

THE EFFECT OF DIFFERENT HYPNOTIC
INDUCTION STYLES ON HYPNOTIC
SUSCEPTIBILITY OF RIGHT-MOVERS,
LEFT-MOVERS AND BIDIRECTIONALS

Thesis for the Degree of M. A.
MICHIGAN STATE UNIVERSITY
RACHEL GUR
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ABSTRACT

THE EFFECT OF DIFFERENT HYPNOTIC INDUCTION STYLES ON HYPNOTIC SUSCEPTIBILITY OF RIGHT-MOVERS, LEFT-MOVERS AND BIDIRECTIONALS

By

Rachel Gur

The purpose of the present investigation was to replicate and extend Bakan's finding that Left-Movers are more highly susceptible to hypnosis than Right-Movers. The replication was done in order to test an alternative explanation that attributed the higher susceptibility of Left-Movers to the style of the hypnotic induction.

The hypnotic susceptibility of Ss who differ in direction of lateral conjugate movement of the eyes upon being asked a reflective question was compared on three scales: (1) Harvard Group Scale of Hypnotic susceptibility; Form A; (2) Right Induction Scale, that was phrased in a highly active and intellectual style and called for focusing on external events; (3) Left Induction Scale that was phrased in a passive and emotional style and called for focusing attention on internal subjective feelings and experiences. The main hypothesis was that the styles used in the different scales will have a differential effect on Left-Movers, .

Right-Movers and Bidirectionals was studied by a two-way fixed effect analysis of variance.

No significant overall effect of eye directionality nor of style of induction on susceptibility were found. The relationship between the different induction scales and eye directionality seemed to be interactive in nature as shown by a significant interaction effect obtained. No significant differences were found between Left-Movers, Right-Movers and Bidirectionals on the Harvard Group Scale of Hypnotic Susceptibility. The Left-Movers performed significantly better than both Right-Movers and Bidirectionals on the Left Induction Scale and the Right-Movers performed significantly better than the Left-Movers, but not significantly better than the Bidirectionals, on the Right Induction Scale. The same changes in the style of instructions had a differential effect on Left-Movers, Right Movers and Bidirectionals. An item-by-item analysis was performed to indicate directions for Right-Movers as compared to Left-Movers. This analysis showed that further modifications of the style of induction is likely to be a step in the right direction. Two additional findings were noticed: Left-Movers were more likely to prefer a female to a male E than both Right-Movers and Bidirectionals; the Left Induction Scale changed the level of difficulty of

Rachel Gur

items, as compared to the other scales used in the present investigation.

The results generally support Bakan's (1969) theory linking eye directionality and hypnotic susceptibility with a functional asymmetry of the brain.

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ON HYPNOTIC SUSCEPTIBILITY OF RIGHT-MOVERS,
LEFT-MOVERS AND BIDIRECTIONALS**

By

Rachel Gur

A THESIS

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TO RUBEN FOR BEING

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It is over, and here I am trying to put into words all the feelings I have toward the people that helped me in completing this thesis.

I wish to thank Dr. Joe Reyher, my thesis chairman and advisor for being with me during this entire period. Always listening, innovating, suggesting, correcting and supporting and doing it so friendly and warmly. His enthusiastic dedication to research helped make this thesis an exciting and enjoyable experience.

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I also wish to express the warm feelings I have toward Paul Bakan who made me interested in the Left-Right business while I was working with him last year. His enthusiasm turned me on to the subject and I felt his absense during the present investigation strongly.

And there's Thyra Foster, who did an excellent job in typing both the proposal and the thesis and who was always smiling, friendly and warm. I thank her for being all.

Last and most my husband, Ruben who went along with me, always loving, supporting, encouraging and enthusiastic. Ruben helped in constructing the scales, running the experiment, analyzing the results, criticising and creatively contributing his brilliant ideas to the thesis.

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INTRODUCTION

The classification of people as "left-movers" or "right movers" followed Teitlebaum's (1954) observation that conjugate lateral eye movements, were characteristic of mental concentration. The movement takes the form of horizontally looking away from the questioner, to the left or to the right. Teitlebaum claims that, in this way, the individual is enabled to break the contact with the external world and its variety of stimuli in order to get better concentration.

Lateral eye movement was noted again by Day (1964), who observed that the direction of this movement was relatively consistent for any individual. Duke (1968) was the first to offer an experimental support for the classification of people as "right-movers" or "left-movers", according to the direction they move their eyes when they reflected on an answer to a question.

Day (1967) suggested that there are strong individual differences between left-movers and right-movers in the organization of the attentional processes. The attentional pattern of the left-mover is more passive and auditory, while the right-mover's one is more active and visual-haptic. The left-mover's description of an emotional event tends to be subjective and descriptive. Conversely the right-mover's

account of a similar incident tends to be loaded with external rather than with internal subjective emotional experiences. Similarly, left-movers tend to use language that is more feeling oriented. Anxiety is experienced differently by the two: The left-mover describes anxiety as having definite internal locus and a physiological arousal pattern similar to that of an auditory startle pattern, while by the right-movers it is described subjectively as having an external locus. Visual experience, of the left-mover, emphasized upper visceral hyperactivity, with increase in heart and breathing rate. Large postural muscles are often placid although facial expressiveness and motility seems to increase. In the case of the right mover, general large muscle tonus appears high while facial muscles show less tonus or change in expression. There is an emphasis of lower visceral activity with slowing and strengthening of heart rate and breathing rate. Bakan & Shotland (1969) found support for the hypothesis, which stemmed out of several reports of impaired visual ability of people with lesions in the right hemisphere (Milner 1968; Corkin, 1965; Newcomb, 1969), of better visual attentiveness for the right-mover. The right movers performed better than the left movers on certain tasks requiring a high degree of undistracted attention to external stimuli.

Bakan (1969) has reported evidence of a relationship between the tendency to move the eyes left in response to a reflective question and a tendency to report clear images. Verbal fluency was also found to be greater in left movers.

Individual differences in how people pay attention to their bodies have been the focus of a series of experiments by Fisher (1966). Administering Fisher's scales, Bakan (1969) found a variety of differences between left movers and right movers regarding parts of the body to which they pay attention more easily and frequently.

In addition left-movers were found to be more likely to display waking alpha EEG, when in college more likely to choose majors in the humanities and social sciences and have relatively better Verbal scores on the Scholastic Aptitude Test. Right-movers, on the other hand, are less likely to display waking alpha EEG, are more likely to choose college majors in the sciences and have better mathematical score on the SAT. (Bakan 1969, 1971).

Several descriptions of "good " hypnotic Ss have emphasized their subjective orientation. Bakan (1969) found that left movers were more highly susceptible, as compared to right movers, and confirmed Hilgard's description of the hypnotizable person which is strikingly parallel to Day's characterization of the left mover as a subjectively oriented

person: "one who has rich subjective experiences..., one who is interested in the life of the mind..., and one who accepts impulses from within (Hilgard, 1965). His results were also congruent with J. R. Hilgard (1965, 1969) who showed that the "good" hypnotic subject is characterized by deep imaginative involvements.

The significant positive relationship found by Bakan to exist between eye directionality and hypnotic susceptibility was explained by him in terms of functional asymmetry of the brain. His general conclusion was that a relatively more active right hemisphere is probably responsible both for a tendency of the eyes to move to the left when reflecting upon an answer and to the induction of a hypnotic state. He views these findings as supporting the theory that the so-called non-dominant hemisphere (the right hemisphere) may in fact be dominant for certain psychological functions which can be characterized as proverbial, pre-logical, subjective, intuitive, global, synthetic and diffuse.

There might, however, be an alternative explanation as to why left movers were found to be more highly susceptible than right movers in Bakan's experiment. It can be argued that the hypnotic instructions were more successful with

left movers simply because the Stanford Hypnotic Susceptibility Scale (Weitzenhoffer & Hilgard, 1962), used in Bakan's study, calls for focusing attention on inner processes and feelings and should therefore be more difficult for right movers to respond to.

In view of the above mentioned different characteristics of left-movers and right-movers in the emotional, physiological and cognitive dimensions, it was hypothesized that for right movers highly intellectualized and unemotional instructions calling for attention to external stimuli and to specific parts of the body, especially in the right side, will facilitate their hypnotic susceptibility as compared to left movers receiving the same instructions. On the other hand, instructions that emphasize attention to inner feelings, processes and sensations and allow the subject to respond in a passive manner should result in inhibiting hypnotic susceptibility in right movers, and enhancing hypnotic susceptibility in left movers. According to Geyher (1963), the use of the passive voice in phrasing the induction of hypnosis, should yield the best results.

The aim of this investigation is to utilize research findings regarding left-movers and right-movers in order to develop induction procedures and susceptibility scales that take the differences between these two types of people into

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consideration, and to assess the differential effect of these scales on the susceptibility of left-movers and right-movers. A group of bidirectional Ss, i.e. those who move their eyes half of the time to the left and half of the time to the right was also included in light of recent findings by Smith (1972) that they tend to score higher on several measures of creativity than both left movers and right movers. This difference was attributed to their greater hemispherical integration.

The following hypotheses were tested:

1. There is a significant interaction between the effect of the eye directionality of subjects and the type of induction they receive.

2. Left Movers score higher than right movers on a hypnotic susceptibility scale which is comparable to the Stanford Hypnotic Susceptibility Scale (Weitzenhoffer & Hilgard, 1962) used by Bakan (1969).

3. Left Movers score higher than bidirectionals on a hypnotic susceptibility scale which is comparable to the Stanford Hypnotic Susceptibility Scale (Weitzenhoffer & Hilgard, 1962) used by Bakan (1969).

4. Left movers score higher than right movers on a scale which is constructed to fit their personality characteristics.

5. Left movers score higher than bidirectionals on a scale which is constructed to fit their personality characteristics.

6. Right movers score higher than left movers on a scale which is constructed to fit their personality characteristics.

7. Right movers score higher than bidirectionals on a scale which is constructed to fit their personality characteristics.

