer. After a while, however, you will have stared long enough, and your eyes will feel very tired, and you will wish strongly that they were closed. Then they will close, as if by themselves. When this happens, just let it happen.

Relax more and more. As you <u>think</u> of relaxing, your muscles will relax. Starting with your right foot, relax the muscles of your right leg . . . . Now the muscles of your left leg . . . . Just relax all over. Relax your right hand, your forearm, upper arm, and shoulder . . . . That's it. . . . . Now your left hand . . . and forearm . . . and upper arm . . . and shoulder . . . . Relax your neck, and chest . . . more and more relaxed . . . completely relaxed . . . completely relaxed.

As you become relaxed your body will feel sort of heavy or perhaps numb. You will begin to have this feeling of numbness or heaviness in your legs and feet . . . in your hands and arms . . . throughout your body . . . as though you were settling deep into the chair. The chair is strong; it will hold your heavy body as it feels heavier and heavier. Your eyelids feel heavy, too, heavy and tired. You are beginning to feel drowsy and sleepy. You are breathing freely and deeply, freely and deeply. You are getting more and more sleepy and drowsy. Your eyelids are becoming heavier, more and more tired and heavy.

Staring at the target so long has made your eyes very tired. Your eyes hurt and your eyelids feel very heavy. Soon you will no longer be able to keep your eyes open. You will have stood the discomfort long enough; your eyes are tired from staring, and your eyelids will feel too tired to remain open. Your eyes are becoming moist from the strain. You are becoming more and more drowsy and sleepy. The strain in your eyes is getting greater and greater. It would be a relief just to let your eyes close and to relax completely, to relax completely. You will soon have strained enough; the strain will be so great that you will welcome your eyes closing of themselves, of themselves.

Your eyes are tired and your eyelids feel very heavy. Your whole body feels heavy and relaxed. You feel a pleasant warm tingling throughout your body as you get more and more tired and sleepy. Sleepy. Drowsy. Drowsy and sleepy. Keep your thoughts on what I am saying; listen to my voice. Your eyes are getting blurred from straining. You can hardly see the target, your eyes are so strained. The strain is getting greater, greater and greater, greater and greater. Your eyelids are heavy. Very heavy. Getting heavier and heavier, heavier and heavier. They are pushing down, down, down. Your eyelids seem weighted and heavy, pulled down by the weight . . . so heavy . . . . Your eyes are blinking, blinking . . . closing, closing . . . .

If eyes have not yet closed:

Soon your eyes would close by themselves, but there is no need to strain them more. You have concentrated well upon the target, and have become very relaxed. Now we have come to the time when you may just let your eyes close. (If no response: That's it, now close them.)

*You now feel very relaxed, but you are going to become even more relaxed. It is easier to relax now that your eyes are closed. You will keep them closed until I tell you to open them or until I tell you to wak up . . . . You feel pleasantly drowsy and sleepy as you continue to listen to my voice. Just keep your thoughts on what I am saying. You are going to get much more drowsy and sleepy. Soon you will be deep asleep but you will have no trouble hearing me. You will not wake up until I tell you to . . . . Soon I shall begin to count from one to twenty. As I count you will feel yourself going down farther and farther into a deep restful sleep, but you will be able to do all sorts of things I ask you to do without waking up . . . . One--you are going to go more deeply asleep. . . . Two--down, down into a deep, sound sleep . . . . Three--four--more and more asleep . . . . Five--six--seven--you are sinking into a deep, deep sleep. Nothing will disturb you. . . . I would like you to hold your thoughts on my voice and those things I tell you to think of. You are finding it easy just to listen to the things I tell you . . . . Eight--nine--ten--half-way

there--always deeper asleep . . . Eleven--twelve--thirteen--fourteen--fifteen--although deep asleep you can hear me clearly. You will always hear me distinctly no matter how deeply asleep you feel you are. 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! (Weitzenhoffer & Hilgard, 1962).

I would like you now to take three deep breaths and you will smell a spicy aroma. When you perceive this pleasant aroma, move the thumb of your right hand and then tell me what you are smelling. That's good. This passes, and you are going into a much deeper and more relaxed state.

*At this point of eye closure proceed to appropriate section.