8. A passively phrased scale constructed for left movers yields higher susceptibility scores than the actively phrased scale designed for right movers. (Reyher, 1962)

9. A passively phrased scale constructed for left movers yields overall better results, in terms of susceptibility scores, than the standard scale. (Reyher, 1962)

10. Left movers score higher on a passively phrased induction scale, constructed for left movers, than they do on an actively phrased induction scale, constructed for right movers.

11. Left movers score higher on a passively phrased induction, constructed for left movers, than they do on a standard induction scale.

12. Right movers score higher when they are given the

actively phrased induction, constructed for right movers, than they do when they are given the passively phrased induction, constructed for left movers.

13. Right movers score higher when they are given the actively phrased induction, constructed for right movers, than they do when they are given the standard scale.

METHOD

Subjects:

One hundred thirty-five Ss were selected out of two hundred and sixty-four males from an Introductory Psychology class who had volunteered to participate in an experiment on Group Hypnosis. 15 white right-handed Ss were in each of the 9 experimental groups.

Materials:

Three hypnotic susceptibility scales were used in this experiment. The first was the standard Harvard Group Scale of Hypnotic Susceptibility; Form A (Shor & Orne, 1962). The second scale was constructed by the author¹ to fit the personality characteristics of the right-movers as found in the literature. An attempt was made to modify the phrasing of the suggestions of the Standard Harvard Group Scale of Hypnotic Susceptibility (HGSHS) and make it more active and action oriented, more focusing on external rather than internal events and more appealing to the intellect rather than to emotions. An example may be helpful here in clarifying the differences

in style between the two scales. The following is a paragraph taken from the standard HGSHS:

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. (Shor & Orne, 1962, p. 6).

The same paragraph in the Right Induction Scale (RIS) constructed for this experiment read as follows:

Just make yourself relaxed. Try to reduce any tension you have. Keep your eyes on the target. Look at it as steadily as you can. Should you move your eyes 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. If at some time you think you would like to sleep do so, that will be fine.

Whatever you do is o.k. just keep staring at the target for a while. There will come a time, however, when your efforts to keep your eyes open will cause them to be so tired and so heavy that you will be unable to keep them open any longer and you will close them. When you do that just let them remain closed.

This scale, like the HGSHS, also consisted of twelve items. Most of the items were identical to those of the standard scale and the differences were mainly in the style of presentation. Some variations were attempted, however, in a few of the items in light of the literature on right-movers. The task in the first item was changed from head lowering to right thigh swaying since the easiness of concentration on the right thigh was found to be correlated with right eye movements. (Bakan, 1971) Another item that was changed was item 9a-Hallucination. Instead of hallucinating, ^{that} _{is} a fly/buzzing around, Ss were asked to hallucinate a voice asking questions. This item was adopted from the Stanford Hypnotic Susceptibility Scale; Form C (Weitzenhoffer & Hilgard, 1962). The rationale was that the right movers should respond more easily than the left movers to a more

verbal intellectualized task. The post-hypnotic suggestion was changed from touching the left ankle to touching the right ankle. Another change was introduced in items 3a, 4a, and 6a, where Ss are asked to lift one of their hands. Rather than telling them which hand to lift, as is done in the standard HGSHS, Ss were allowed to choose which of their hands they would concentrate on. This was done in order to find out whether right-movers will differ from left-movers in their choices. (For the complete scale see Appendix A).

The third scale was constructed by the author to fit the personality characteristics of the left-movers as found in the literature. Here an attempt was made to modify the style of the HGSHS so as to make it more passive, more focusing on internal events (e.g. body sensation, feelings, emotions) and appealing more to the experiential rather than the intellectual aspects of the situation. The same

paragraph from the HGSHS that was cited before read in the Left Induction Scale (LIS) as follows:

You find yourself relaxing more and more and the tension slowly leaves your body. Your eyes keep looking at the target. Looking at it steadily. Should your eyes wander away from it, that will be all right... they will wander 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 find yourself getting sleepy, that will be fine, too. Whatever happens, let it happen. Your eyes keep staring at the target. There will come a time, however, when your eyes will be so tired will feel so heavy, that they will be unable to stay open any longer and they will close.

This scale also consisted of twelve items. Again, most of the items were identical to those of the standard HGSHS and the differences were mainly in the style of presentation. Beside letting the SS choose which hand to concentrate on in items 3a, 4a, and 6a, the only variation was in item 9a-Hallucination where Ss were asked to hallucinate a tune rather than a fly, due to the artistic tendency found to be predominate among left-movers. (Bakan, 1971) (For the complete LIS see Appendix B).

The eye directionality of each S was determined by a procedure developed by Bakan (1971) which involves asking the subject to explain briefly the following set of proverbs.

1. The hardest work is to go idle.
2. In the mirror everyone sees his best friend.
3. A watched pot never boils.
4. It is better to have a good enemy than a bad friend.

5. If you can not bite don't show your teeth.
6. A poor worker blames his tools.
7. He that lies on the ground can not fall.
8. It is better to have a bad peace than a good war.k
9. What saddens a wise man gladdens a fool.
10. They that are mute want to talk to most.

Eight additional proverbs were on an alternative list of proverbs. They were used when the first ten proverbs failed to produce ten observable and clear eye movements. These were:

1. Call no man happy until he is dead.
2. Lend your money and loose your friend.
3. A rolling stone gathers no moss.
4. He is rich who has few desires.
5. Stitch in time saves nine.
6. Don't count your chickens before they are hatched.
7. When the cat's away the mice will play.
8. He who laughs last laughs best.

The number of alternative proverbs used was determined by the number of proverbs in the first list that failed to produce the detectable eye movement. They were presented in the order shown above.

Procedure:

The Group Hypnosis sessions were conducted three evenings a week. Different induction scales were used each evening. The order was randomly determined each week. Ss were thus randomly assigned to one of three groups. (1) Those receiving the Standard HGSHS. (2) Those receiving the RIS. (3) Those receiving the LIS. All the groups were run in a sound proof room.

The general induction instructions and determination of susceptibility followed the procedures suggested in the HGSHS Manual (Wbor & Orne, 1962).

When all Ss were done with the self reporting questionnaire (see Appendix C for the RIS questionnaire and Appendix D for the LIS questionnaire) they were asked to vacate the room in order to participate immediately in the second part of the experiment. During this part, in which eye directionality as well as handedness were determined for each S individually, Ss were told to wait in front of two rooms and enter one by one. One of the experimenters in this part of the experiment was always a female and the other was always a male. The Ss could see which experimenter was in which room and had a free choice of

E. Care was taken to make

the testing conditions as relaxed and nonstressful as possible, and to prevent Ss from detecting that their eye movements were being recorded. Furthermore, each S was seated behind a desk in a symmetrical room, that is, a room in which the left half of the S's visual field was the same as the right half. This precaution was taken in order to reduce the number of distracting stimuli that might influence an S's eye movements. The eyes of the S were examined in a non-conspicuous way. The very first lateral movement of the eyes at the conclusion of the proverb and just as the subject started to reflect upon an answer was recorded. If seven or more movements, out of ten, were to the left, S was classified as a left mover. In the same way, if seven or more movements were to the right - he was classified as a right mover. Otherwise he was considered bidirectional.

RESULTS

Hypothesis I. A 3 x 3 factorial design was subjected to a two way fixed effect analysis of variance in order to test an interaction between type of induction and eye directionality. This analysis of variance was performed on the susceptibility scores obtained from the ten items that were equivalent and comparable across the three scales that were used in the study. The special items that were deleted were not comparable as seen in Tables 1,2,3.

Table 1

Number of Ss Failing and Passing Each Item of the HGSHS

Item	Passed	Failed	Percentage Passing
1a. Head Falling	33	12	73
2a. Eye Closure	31	14	69
3a. Hand Lowering	38	7	84
4a. Arm Immobilization	23	22	51
5a. Finger Lock	35	10	78
6a. Arm Rigidity	36	9	80
7a. Hands Moving (together)	37	8	72
8a. Communica. Inhibi.	30	15	67
9a. Hallucination (fly)	17	28	38
10a. Eye Catalepsy	27	18	60
11a. Post Hyp. Suggestion (touching left ankle)	14	31	31
12a. Amnesia	36	9	30

Table 2

Number of Ss Failing and Passing Each Item of the RIS

Item	Passed	Failed	Percentage Passing
1a. Thigh Swaying	26	19	58
2a. Eye Closure	31	14	69
3a. Hand Lowering	35	10	78
4a. Arm Immobilization	24	21	53
5a. Finger Lock	33	12	73
6a. Arm Rigidity	28	17	63
7a. Moving Hands (together)	25	20	56
8a. Communica. Inhibi.	19	26	42
9a. Hallucination (voice)	3	42	7
10a. Eye Catalepsy	23	22	51
11a. Post Hyp. Suggestion (touching right ankle)	10	35	22
12a. Amnesia	38	7	84

Table 3

Number of Ss Failing and Passing Each Item of the LIS

Item	Passed	Failed	Percentage Passing
1a. Head Falling	33	12	73
2a. Eye Closure	32	13	71
3a. Hand Lowering	20	25	44
4a. Arm Immobilization	39	6	87
5a. Finger Lock	33	12	73
6a. Arm Rigidity	32	13	71
7a. Hands Moving (together)	33	12	73
8a. Communica. Inhibi.	30	15	67
9a. Hallucination (tune)	25	20	56
10a. Eye Catalepsy	30	15	67
11a. Post Hyp. Suggestion (touching left ankle)	16	29	36
12a. Amnesia	33	12	73

As a result the following items were deleted: Thigh swaying and Hallucination of a voice asking questions from the RIS, Head Falling from the LIS and the HGSHS, Hallucination of a tune from the LIS and Hallucination of a fly from the HGSHS. The analysis of variance yielded the results summarized in Table 4. The columns represent the three different susceptibility scales and the rows divide the subjects into Right-Movers (RM), Left-Movers (LM) and Bidirectionals (BD).²

Table 4

Analysis of Variance of Susceptibility Scores

Based on Ten Comparable Items of the Three

Scales Administered to Nine Groups of Subjects

Source of Variation	Sum of Squares	df	Mean Square	F
Rows	21.17	2	10.59	2.56
Columns	22.23	2	11.12	2.69
Interaction	51.32	4	12.83	3.11*
Error	519.87	126	4.13	
Total	614.59	134		

* $p < .025$

As seen by Table 4, hypothesis I is supported by a significant interaction between eye directionality and the type of scale. This interaction indicates a differential

effect of the scales on Right-Movers vs. Left-Movers vs. Bidirectionals.

The nature of the interaction can best be conveyed through a graphical exposition as shown in figure 1. As seen clearly in the graph, the right movers (RM) scored lower than the left movers (LM) in all susceptibility scales except in the Right Induction Scale in which they score the highest. Conversely, the left-movers (LM) scored the highest in all susceptibility scales except in the Right Induction Scale in which they scored the lowest. The HGSHS seemed to be the best scale for the bidirectionals (BD), although they did not seem to have been significantly affected by changes in the inductions and their performance remained quite stable.

The means of hypnotic susceptibility scores obtained for each group are summarized in table 5 in order to facilitate the interpretation of figure 1.

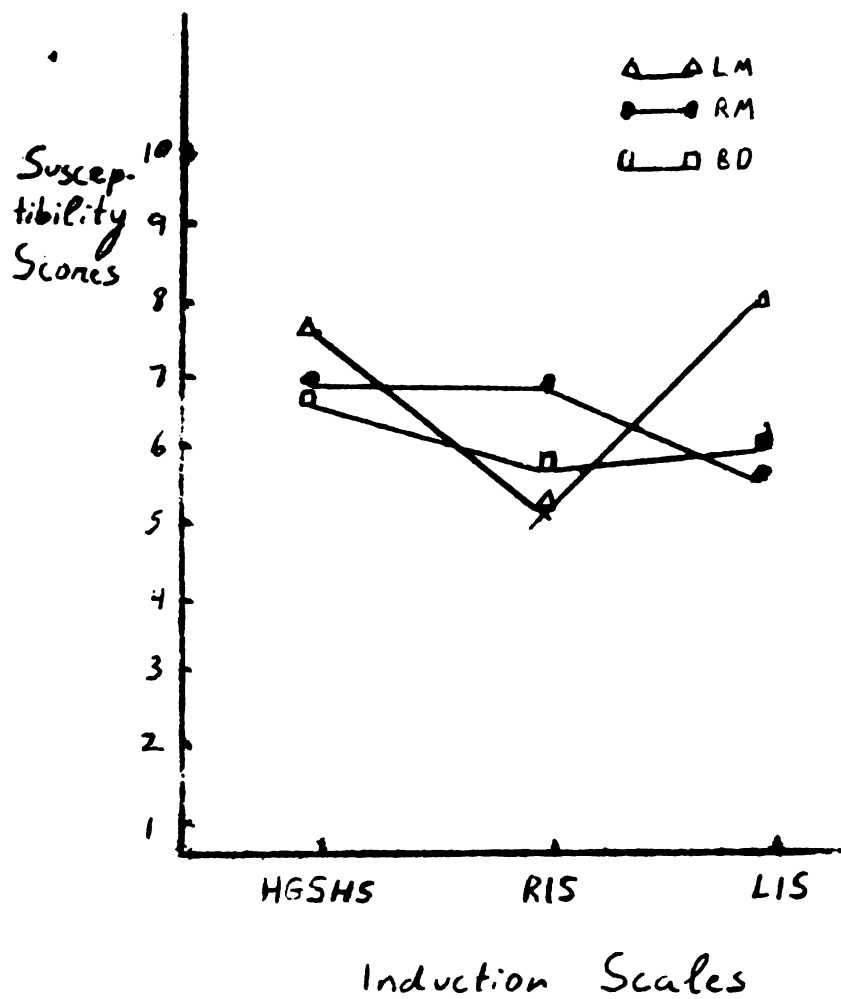
Table 5

Means of Hypnotic Susceptibility Scores
of Nine Groups of Subjects

Induction Eye- Directionality	HGSHS	RIS	LIS
Right Movers	6.67	6.67	5.60
Left Movers	7.40	5.40	8.00
Bidirectional	6.47	5.53	5.90

Figure 1

Means of Left-Movers (LM), Right-Movers (RM)
and Bidirectionals (BD) on the Ten Items
Three Hypnotic Susceptibility Scales



Hypothesis II: Left movers score higher than right movers on the Harvard Group Scale of Hypnotic Susceptibility (Bakan, 1969) (LM > RM on HGSHS)

A t-test was used to compare the obtained means.

Since there was not a significant difference ($t=0.88$, N.S.), this hypothesis is not supported.

Hypothesis III: Left movers score higher than bidirectionals on the Harvard Group Scale of Hypnotic Susceptibility. (LM > BD on HGSHS).

The difference between left movers and bidirectionals failed to reach statistical significance on that scale ($t=0.54$, N.S.); therefore this hypothesis is not supported.

Hypothesis IV: Left movers score higher than right movers on the Left Induction Scale. (LM > RM on LIS).

Left movers scored significantly higher on the Left Induction Scale than right movers ($t=3.39$, $p < .001$); therefore, this hypothesis is supported.

Hypothesis V: Left movers score higher than bidirectionals on the Left Induction Scale. (LM > BD on LIS).

Left movers scored significantly higher on the Left Induction Scales than bidirectionals. ($t=2.95$, $p < .005$). therefore, this hypothesis is supported.

Hypothesis VI: Right movers score higher than left movers on the Right Induction Scale. (RM LM on RIS).

Right movers scored significantly better than left movers on the Right Induction Scale. ($t=1.90$, $p<.05$); therefore, this hypothesis is supported.

Hypothesis VII: Right movers score higher than bidirectionals on the Right Induction Scale. (RM BD on RIS).

The difference between right movers and bidirectionals failed to reach statistical significance. ($t=1.61$, $p<.10$); therefore, this hypothesis was not supported.

Hypothesis VIII: The Left Induction Scale yields higher susceptibility scores, than the Right Induction Scale. (LIS RIS).

The difference between the Left Induction Scale and the Right Induction Scale failed to reach statistical significance, as shown by the lack of columns effect in the analysis of variance ($F = 2.69$, N.S.); therefore this hypothesis was not supported.

Hypothesis IX: The Left Induction Scale yields higher susceptibility scores, than the Harvard Group Scale of Hypnotic Susceptibility. (LIS HGSHS).

The difference between these means has also failed to reach statistical significance in the Analysis of

Variance ($F=2.69$, N.S.); therefore this hypothesis was not supported.

Hypothesis X: Left movers score higher on the Left Induction Scale than they do on the Right Induction Scale. (LIS $>$ RIS for LM).

Left movers scored higher on the Left Induction Scale. The difference between their score on the LIS and the RIS is significant. ($t=4.91$, $p < .0001$); therefore, this hypothesis is supported.

Hypothesis XI: Left movers score higher on the LIS than they do on the Harvard Group Scale of Hypnotic Susceptibility. (LIS $>$ HGSHS for LM)

The difference between Left movers' LIS scores and their HGSHS scores failed to reach statistical significance ($t=0.92$, N.S.). Therefore, this hypothesis is not supported.

Hypothesis XII: Right movers score higher on the Right Induction Scale than they do on the Left Induction Scale. (RIS $>$ LIS for RM)

Right movers did score higher on the RIS than on the LIS though the difference failed to reach statistical significance at the .05 level. ($t=1.37$, $p < .10$)

Hypothesis XIII: Right movers score higher on the Right Induction Scale than they do on the Harvard Group Scale of Hypnotic Susceptibility. (RIS > HGSHS for RM). The average of the Right Movers on the RIS equals their average on the HGSHS. ($t=0$, N.S.); therefore, this hypothesis was not supported.

The results of this study referring to the experimental hypotheses are summarized in Table 6.

Table 6
Summary of Comparisons Testing the
Experimental Hypotheses

Hypothesis	P-level
1. Scales x Direction	.025
2. LM > RM on HGSHS	N.S.
3. LM > BD on HGSHS	N.S.
4. LM > RM on LIS	.001
5. LM > BD on LIS	.005
6. RM > LM on RIS	.05
7. RM > BD on RIS	N.S.
8. LIS > RIS	N.S.
9. LIS > HGSHS	N.S.
10. LIS > RIS for LM	.0001
11. LIS > HGSHS for LM	N.S.
12. RIS > LIS for RM	N.S.
13. RIS > HGSHS for RM	N.S.

Since this experiment was intended to be the first step toward developing different hypnotic induction procedures for left-movers and right-movers, an item-by-item analysis was conducted in order to find those items in each scale that were influenced by eye directionality.

The point biserial correlation was chosen to indicate relationship between passing a given item and the number of eye movements to the left in each scale. A significant level of .10 was chosen in order to detect any possible trend that can give some clues for further research in developing the scales. The results for the HGSHS are given in Table 7.

Table 7:

Relationship between Eye Directionality and Passing
or Failing Each of the Twelve HGSHS Items

Item	rpb	P
1a. Head Falling	.09	N.S.
2a. Eye Closure	-.10	N.S.
3a. Hand Lowering	.08	N.S.
4a. Arm Immobilization	.24	N.S.
5a. Finger Lock	-.01	N.S.
6a. Arm Rigidity	-.01	N.S.
7a. Hands Moving(together)	.13	N.S.
8a. Communica. Inhibi.	-.18	N.S.
9a. Hallucination(fly)	-.07	N.S.
10a. Eye Catalepsy	-.01	N.S.
11a. Post Hyp. Suggestion (Touching left ankle)	.11	N.S.
12a. Arm-11	N.S.

None of the point biserial correlations for the HGSHS was found to be significant at the point .10 level (two tailed test). Half of the correlations were positive and half of them negative. The results of the item-by-item for the RIS and LIS did not prove to be much more productive in terms of the statistical significance, of the individual correlating coefficients, but showed a very provocative consistency in the direction of the relationship.