APPENDIX F

Analysis of Variance for Cluster Variables

Appendix F

Analysis of Variance for Cluster Variables

Measure	Source	dF	MSF	F
Cluster 1	Susceptibility (S)	1, 32	5.51	1.20
Cluster 2	Susceptibility (S)	1, 32	1.51	1.25
Cluster 3	Susceptibility (S)	1, 32	.20	.32
Cluster 1	Sex (A)	1, 32	.31	.07
Cluster 2	Sex (A)	1, 32	.31	.26
Cluster 3	Sex (A)	1, 32	.45	.71
Cluster 1	Order (O)	1, 32	.01	.00
Cluster 2	Order (O)	1, 32	.01	.01
Cluster 3	Order (O)	1, 32	.25	.00
Cluster 1	Susceptibility (S) Sex (A)	1, 32	.01	.00
Cluster 2	Susceptibility (S) Sex (A)	1, 32	2.81	2.33
Cluster 3	Susceptibility (S) Sex (A)	1, 32	1.80	2.85
Cluster 1	Susceptibility (S) Order (O)	1, 32	7.81	1.71
Cluster 2	Susceptibility (S) Order (O)	1, 32	4.51	3.74
Cluster 3	Susceptibility (S) Order (O)	1, 32	.05	.08

Appendix F (Continued)

Analysis of Variance for Cluster Variables

Measure	Source	dF	MS	F
Cluster 1	Sex (A) Order (O)	1, 32	.11	.02
Cluster 2	Sex (A) Order (O)	1, 32	1.01	.84
Cluster 3	Sex (A) Order (O)	1, 32	.20	.32
Cluster 1	Condition (C) Sex (A)	1, 32	3.61	1.57
Cluster 2	Condition (C) Sex (A)	1, 32	1.51	1.67
Cluster 3	Condition (C) Sex (A)	1, 32	.45	.83
Cluster 1	Condition (C) Order (O)	1, 32	.11	.05
Cluster 2	Condition (C) Order (O)	1, 32	.11	.12
Cluster 3	Condition (C) Order (O)	1, 32	.20	.37

APPENDIX G

Main Effects:

Susceptibility, Sex, and State

Appendix G

Main Effects:

Susceptibility, Sex, and State

Measure	Source	dF	MS	F
Variable 1 (Mother)	Susceptibility (S)	1, 32	.05	.08
Variable 2 (Father)	Susceptibility (S)	1, 32	.01	.02
Variable 3 (Siblings)	Susceptibility (S)	1, 32	.01	.28
Variable 4 (Other Family Members)	Susceptibility (S)	1, 32	.80	1.63
Variable 5 (Non-Family Members)	Susceptibility (S)	1, 32	.01	.02
Variable 6 (Group)	Susceptibility (S)	1, 32	.01	.04
Variable 7 (Animal)	Susceptibility (S)	1, 32	.11	.28
Variable 8 (Birth of a Sibling)	Susceptibility (S)	1, 32	.05	2.25
Variable 9 (Death)	Susceptibility (S)	1, 32	.11	1.00
Variable 10 (Illness/Injury)	Susceptibility (S)	1, 32	.11	.20
Variable 11 (Punishment)	Susceptibility (S)	1, 32	.11	.85
Variable 12 (Misdeeds)	Susceptibility (S)	1, 32	.01	.04
Variable 13 (Givingness)	Susceptibility (S)	1, 32	.00	.00

Appendix G (Continued)

Main Effects:

Susceptibility, Sex, and State

Measure	Source	dF	MS	F
Variable 14 (Mastery)	Susceptibility (S)	1, 32	.00	.00
Variable 15 (Mutuality)	Susceptibility (S)	1, 32	.11	.33
Variable 16 (Attention-getting)	Susceptibility (S)	1, 32	.61	1.85
Variable 17 (New or Unfamiliar Situation Causing Excitement)	Susceptibility (S)	1, 32	.20	1.31
Variable 18 (Fear of Anxiety Provoking or Threatening Situation)	Susceptibility (S)	1, 32	.61	1.28
Variable 19 (Open Hostility)	Susceptibility (S)	1, 32	.11	1.65
Variable 20 (Visual)	Susceptibility (S)	1, 32	.05	.13
Variable 21 (Auditory)	Susceptibility (S)	1, 32	.01	.15
Variable 22 (Motor)	Susceptibility (S)	1, 32	.45	.90
Variable 23 (School)	Susceptibility (S)	1, 32	.11	.36
Variable 24 (Hospital/Doctor's Office)	Susceptibility (S)	1, 32	.00	.00
Variable 25 (Inside the Home-Family or Relatives)	Susceptibility (S)	1, 32	.01	.02
Variable 26 (Outside in the Subject's Neighborhood)	Susceptibility (S)	1, 32	.80	1.50