Table 8

Relationship Between Eye Directionality
(RM-LM Dichotomy) and Passing or Failing Each of
the Twelve Right Induction Scale Items

Item	rpb	P
1a. Thigh Swaying	-.03	N.S.
2a. Eye Closure	.14	N.S.
3a. Hand Lowering	-.24	N.S.
4a. Arm Immobilization	-.01	N.S.
5a. Finger Lock	-.03	N.S.
6a. Arm Rigidity	-.16	N.S.
7a. Moving Hands(together)	-.24	N.S.
8a. Communica. Inhibi.	-.10	N.S.
9a. Hallucination (voice)	-.13	N.S.
10a. Eye Catalepsy	-.29	.05
11a. Post Hyp. Suggestion (touching R. ankle)	.03	N.S.
12a. Amnesia	-.04	N.S.

The only item that was found in RIS (Table 7) to be significantly correlated to eye directionality was Eye Catalepsy. The correlation was negative, indicating that right movers are more likely than left movers to pass this item. All the other items in this scale, except for Eye Closure and Post Hypnotic Suggestion are negatively correlated with the number of eye movements to the left. This proportion is significantly higher than chance expectancy as shown by the binomial expansion ($p=.003$) The results for the point biserial correlation computed for the LIS are given in Table 9

Table 9

Relationship Between Eye Directionality and Passing or Failing Each of the Twelve Left Induction Scale Items

Item	rpb	P
1a. Head Falling	.13	N.S.
2a. Eye Closure	.09	N.S.
3a. Hand Lowering	.13	N.S.
4a. Arm Immobilization	.15	N.S.
5a. Finger Lock	.14	N.S.
6a. Arm Rigidity	.23	N.S.
7a. Hands Moving(together)	.24	N.S.
8a. Communica. Inhibi.	.13	N.S.
9a. Hallucination (tune)	.08	N.S.
10a. Eye Catalepsy	.30	.05
11a. Post Hyp. Suggestion (touching left ankle)	.04	N.S.
12a. Amnesia	-.08	N.S.

As seen in Table 3 Eye Catalepsy is again the only item that significantly correlates with eye directionality. The correlation this time favors left movers. In this scale all the items, except for Amnesia, are positively correlated with the number of eye movements to the left. This proportion is significantly higher than chance expectancy, as shown by the binominal expansion ($p=.019$).

Unexpected Findings

An interesting finding related to the percentage of Ss from each category who went to either a male or a female to be tested for eye directionality. 53% of the right-movers went to a male and 47% to a female. ($Z = 0.43$, N.S.). The left-movers, however, seemed to prefer a female E. 76% of them went to a female and only 24% to a male E. ($Z = 6.5$, $p < .001$). The bidirectionals, like the right movers, showed no significant preference. (42% went to a male and 58% to a female E. $Z = 0.89$, N.S.). No relationship was found between eye directionality and the hands that Ss concentrated upon in items 3a, 4a, 6a in the RIS and LIS ($R = .01$, $p > .05$).

The Spearman rank order correlation was used to compute correlations among the three scales in this investigation, the HGSHS (Shor & Orne, 1963) and the SHSS (Weitzenhoffer & Hilgard, 1959) with respect to the relative level of difficulty (percentage passing) of the items. Level of difficulty was based upon the percentage of Ss passing each. These are summarized in table 10.

Table 10

Spearman's Rank Order Correlations Among

HGSHS-R^a, LIS, RIS, HGSHS and SHSS

Irrespective of Directionality of Eye Movement

	HGSHS-R	LIS (ten items)	RIS (ten items)	HGSHS	SHSS
HGSHS-R	-	.16 t=.45	.75 t=3.21*	.77 t=3.81**	.46 t=1.62
LIS (ten items)		-	.39 t=1.20	.02 t=.05	-.21 t=-.79
RIS (ten items)			-	.52 t=1.65	.50 t=1.63
HGSHS				-	.60 t=2.37*
SHSS					-

*p < .025

**p < .01

a HGSHS-R - Harvard Group Scale of Hypnotic Susceptibility Replication

The obtained matrix of correlations shows significant correlations between the HGSHS-R and both HGSHS and the RIS, and between the HGSHS and the SHSS.

Table 1/ shows the order of item difficulty for each of the scales.

Table 1/

Rank Orders of Items in the

HGSHS-R, LIS, RIS, HGSHS, and SHSS

Item: Order of Presentation	HGSHS-R N=45	LIS N=45	RIS N=45	HGSHS N=132	SHSS N= 124
	a	a	b	a	c
1. Postural Sway	6 (73%)	3.5 (73%)	6 (58%)	2.5 (86%)	3 (69%)
2. Eye Closure	7 (69%)	6.5 (71%)	4 (69%)	4 (74%)	4 (58%)
3. Hand Lowering	1 (84%)	1.1 (44%)	2 (73%)	1 (89%)	1 (81%)
4. Arm Immobilization	10 (51%)	1 (87%)	8 (53%)	9.5 (48%)	12 (14%)
5. Finger Lock	5 (78%)	3.5 (73%)	3 (73%)	5 (67%)	8 (32%)
6. Arm Rigidity	3.5 (80%)	6.5 (71%)	5 (63%)	6 (57%)	8 (32%)
7. Moving Hands (together)	2 (72%)	3.5 (73%)	7 (56%)	2.5 (86%)	2 (70%)
8. Communication Inhibition	8 (67%)	8.5 (67%)	10 (42%)	8 (56%)	11 (23%)
9. Hallucination	11 ^d (38%)	10 ^e (56%)	12 ^f (7%)	11 ^d (39%)	6 ^d (35%)
10. Eye Catalepsy	9 (60%)	8.5 (67%)	9 (51%)	7 (56%)	10 (30%)
11. Post Hypnotic Suggestion	12 (31%)	12 (36%)	11 (22%)	12 (36%)	5 (49%)
12. Amnesia	3.5 (80%)	3.5 (73%)	1 (84%)	9.5 (48%)	8 (32%)

a - Head Falling, b - Thigh Swaying, c - Backwad,
d - Fly, e - Tune, f - Voice

The most striking changes appeared in the LIS. Hand Lowering, one of the easiest items on the other scales, was one of the most difficult items. On the other hand, Arm Immobilization, one of the most difficult items on the other scales, was the easiest on this scale. Another important change was that Amnesia appeared to become much easier across the three scales used in the present investigation.

DISCUSSION

The overall results obtained from the HGSHS were in the direction found in Bakan's (1969) study, though the differences were not significant. Generally the left movers seemed to be the most highly sensitive group of subjects in terms of their reaction to different types of instructions. The variation in their means accounted for more of the variance. The right movers, on the other hand, did not react as strongly to changes in style of induction and their means remained relatively stable across conditions. They did show a drop in susceptibility in response to the Left Induction Scale.

Viewing the effects of each of the newly developed scales separately, it seems that the Left Induction Scale achieved its goals successfully in enhancing the hypnotic susceptibility of the left movers. It is generally clear from the results of this investigation that none of the newly developed scales significantly increased the hypnotic susceptibility of subjects beyond the scores obtained in the HGSHS. It seems, rather, that the LIS, though somewhat enhancing susceptibility of left movers, strongly reduced the susceptibility of right movers. The effect of the RIS, again, was mainly in reducing the susceptibility of left movers without a corresponding increase in the susceptibility

of right movers. Changing instructions in the induction procedure does not seem to increase hypnotic susceptibility. This finding goes along with an impressive body of research that has shown hypnotic susceptibility to be a fairly stable personality characteristic, highly resistant to experimental manipulations. (As, Hilgard, and Weitzenhoffer, 1963; Hilgard, 1965, 1967; London, 1967). Another possibility is that the scales for measuring hypnotic susceptibility are still too crude to be capable to detect minor but significant changes in hypnotic susceptibility. Further research is needed to answer this question.

(1969)
Although Bakan's results were not replicated, they *do not*
(Bakan 1971)
oppose his theory./ This theory is based on Bogan's
(1969) hypothesis that the major differences between the cerebral hemispheres are that the left-hemisphere has developed a capacity for propositional thought, thought that is analytical and subject to the rules of syntax, semantic and mathematical logic. The right hemisphere has a highly developed appositional capacity, a capacity for opposing or comparing perceptions, nonverbal schemas, engrams, etc. Studies involving electroshock, brain damage, and brain lesions lend support to Bogan's hypothesis (Cohen et. al., 1968; Kimura, 1961; Curry, 1963; Benton, 1965;

Hecaen & Ajuriaguerra, 1964; Levy, Agresti and Sperry, 1968; Sperry and Levy, 1970). Bakan's hypothesis is that eye directionality is indicative of which cerebral hemisphere is relatively more dominant for certain cognitive, emotional and perceptual processes. Left or right eye movements associated with the reflective process are, according to Bakan, symptomatic of easier triggering of activity in the hemisphere contralateral to the direction of eye movement. Appositional functions seem to characterize the left mover, according to this hypothesis, while propositional functions seem to characterize the right mover (Bakan, 1971). The results of this investigation do not clarify whether hypnosis is more appositional or propositional.

It seems therefore, that an attempt to construct scales that will be more appropriate for either left movers or right movers should concentrate mainly on making the instructions in the RIS even more active and externally oriented and those in the LIS even more passive and internally oriented. In other words, making the experimental manipulations more extreme. The present investigation resulted in the scales showing a consistent opposite trend and the success or failure on each item was

determined more by the style of instructions than by the nature of the item. While half of the correlations on the HGSHS were negative and half positive, all the correlations between number of eye movements to the left and passing or failing each item except two on the RIS were negative and all the correlations on the LIS, except one, were positive. This general tendency gives a basis for further attempts in future investigations to make the divergency more extreme.

The finding that a significantly higher proportion of male left-movers preferred to go to a female E goes along with Fisher's (1966) finding that male college students who have a tendency to be more aware of the left side of their body tend to be more spontaneous and uninhibited as well as more successful in dating than those who tend to be more aware of the right side of their body. Bakan's finding that left-movers pay more attention to the left side of their body, whereas right movers pay more attention to the right side of their body provides the necessary link between Fisher's data and those obtained in the present study. On the basis of these relationships it might be argued that male left movers, are more in tune with their feelings showing a higher tendency to act

in terms of the emotional arousal caused by the female E. Male right movers, on the other hand, tend to repress the emotions involved; they were quite neutral in their choice of E's sex.

Of particular interest was the tendency of the LIS to have lower correlations with the other scales than the correlations of the other scales have with one another. This strongly suggests that the style or type of induction (passive or active) is involved as an influencing factor. This inference is supported by the marked changes in the relative difficulty of particular items such as Arm Immobilization and Hand Lowering. If failure on an item early in the induction involves the probability of success on subsequent items, because of S's loss of confidence in himself and/or the operator, the order of presentation must be altered on all five scales. However, it should be noticed that the relative ease of passing the Amnesia item, which occurred last, does not support this possibility.

Just how style of induction differentially influenced item difficulty is puzzling. The nature of the items affected do not suggest the mechanism involved;



specifically, the extreme difference in percentage of Ss passing Arm Immobilization and Hand Lowering is not accounted for in any obvious way by the nature of the items. Further research is clearly indicated.

The results of this investigation seem to provide a stimulating basis for more psychodynamic approaches to the study of hemispheric brain dominance. It can be speculated that the left hemisphere is more active in repressing psychodynamic conflicts, thus detaching the Right-Movers from their anxieties and emotions. The passive tone of the LIS might have stimulated anxiety which led to resistance to enter the hypnotic state. The left-Movers, who seem to be generally more aware of their conflicts and anxieties, were able to feel comfortable in the same situation, and entered the passive compliant role of a hypnotized subject more readily. The RIS, however, did not allow them to enter such a role because it conveyed a double message to them: they were told to actively enter a passive role. Their tendency to score lower on this scale may reflect more awareness, on their part, of the double message embedded in the instructions. Psychodynamically, therefore, different processes might have been involved in the reactions of Left-Movers and Right-Movers to the different scales. A more detailed investigation of these processes in future studies may give us further clues to the nature of hypnosis and its relation to brain hemispheric dominance.

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APPENDICES

Appendix A: Right Induction Scale

Preliminary remarks by examiner

In a few minutes I am going to administer a standard procedure for measuring susceptibility to hypnosis. At the end of the standard procedure you yourself will report on what happened from your point of view in the response booklet which has been distributed to you. Note that the booklet is sealed. Do not open the response booklet until I specifically tell you to do so at the end of the standard procedure. On the cover page of the response booklet are spaces for your name, address, and some other general information. Please fill in this information now. Again, please do not open the booklet now. Fill in the information on the cover page only. (Allow a minute or two for Ss to record this information.)

Let's talk a while before we start. I want you to be quite at ease and it may help if I answer a few of your questions first. I am assuming that for some of you this is the first time you are participating in a hypnosis experiment. People coming for the first time are sometimes a little uneasy because they do not know what the hypnotist will do or because they may have a distorted notion of what the hypnotized might do. Your questions will be answered before we are through, but you can best get the answers you want by concentrating thoroughly on what I say and on what you are doing, but not focusing excessively on details.

Some people, however, tend to react in a new situation by laughing, giggling or whispering. We 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.

I would like to mention a few more points. First of all, what we will be doing, while a little unusual may not be as far removed from some things you might have done before. Hypnosis is largely based upon your willingness to act upon ideas. You will not be asked to do anything that will make you look silly or stupid. We are here for serious scientific purposes. Finally, I shall not ask you any questions about your personal affairs, so that there will be nothing personal about what you do or say during hypnosis.

You may have some questions as to 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 psychiatrists to reduce anxiety about certain situations. 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 are capable of engagement in hypnotic tasks, but some are much more able to do these tasks than others, even when each of them cooperates. We are studying some of these differences among people.

Have you any questions or comments before we go ahead?

(Answer questions by paraphrasing the above points.)

Now please make yourself comfortable in your chair. Clear your lap of books and papers, and prepare to begin. Individuals who wear glasses should keep them on. If, however, you are wearing contact lenses it might be more comfortable to remove them.

1a. Thigh Swaying

To begin with, I want you to know how it is to respond to suggestions when you are not hypnotized.

No put your knees together, with both feet on the floor, close your eyes and relax, just relax.

In a moment I will ask you to think of your right thigh and knee swinging to the right. As you know, thinking of a movement and making a movement are closely related. Soon after you think of your right thigh moving to the right you will have a tendency to make this movement. You will find your right thigh actually swaying to the right, more and more to the right, until your thigh will move so far to the right that it will not be possible to move it any farther.

Now listen carefully to what I say and begin to think of moving your right thigh to the right. You are soon going to start moving your right thigh to the right, your right thigh is going to move to the right, more and more to the right. Your right thigh now begins to move to the right, swaying to the right, more and more to the right. Your right thigh is moving to the right. Your right thigh is swinging more and more to

the right. Your right thigh is going more and more to the right. Your right thigh is going more and more to the right. It is moving to the right, to the right.

Your right thigh is moving to the right, swaying to the right, swinging to the right, moving to the right, going to the right, swinging to the right, swinging to the right, right

Your right thigh is swinging, swinging, swinging . . . Now! That's fine. Now please open your eyes. That's right. 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. But at this point you have the idea of how it is to act upon suggestions.

2a. Eye Closure

Now sit yourself comfortably and rest your hands in your lap. That's right. Rest your hands in your lap. Now look at your right hand, find a spot on this hand 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 . . . hand relaxed . . . look directly at the target. I am about to give you some instructions that will gradually make you enter a state of hypnosis. Just sit down quietly and comfortably. I want you to look steadily at the target and while keeping your eyes upon it listen to what I say. Your ability to be hypnotized depends partly on your willingness to cooperate and partly on your ability to concentrate on the target and on 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, making yourself take part in whatever is going to take place. Just concentrate and follow the instructions. If you pay close attention to what I tell you and think of what I tell you to think about, you can easily find out 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 make yourself part of the story. Many people report that going into hypnosis is 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 things that may be going on. In some ways hypnosis is like sleepwalking; however, hypnosis is also individual and is not just alike for everyone. In a sense the hypnotized person is like a sleep-walker, 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 make you embarrassed. Most people find hypnosis to be very interesting.

Just make yourself relaxed. Try to reduce any tension you have. Keep your eyes on the target. Look at it as steadily as you can. Should you move your eyes 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. If at some time you think you would like to sleep, that will be fine, too. Whatever you do is o.k. just keep staring at the target for a while. There will come a time, however, when your efforts to keep your eyes open will cause them to be so tired and so heavy, that you will be unable to keep them open any longer, and you will close them. When you do that, just let them remain closed.

As I continue to talk you will become more and more drowsy, but not all people respond at the same rate to what I have to say. Some people will close their eyes before others. When the time comes that you close your eyes, just keep them closed. You may hear me still giving suggestions for your eyes to close. Don't be bothered by these suggestions. They will be for other people. Don't be disturbed by these suggestions to other people, but simply relax more and more.

Make yourself completely relaxed 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. Relax every muscle of your body. Pay close attention to your right leg.

Relax the muscles of your right leg...relax the muscles of both legs...pay close attention to the muscles of your right foot...relax the muscles of both feet...pay close attention to the muscles of your right arm...relax the muscles of your right arm...relax the muscles of both arms...pay close attention to the muscles of your right hand and fingers...relax the muscles of your right hand and fingers...relax the muscles of both hands and fingers...relax the muscles of your neck, of your chest...relax all the muscles of your body...Make yourself limp, limp, limp. Relax more and more, more and more. Relax completely. Relax completely Relax Completely.

As you relax more and more you will find that you can make your body heavier and heavier. You can make your right leg heavier and heavier without pushing it down. Go ahead try this. Now try to make your right arm heavy and your right foot, your right hand and your whole body. You find it easier and easier to make your right arm heavy, heavy. You can make your whole body feel heavy, heavier and heavier. Because of your concentration and effort you may be making yourself drowsy, drowsy and sleepy. You will breath more and more slowly and regularly, slowly and regularly.

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.

Your eyes are tired from staring. As the force of gravity continuously pulls at your eyelids, you will notice the heaviness in your eyelids is increasing. Soon you will not be able to keep your eyes open. Soon you will have to close your eyes. Your eyelids will be too heavy to keep open. Your eyes are tired from staring. Your eyes are becoming wet from straining. Try to intensify any fatigue and strain in your eyes. Try to intensify any feeling of drowsiness and sleepiness. The strain in your eyes is getting greater and greater, greater and greater. Perhaps you will find that 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 be so heavy that you will not be able to keep your eyes open, you will have to close them.

Make your eyelids heavy, very heavy. Make yourself relaxed, very relaxed. Pay close attention to your body and notice any feeling of warmth and heaviness. You will find that you are tired and drowsy. Tired and sleepy, sleepy, sleepy, sleepy. Listen only to my voice. Pay attention to nothing else but my voice. The target is getting blurred. You are having difficulty seeing. You have to strain your eyes. The strain is getting greater and greater, greater and greater.

Increase the heaviness of your eyelids. Your lids are heavy. Heavy as lead. Getting heavier and heavier, heavier and heavier. You have a tendency to close them. You might find that your eyelids seem weighted, weighted with lead, heavy as lead. You might find that your eyes blink, blink, blink...close, close. Your eyes may have closed by now and if not you would soon have to close them, but there is no need to strain them more. Even if you have not closed your eyes fully as yet.

You have concentrated well upon the target and have become relaxed and drowsy. Now we have come to the time when you may just close your eyes. That's it, eyes completely closed. Close your eyes now.

You are now 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 other wise, or I tell you to awaken...You are 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 can 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 let yourself go 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-sink, sink 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 asleep-thirteen-fourteen-fifteen-although deep asleep you can clearly hear me. You will always hear me no matter how deeply asleep you may be...sixteen-seventeen-eighteen-deep asleep, fast asleep. Nothing will disturb you. You are going to be able to do many things that I will tell you to...nineteen, twenty. Deep asleep! You will not awaken until I tell you to do so. You will wish to sleep and will do the things I shall presently describe.