Appendix G (Continued)

Main Effects:

Susceptibility, Sex, and State

Measure	Source	dF	MS	F
Variable 27 (Traveling)	Susceptibility (S)	1, 32	.31	3.26
Variable 28 (Inside the Home of a Non-Family Member)	Susceptibility (S)	1, 32	.31	2.53
Variable 29 (Outside, Away From Family, Home or Neighborhood)	Susceptibility (S)	1, 32	.01	.16
Variable 30 (Unclear)	Susceptibility (S)	1, 32	.01	.16
Variable 31 (Active)	Susceptibility (S)	1, 32	1.51	2.05
Variable 32 (Passive)	Susceptibility (S)	1, 32	1.51	2.05
Variable 33 (Internal)	Susceptibility (S)	1, 32	.45	.58
Variable 34 (External)	Susceptibility (S)	1, 32	.45	.61
Variable 35 (Positive)	Susceptibility (S)	1, 32	.00	.00
Variable 36 (Negative)	Susceptibility (S)	1, 32	.11	.14
Variable 37 (Neutral)	Susceptibility (S)	1, 32	.20	.81
Variable 1 (Mother)	Sex (A)	1, 32	.20	.32
Variable 2 (Father)	Sex (A)	1, 32	.01	.02

Appendix G (Continued)

Main Effects:

Susceptibility, Sex, and State

Measure	Source	dF	MS	F
Variable 3 (Siblings)	Sex (A)	1, 32	2.11	3.05
Variable 4 (Other Family Members)	Sex (A)	1, 32	.00	.00
Variable 5 (Non-Family Members)	Sex (A)	1, 32	.11	.19
Variable 6 (Group)	Sex (A)	1, 32	.31	.93
Variable 7 (Animal)	Sex (A)	1, 32	.31	.77
Variable 8 (Birth of a Sibling)	Sex (A)	1, 32	.05	2.25
Variable 10 (Illness/Injury)	Sex (A)	1, 32	.11	.20
Variable 11 (Punishment)	Sex (A)	1, 32	.01	.09
Variable 12 (Misdeeds)	Sex (A)	1, 32	.01	.04
Variable 13 (Givingness)	Sex (A)	1, 32	.05	.32
Variable 14 (Mastery)	Sex (A)	1, 32	.05	.35
Variable 15 (Mutuality)	Sex (A)	1, 32	.31	.90
Variable 16 (Attention-getting)	Sex (A)	1, 32	1.01	3.05

Appendix G (Continued)

Main Effects:

Susceptibility, Sex, and State

Measure	Source	dF	MS	F
Variable 17 (New or Unfamiliar Situation Causing Excitement)	Sex (A)	1, 32	.05	.33
Variable 18 (Fear or Anxiety Provoking or Threatening Situation)	Sex (A)	1, 32	.31	.65
Variable 20 (Visual)	Sex (A)	1, 32	.05	.13
Variable 21 (Auditory)	Sex (A)	1, 32	.11	1.37
Variable 22 (Motor)	Sex (A)	1, 32	.80	1.59
Variable 23 (School)	Sex (A)	1, 32	.11	.36
Variable 24 (Hospital/Doctor's Office)	Sex (A)	1, 32	.05	.58
Variable 25 (Inside the Home-Family or Relatives)	Sex (A)	1, 32	.31	.46
Variable 26 (Outside in the Subject's Neighborhood)	Sex (A)	1, 32	.20	.38
Variable 27 (Traveling)	Sex (A)	1, 32	.01	.13
Variable 28 (Inside the Home of a Non-Family Member)	Sex (A)	1, 32	.01	.10
Variable 29 (Outside, Away from Family, Home or Neighborhood)	Sex (A)	1, 32	.01	.16
Variable 30 (Unclear)	Sex (A)	1, 32	.11	1.47