3a Hand Lowering

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

Please extend one of your arms straight out in front of you, up in the air with the palm of your hand down. One of your arms straight out in front of you...straight out, up in the air with the palm of your hand down. One of your arms straight out in front of you palm down. I want you now to pay close attention to this hand, the sensations in it, and what you do with it. As you pay attention to it you find it easy to be more aware of it than you have been-try to notice whether it is warm or cool, whether there is a little tingling in it, whether you tend to twitch your fingers ever so slightly...that's right, I want you to pay close attention to this hand because you will find that you can have something very interesting happening to it. The force of gravity is continuously pulling down on your arm. The force of gravity makes your arm heavier and heavier, the harder and harder to keep up. And as it becomes heavier and heavier, you have the tendency to move your hand down...as if something were forcing it down...a little bit down...more and more down...down...and as I count you can have it get heavier and heavier and go 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 move your hand now the rest of the way down to its original position by your side and relax. Your hand back to it's original resting position and relax. You must have noticed how heavy and tired you could make your arm and hand be. 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,...make your hand and arm quite comfortable again...quite comfortable again. There... just relax.

4a Arm Immobilization

You are very relaxed. The general heaviness you have induced from time to time, now try to induce all over your body. Now I want you to pay close attention to one of your arms and hands...One of your arms and hands share in this induced heaviness...How heavy your hand is...and note how as you think about this heaviness in your hand and arm you can make it increase even more, now see if you can make your arm heavy...very heavy...even more, now see if you can make your arm heavy...very heavy...now see if you can make your hand 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 how you had to lift it against some resistance because of how relaxed you have made yourself. Now place your hand back by your side. Make your hand and arm now feel normal again. They are no longer heavy. Just relax...relax completely.

5a Finger lock

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...press hands tightly together. Notice how you can make your fingers become 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 all right. Stop trying and relax. You noticed how hard it was to get started to take them apart. Now you can take them apart. Return your hands to their resting position and relax. Hands to their resting position and relax...just relax.

6a Arm Rigidity

Please extend one of your arms 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 watch, as you have it become stiff...stiffer and stiffer...very stiff...and now notice what is happening in your arm...you notice that you can concentrate and have it become 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...try to bend it...try. (Allow 10")

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 try to do many things. You induced a stiffness ...that you had to exert a good deal of effort to bend your arm. Just place your arm back in resting position. It is not stiff any more. As you relax your arm, make your whole body relax. As you relax your arm, make your whole body relax.

7a Moving hands (Together)

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. It has been found that most people when they hold their hands in this position have a slight tendency to move their hands towards each other. As you pay attention to

your hands they will move toward each other slowly at first, but they will move closer, closer and closer to each other, moving...moving...closer, closer,...closer to each other, moving...moving...closer, closer...(allow 10" without further suggestions)

That's fine. You see again how by concentrating on certain tendencies to move, you can become more aware of the movement and have it increase.

Now place your hands back by your side and relax. Your hands back in their resting position and relax.

8a Inhibition

You have made yourself very relaxed now...deeply relaxed...As you know people when they are deeply asleep find it difficult to make voluntary movements. This is often the case also for people who are as deeply relaxed as you are now. Think how hard it might be to shake your head back and forth while so deeply relaxed. Perhaps as hard as when asleep...I wonder if you could shake your head. I really don't think you could...You might try a little later when I tell you to...but I think it will be quite difficult...Why don't you try to shake your head now...just try to shake it. (Allow 10")

9a Hallucination

There are some brief questions I need to ask you while you are still hypnotized. These questions will require a "yes" or "no" answer, so you can respond by just shaking your head. I hope you won't mind answering these questions. The questions will be asked over a loud speaker which is on the wall. Please shake your head clearly so that I can record your answer. The loudspeaker has just been turned on...Here is the first question...(Allow 10")

That's fine. Lets now go on to something else.

10a Eye Catalepsy

You have closed your eyes 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. If you try to open them, you will most

likely find that your eyelids are glued together...tightly glued shut. Even if you will be able to open your eyes, you will, 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 - even momentarily - open your eyes. You closed them so tightly that you can not open them. Perhaps you would soon like to try to open your eyes momentarily in spite of their being so heavy and so completely...so tightly closed. Just try...try - to open your eyes. (Allow 10")

All right, stop trying. Now again, make your eyes tightly shut. Your eyes tightly shut. You had a chance to find out how tightly shut they were. Now relax...just keep your eyes closed and relax. (Make your eyes normal again...just keep them closed and relaxed...relaxed and shut.)

11a Post-hypnotic suggestion (touching right ankle) amnesia

Remain deeply relaxed and pay close attention to what I am going to tell you next. In a moment I shall begin counting backward from twenty to one. You will gradually wake up, but for most of the count you will still remain in the state you are now in. By the time I reach "five" you will open your eyes, but you will not wake up fully. When I get to "one" you will be fully alert, in your normal state of wakefulness. You might probably think that you have slept because you will have difficulty in remembering all the things that you did. In fact you will have to make so much an effort to recall any of these things, that you will have no wish to do so. It will be much easier simply to forget everything until I tell you that you can remember. You will remember nothing on what has happened until I say to you: "Now you can remember everything!" You will not remember anything until then. After you open your eyes, you will be normal. You will have no headache or other after effects. I shall now count backwards from twenty, and at "five", not sooner, you will open your eyes but not wake up fully, until I say "one". At "one" you will be awake... A little later I shall tap my pencil on the table like this (demonstrate). When you hear the taping noise you will reach down and touch your right ankle. You will touch your right ankle but forget that I told you to do so; just as you will forget the other things, until I tell you "Now you can remember everything". Ready, now: 20-19-18-17-16-15-14-13-12-11-10 (half-way) 9-8-7-6-5-4-3-2-1.

Wake up! Wide awake. Any remaining drowsiness which you may feel will quickly pass.

(A distinct taping noise is now to be made. Then allow 10" before continuing)

Testing:

Now please take your response booklet, break the seal and turn to the second page of the booklet. Do not turn to the third page until I specifically instruct you to do so later. On the second page please write down briefly in your own words a list of the things that happened since you began looking at the target. You should not go into much detail here on the particular ways in which you responded, but please try to mention all of the different things that you were asked to do. You will now be given three minutes to write out this information. At the end of these minutes you will be asked a number of more specific questions regarding what you did. (Allow two minutes) Please complete your list in one more minute. If you have already completed your list, spend the next minute trying to recall if there was anything else which you may have neglected to mention. (Allow one more minute)

All right, now listen carefully to my words. "Now you can remember everything". Please turn to page three and write down a list of anything else that you remember now that you did not remember previously. You will be given two minutes more to write out this information (Allow 2')

Now please turn to the next page and answer the questions in the remainder of the booklet. Use your own judgement when questions are ambiguous.

(Collect booklets at the end of the session. If necessary instruct Ss to answer only as much of the last section on subjective experiences as time permits).

Appendix B: Left Induction Scale

Preliminary Remarks by Examiner. In a few minutes I am going to administer a standard procedure for measuring susceptibility to hypnosis. At the end of the standard procedure you yourself will report on what the experience was like in the Response Booklet which has been distributed to you. Note that the booklet is sealed. Do not open the Response Booklet until I specifically tell you to do so at the end of the standard procedure. On the Cover Page of the Response Booklet are spaces for your name, address, and some other general information. Please fill in this information now. Again, please do not open the booklet now. Fill in the information on the Cover Page only.
(Allow a minute or two for subjects to record this information)

Let's talk a while before we start. I want you to be quite at ease, and it may help if I answer a few of your questions first. 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 feeling 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, 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, giggling or whispering. We 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.

Third, and finally, I shall not have you reveal personal experiences, so that there will be nothing personal about what you will experience during the hypnotic state.

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 psychiatrists to reduce feelings of anxiety. If we can understand the processes involved, we will know more about the relationship between feelings 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 experience hypnosis, but some are much more readily hypnotized than others, even when each of them feels he is going along. We are studying some of these differences among people.

Have you any questions or comments before we go ahead?
(Answer questions by paraphrasing the above points.)

Now please make yourself comfortable in your chair. Clear your lap of books and papers, and prepare to begin. Individuals who wear glasses should keep them on. If, however, you are wearing contact lenses, it might be more comfortable to remove them. (The examiner should also communicate the following if the main procedures are tape recorded.)

MAIN PROCEDURES

(The following instructions are to be presented verbatim.)

1a HEAD FALLING (Total time: 3'30")

To begin with, I want you to experience how it feels to respond to suggestions when you are not hypnotized. If you will now please sit up straight in your chair...Close your eyes and relax; continue, however, to sit up straight. That's right. Eyes closed and sit up straight. While you find yourself remaining in that position, with your eyes

closed, while at the same time letting yourself relax. (Allow 30" to pass.) Now you'll find yourself remaining in the same position sitting up right with your eyes closed.

In a moment you will feel your head wanting to fall forward. As you know, anticipating a movement and experiencing a movement are closely related. Soon after you will notice your head beginning to fall forward. You will find your head actually falling forward, more and more forward, until your head will fall so far forward that it will hang limply on your neck.

Feel the tendency of your head to fall forward, to droop forward, Feel the tendency of your head to fall forward. fall forward, more and more forward. Your head is falling forward, falling forward. More and more forward. Your head is falling more and more forward, falling more and more forward. Your head is going forward, drooping down, down, limp and relaxed. Your head is drooping, swaying, falling forward, falling forward, falling forward, falling, swaying, drooping, limp, relaxed, forward, forward, falling, falling, falling . . . Now!

That's fine. Now please sit up and open your eyes. That's right. Sit up and open your eyes. You can see how having anticipation of a movement produces a tendency to make the movement. You learn to become hypnotized as a result of having experienced what it is that you were led to anticipate. But at this point you have the idea of what it feels like to experience acting upon suggestions.

2a EYE CLOSURE (Total time: 15'25")

Please place your hands in your lap and let your body find a comfortable position. That's right. Just let your hands rest in your lap. Now as you look at your hands your eyes will find a spot on your left hand and just focus on it. It doesn't matter what spot your eyes choose; your eyes will just select some spot to focus on. I shall refer to the spot which your eyes have chosen as the target. That's right . . . hands relaxed. Your eyes look directly at the target. I am about to give you some instructions that will relax your body and mind and gradually make you enter a state of hypnosis. Just let yourself relax and let your body find a comfortable position. Your eyes will keep looking steadily

at the target and you will find yourself listening carefully to what I say, and listening to my words, letting happen whatever you feel is going to take place. Just let it happen. Your attention will be directed at what I tell you, and the experiences which I will describe will take place. You will find it easy to experience what it feels to be hypnotized. There is nothing fearful or mysterious about hypnosis. It is a perfectly normal consequence of certain psychological principles. 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. Nothing will be done that will cause you any embarrassment. Most people find this a very interesting experience. (Time: 3'35")

You will find yourself relaxing more and more and the tension slowly leaves your body. Your eyes keep looking at the target. Looking at it steadily. Should your eyes wander away from it, that will be all right. . . wander 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 find yourself getting sleepy, that will be fine, too. Whatever happens, let it happen. Your eyes keep staring at the target. There will come a time, however, when your eyes will be so tired, will feel so heavy, that they will be unable to stay open any longer and they will close. (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, they will remain closed. You may find that I shall still give suggestions 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 shall relax completely, while at the same time sitting 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, as I talk, you find that your body and mind continue to relax more and more to relax completely. You will find that every muscle of your body is relaxed. The muscles of your legs are relaxing . . . The muscles of your feet are relaxing . . . The muscles of your arms are relaxing . . . The muscles of your hands are relaxing . . . of your fingers . . . the muscles of your neck, of your chest are relaxing . . . All the muscles of your body are relaxing . . . You experience yourself becoming limp, limp, limp. You find yourself relaxing more and more, more and more, relaxing completely. Relaxing completely. Relaxing 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 legs feel heavy and limp, heavy and limp . . . Your arms are heavy, heavy . . . 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. The heaviness in your eyelids is increasing. Soon you will experience the feeling of your eyes wanting to close. Soon your eyes will close of themselves. Your eyelids will be too heavy to keep open. Your eyes are tired. You are becoming increasingly drowsy and sleepy. The strain in your eyes is getting greater and greater, greater and greater. It will be so nice when your eyes close, your body relaxes completely. You find yourself just listening sleepily to my voice talking to you. You are waiting for your eyes to close and for your body to relax completely, relax completely. Your eyes are becoming 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. Only my voice remains in awareness. Nothing else but my voice enters your mind. Your eyes are getting blurred. (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 . . . closing . . . (Time: 35")

Your eyes may have closed by now, and if they have not, they will soon close of themselves. Even if your eyes have not closed fully as yet, you have experienced the feeling of becoming relaxed and drowsy. At this time you may just let your eyes close. That's it, eyes completely closed. Your eyes are closed now. (Time: 35")

You are now comfortably relaxed, but you are going to become much more relaxed, much more. Your eyes are now closed. Your eyes will remain closed until I tell you otherwise, or I tell you to awaken . . . You feel drowsy and sleepy. Just noticing my voice. Your mind stays on what I am saying--You are just listening. 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 experience all sorts of things I ask you to. 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, sound sleep. Nothing will disturb you. Only my voice remains in your awareness and only such things as I may bring into your awareness. Your attention stays on my voice and the things I tell you . . . Eight--nine--ten--eleven--twelve--deeper and deeper, always deeper asleep--thirteen--fourteen--fifteen--although deeply 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")

3a. HAND LOWERING (Total time: 5'05")

Introduction. As you become even more drowsy and sleepy, your body finds it easy to shift into a more comfortable position without it bothering you.

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 mind can affect what you experience in this state. Not all people experience just the same things in this state, and perhaps you will now have all the experiences I will describe to you. That will be all right. But you will have at least some of the experiences and you will find these interesting. Your attention will remain on what I tell you. Just let happen whatever you find is happening, even if it is not what you expect.

Now you find that there is a tendency in one of your arms to go up in the air and extend straight out in front of you with the palm of your hand down. This tendency becomes stronger and stronger, stronger and stronger. It already becomes very clear and this hand start moving up. You know which hand it is and it moves up, higher and higher till it stops straight out in front of you with the palm of your hand down. That's right. One of your hands goes up in the air, straight out in front of you.

Instruction Proper. One of your hands is straight out in front of you . . . straight out, up in the air, with the palm of your hand down. That's it. One of your arms straight out in front of you . . . palm down. This hand alone remains in your awareness now, the feelings in it, and what is happening to it. As it continues to stay in your awareness, more and more vividly--you feel 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 . . . Your attention stays on 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 . . . in your mind's eye 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 . . . your hand now goes back to its original resting position and relaxes. Your hand back to its original resting position and you relax. You must have noticed how heavy and tired the arm and hand felt; much more so than it ordinarily would if they were to be held out that way for a little while; you probably felt how something seemed to be pulling it down. You become completely relaxed again now, your hand and arm are quite comfortable again . . . quite comfortable again. There . . . You find yourself relaxing more and more, more and more. Relaxing completely.

4a. ARM IMMOBILIZATION (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, you find that your attention wanders again to one of your arms and hands . . . This arm and hand share in the feeling of heaviness . . . how heavy your hand feels . . . and note how as you feel this heaviness in this 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 . . . a little later you will experience a desire to see how heavy your hand is . . . but you will find it too heavy to lift . . . You now start really feeling how heavy it is . . . You find yourself trying in vain to lift your hand up, trying in vain to lift your hand up, trying hard but in vain. (Allow 10")

That's fine . . . you stop trying and your body relaxes again . . . You notice that when you experience a desire to lift it, there was resistance because of the relaxed state you are in. But now your hand rests 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. You relax more and more. You find yourself relaxing completely again, relaxing completely again.

5a FINGER LOCK (Total time: 1'40")

Now, something else will happen. Your hands move together and your fingers become interlocked. You find that your fingers interlock and your hands become pressed together. That's it. Your fingers are together. Your fingers are interlocked and your hands are pressed tightly together. Your fingers are interlocked tightly...hands pressed tightly together. Feel how your fingers are becoming tightly interlocked together, more and more tightly interlocked together ...so tightly interlocked together that you wonder very much if your fingers could be taken apart...Your fingers are interlocked, tightly interlocked...and I want you to see if your hands can be moved apart...see if they can be moved apart (Allow 10")

That's right. You find that you can stop trying and that you relax again. You experienced how hard it was to get started to let them be taken apart. Your hands are no longer tightly clasped together...They can be taken apart. Now return your hands to their resting position. You are becoming relaxed. Hands to their resting position and you are relaxed...just relaxed.

6a ARM RIGIDITY (Total time: 2'25")

Now again you experience a tendency in one of your hands to go up in the air straight out in front of you. This tendency becomes stronger and stronger and one of your hands starts going up in the air. It already becomes clear to you which of your hands has the strongest tendency to go up and this hand starts moving up. You know which hand it is and it moves up, higher and higher till it stops at a position in which it is stretched straight out in front of you and it makes a fist. Moving up quite fast till it stops straight out in front of you and it makes a fist. Arm straight out in front of you. That's right. Straight out, with a fist. Arm straight out, a tight fist...there is a tight fist. Now this arm alone remains in your awareness and you start imagining that it is becoming stiff...stiffer and stiffer...very stiff...and now you feel that something is happening to your arm...you experience a feeling of stiffness coming into it...It is becoming stiff...more and more stiff...rigid ...like a bar of iron...and you can feel how difficult...how impossible it is to bend a bar of iron...you find yourself testing how stiff and rigid it is...trying to bend it...trying to bend it. (Allow 10")

1. The first part of the report is a general
description of the project and its objectives.
2. The second part is a detailed description of the
methodology used in the study.

3. The third part is a discussion of the results
of the study and their implications.

4. The fourth part is a conclusion and
recommendations for future research.

5. The fifth part is a list of references.

That's good. You find that you stop trying to bend your arm now and you become relaxed again. You stop trying to bend your arm and you find yourself relaxing completely again. I want you to experience many things. You felt the creeping stiffness...a good deal of effort had to be exerted in order to do something that would normally be very easy. But your arm is not stiff any longer. Your arm drops back to resting position...back in resting position. You become completely relaxed and as your arm relaxes, your whole body relaxes. As your arm relaxes, your whole body relaxes.

7a HANDS MOVING (TOGETHER) (Total time: 1'45")

Now both hands start moving up in the air, straight out in front of you, palms facing inward--palms facing toward each other. Your hands will be 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 you start imagining a force attracting your hands toward each other pulling them together. As you feel this force pulling your hands together your hands start moving together, slowly at first, but they will move closer, closer and closer together as though a force were acting on them ...moving...moving...closer, closer...(Allow 10" without further suggestion)

That's fine. Now your hands drop back to their resting position and you become relaxed again. Your hands back in their resting position and you become relaxed again.

8a COMMUNICATION INHIBITION (Total time: 1'25")

You are very relaxed now...deeply relaxed...It occurs to you how hard it might be to communicate while so deeply relaxed...perhaps as hard as when asleep...I wonder if your head could shake to indicate "no". I really doubt if it could...When I tell you to, it will be very hard for your head to shake "no". Indeed I have the feeling that it would be but I think you will find it will be impossible...It is impossible for your head to shake no now in spite of its attempt. You can feel how impossible it is to shake your head "no" now. (Allow 10")

That's all right...you stop trying and you become relaxed again. You experienced again how difficult it was for your head to do something normally as easy as shaking your head. It can shake it to indicate "no" much more easily now. Your head starts shaking easily now...That's right, now you become relaxed again. Just relaxed.