Appendix G (Continued)

Main Effects:

Susceptibility, Sex, and State

Measure	Source	dF	MS	F
Variable 31 (Active)	Sex (A)	1, 32	.11	.15
Variable 32 (Passive)	Sex (A)	1, 32	.11	.15
Variable 33 (Internal)	Sex (A)	1, 32	.05	.86
Variable 34 (External)	Sex (A)	1, 32	.00	.00
Variable 35 (Positive)	Sex (A)	1, 32	.06	.00
Variable 36 (Negative)	Sex (A)	1, 32	.31	.38
Variable 37 (Neutral)	Sex (A)	1, 32	.45	1.82
Variable 1 (Mother)	Condition (C)	1, 32	3.20	8.66**
Variable 2 (Father)	Condition (C)	1, 32	.11	.41
Variable 3 (Siblings)	Condition (C)	1, 32	.61	1.88
Variable 4 (Other Family Members)	Condition (C)	1, 32	.05	.28
Variable 5 (Non-Family Members)	Condition (C)	1, 32	.31	.90
Variable 6 (Group)	Condition (C)	1, 32	.31	1.51

Appendix G (Continued)

Main Effects:

Susceptibility, Sex, and State

Measure	Source	dF	MS	F
Variable 7 (Animal)	Condition (C)	1, 32	.31	1.18
Variable 8 (Birth of a Sibling)	Condition (C)	1, 32	.00	.00
Variable 9 (Death)	Condition (C)	1, 32	.11	3.24
Variable 10 (Illness/Injury)	Condition (C)	1, 32	.01	.03
Variable 11 (Punishment)	Condition (C)	1, 32	.11	.93
Variable 12 (Misdeeds)	Condition (C)	1, 32	2.11	9.45**
Variable 13 (Givingness)	Condition (C)	1, 32	.20	1.95
Variable 14 (Mastery)	Condition (C)	1, 32	.80	4.88*
Variable 15 (Mutuality)	Condition (C)	1, 32	1.51	4.84**
Variable 16 (Attention-Getting)	Condition (C)	1, 32	1.01	3.74
Variable 17 (New or Unfamiliar Situation Causing Excitement)	Condition (C)	1, 32	.45	2.573
Variable 18 (Fear or Anxiety Provoking or Threatening Situation)	Condition (C)	1, 32	.11	.32
Variable 19 (Open Hostility)	Condition (C)	1, 32	.31	4.25

Appendix G (Continued)

Main Effects:

Susceptibility, Sex, and State

Measure	Source	dF	MS	F
Variable 20 (Visual)	Condition (C)	1, 32	8.45	30.73**
Variable 21 (Auditory)	Condition (C)	1, 32	.11	1.21
Variable 22 (Motor)	Condition (C)	1, 32	2.45	8.24**
Variable 23 (School)	Condition (C)	1, 32	.31	1.62
Variable 24 (Hospital/Doctor's Office)	Condition (C)	1, 32	.05	.46
Variable 25 (Inside the Home-Family or Relatives)	Condition (C)	1, 32	.01	.02
Variable 26 (Outside in the Subject's Neighborhood)	Condition (C)	1, 32	.20	.56
Variable 27 (Traveling)	Condition (C)	1, 32	.11	1.80
Variable 28 (Inside the Home of a Non-Family Member)	Condition (C)	1, 32	.11	1.25
Variable 29 (Outside, Away From Family, Home or Neighborhood)	Condition (C)	1, 32	.11	1.42
Variable 30 (Unclear)	Condition (C)	1, 32	.11	1.37
Variable 31 (Active)	Condition (C)	1, 32	10.51	37.29**
Variable 32 (Passive)	Condition (C)	1, 32	10.51	37.29**

Appendix G (Continued)

Main Effect:

Susceptibility, Sex, and State

Measure	Source	dF	MS	F
Variable 33 (Internal)	Condition (C)	1, 32	1.80	3.70
Variable 34 (External)	Condition (C)	1, 32	1.25	2.36
Variable 35 (Positive)	Condition (C)	1, 32	.20	.99
Variable 36 (Negative)	Condition (C)	1, 32	.01	.04
Variable 37 (Neutral)	Condition (C)	1, 32	.20	.85