9a HALLUCINATION (TUNE) (Total time: 1'30")

I am sure that your mind was so deeply involved in what you were experiencing that the tune which was playing softly in the background has not entered your awareness. But not that I bring it to your awareness, you become increasingly aware of it, you feel as if it is coming closer to you and the rythm penetrates your mind to the extent that your head feels a desire to nod in response to it. The tune comes now to the center of your awareness and your head now is going to start moving up and down in response to the rythm.

That's all right. Your head moves up and down in response to the rythm that you are experiencing. (Allow 10") O.K. I am turning off the tune, no more music. Your head stops responding to the rythm. It relaxes. It relaxes completely again.

10a EYE CATALEPSY (Total time: 2')

You have experienced your eyes closed for a long time while you have remained relaxed. They are by now tightly closed, tightly shut...You start wondering whether it will be possible for your eyes to open. Most likely your eyes feel as if they were glued together...tightly glued shut.. Even if you should be able to open your eyes, they would, of course, do so only momentarily and then immediately close again and relax, so as not to disturb your involvement in yourself. But I doubt that they will be able-even momentarily-to open up. They are so tightly closed that they could not be opened. Perhaps they would soon feel like trying to open momentarily in spite of their feeling so heavy and so completely...so tightly closed. I don't think they would. They are tightly glued now in spite of trying to open up momentarily (Allow 10")

All right. They stop trying. Now and they are becoming tightly shut. Your eyes, tightly shut. You've had a chance to feel your eyes tightly shut. Now you become relaxed again. Your eyes are closed and relaxed...relaxed and shut.

11a POST HYPNOTIC SUGGESTION (TOUCHING LEFT ANKLE);
AMNESIA (Total time: 3'35")

You are deeply relaxed and what I am going to tell you next will enter your awareness very clearly. In a moment I shall begin counting backwards from twenty to one. You will find yourself gradually waking up, but for most of the count you will still remain in the state you are now in. By the time I reach "five" your eyes will open up, but you will not be fully aroused. When I get to "one" you will be fully alert, in your normal state of wakefulness. You probably will have the impression that you have slept because you will have difficulty in remembering all the things I have told you and all the things you experienced or felt. In fact, you will find it to be so much of an effort to recall any of these things that you will have no wish to do so. You will find that the different experiences you had will simply be forgotten until I tell you that you can remember. Nothing will be remembered until I say to you: "Now you can remember everything!" Nothing will be remembered until then. After your eyes have opened, you will feel fine. You will have no headache or other after-effects. I shall now count backwards from twenty, and at "five", not sooner, your eyes will be opened but you will not be fully aroused until I say "one". At "one" you will be awake...A little later you will hear a tapping noise like this (Demonstrate). When you hear the tapping noise you will find your left hand reaching down and touching your left ankle. Your hand will touch your left ankle, but you will have forgotten I told you to do so, just as the other experiences will be forgotten until I tell you "Now you can remember everything". Ready, now: 20-19-18-17-16-15-14-13-12-11-10-half-way=9-8-7-6-5-4-3-2-1. Wake up! Wide awake! Any remaining drowsiness which you may feel will quickly pass.

(A distinct tapping noise is now to be made. Then allow 10" before continuing.)

TESTING:

Now please take your Response Booklet, break the seal and turn to the second page of the Booklet. Do not turn to the third page until I specifically instruct you to do so later. On the second page please write down briefly in

your own words a list of the things that happened since you began looking at the target. You should not go into much detail here on the particular ways in which you responded, but please try to mention all of the different things that you were asked to do. You will now be given three minutes to write out this information. At the end of three minutes you will be asked a number of more specific questions regarding your experiences. (Allow 2') Please complete your list in one more minute. If you have already completed your list, spend the next minute trying to recall if there was anything else which you may have neglected to mention. (Allow 1' more)

All right, now listen carefully to my words. Now you can remember everything. Please turn to page three and write down a list of anything else that you remember now that you did not remember previously. You will be given two minutes more to write out this information. (Allow 2')

Now please turn to page four, and answer the questions in the remainder of the booklet. Use your own judgment where questions are ambiguous.

(Collect booklets at the end of the session. If necessary, instruct subjects to answer only as much of the last section on subjective experiences as time permits.)

APPENDIX C

PLEASE SUPPLY THE INFORMATION REQUESTED BELOW

Name: _____ Date: _____

Age: _____ Sex: _____ School: _____ Class: _____

Occupation: _____

Present Address: _____

_____ Phone: _____

Permanent Address: _____

_____ Phone: _____

Have you ever been hypnotized? Circle: Yes No
If so, please cite the circumstances and describe your
experiences. Please be brief.

DO NOT OPEN THIS BOOKLET until the examiner specifically
instructs you to do so.

Please write down briefly in your own words a list of the things that happened since you began looking at the target. Do not go into detail. Spend three minutes, no longer, in writing your reply.

Please DO NOT TURN THIS PAGE until the examiner specifically instructs you to do so.

PLEASE DO NOT RETURN TO PAGE 2

On this page write down a list of anything else that you now remember that you did not remember previously. Please do not go into detail. Spend two minutes, no longer, in writing out your reply.

Please DO NOT TURN THIS PAGE until the examiner specifically instructs you to do so.

PLEASE DO NOT RETURN TO EARLIER PAGE

SECTION ON OBJECTIVE, OUTWARD RESPONSES

Listed below in chronological order are the eleven specific happenings which were suggested to you during the standard hypnotic procedure. We wish you to estimate whether or not you objectively responded to these eleven suggestions, that is, whether or not an onlooker would have observed that you did or did not make certain definite responses by certain specific, pre-defined criteria. In this section we are thus interested in your estimates of your outward behavior and not what your inner, subjective experience of it was like. Later on you will be given an opportunity to describe your inner, subjective experience, but in this section refer only to the outward behavioral responses irrespective of what the experience may have been like subjectively.

It is understood that your estimates may in some cases not be as accurate as you might wish them to be and that you might even have to guess. But we want you to make whatever you feel to be your best estimate regardless.

Beneath a description of each of the eleven suggestions are sets of two responses, labeled A and B. Please circle either A or B for each question, whichever you judge to be the more accurate. Please answer every question. Failure to give a definite answer to every question may lead to disqualification of your record.

I. THIGH SWAYING

You were first told to sit up straight in your chair for 30 seconds and then to think of your thigh swaying. Would you estimate that an onlooker would have observed that your thigh swayed at least two inches during the time you were thinking about it happening?

Circle one: A. My thigh swayed at least two inches.

B. My thigh swayed less than two inches.

II. EYE CLOSURE

You were next told to rest your hands in your lap and pick out a spot on your right hand as a target and concentrate on it. You were then told that your eyelids were becoming

tired and heavy. Would you estimate that an onlooker would have observed that your eyelids had closed (before the time you were told to close them deliberately)?

- Circle one: A. My eyelids had closed by then.
B. My eyelids had not closed by then.

III. HAND LOWERING

You were next told to extend one of your arms straight out and feel it becoming heavy as a result of the force of gravity pulling the hand and arm down. Would you estimate that an onlooker would have observed that your hand lowered at least six inches (before the time you were told to let your hand down deliberately)?

- Circle one: A. My hand had lowered at least six inches by then.
B. My hand had lowered less than six inches by then.

Which arm did you extend?

- A. Left
B. Right

IV. ARM IMMOBILIZATION

You were next told how heavy one of your hands and arms was and then told to try to lift your hand up. Would you estimate that an onlooker would have observed that you did not lift your hand and arm up at least one inch (before you were told to stop trying)?

- Circle one: A. I did not lift my hand and arm at least one inch by then.
B. I did lift my hand and arm an inch or more by then.

Which hand were you concentrating on?

- A. Left
B. Right

V. FINGER LOCK

You were next told to interlock your fingers, told to tightly interlock them, and then told to try to take your hands apart. Would you estimate that an onlooker would have

observed that your fingers were incompletely separated (before you were told to stop trying to take them apart)?

- Circle one: A. My fingers were still incompletely separated by then.
B. My fingers had completely separated by then.

VI. ARM RIGIDITY

You were next told to extend one of your arms straight out and make a fist, told to make it stiff, and then told to try to bend it. Would you estimate that an onlooker would have observed that there was less than two inches of arm bending (before you were told to stop trying)?

- Circle one: A. My arm was bent less than two inches by then.
B. My arm was bent two or more inches by then.

Which arm did you extend?

- A. Left
B. Right

VII. MOVING HANDS TOGETHER

You were next told to hold your hands out in front of you about a foot apart and then told to imagine a force pulling your hands together. Would you estimate that an onlooker would have observed that your hands were not over six inches apart (before you were told to return your hands to their resting position)?

- Circle one: A. My hands were not more than six inches apart by then.
B. My hands were still more than six inches apart by then.

VIII. INHIBITION

You were next told to think how hard it might be to shake your head back and forth, and then told to try. Would you estimate that an onlooker would have observed you to make a recognizable shake of the head back and forth? (that is, before you were told to stop trying.)

- Circle one: A. I did not recognizably shake my head back and forth.
B. I did recognizably shake my head back and forth.

TX. ASKING QUESTIONS

You were next told that I am going to ask you some questions to which you could indicate a "yes" or "no" answer by shaking your head. Would you estimate that an onlooker would have observed you make any movement with your head, any outward acknowledgement of an effect (regardless of what it was like subjectively)?

- Circle one: A. I did make some outward acknowledgement.
B. I did not make any outward acknowledgement.

X. EYE CATALEPSY

You were next told that your eyelids were so tightly closed that you could not open them, and then you were told to try to do so. Would you estimate that an onlooker would have observed that your eyes remained closed (before you were told to stop trying)?

- Circle one: A. My eyes remained closed.
B. My eyes had opened.

XI. POST-HYPNOTIC SUGGESTION (TOUCHING RIGHT ANKLE)

You were next told that after you were awakened you would hear a tapping noise at which time you would reach down and touch your right ankle. You were further informed that you would do this but forget being told to do so. Would you estimate that an onlooker would have observed either that you reached down and touched your right ankle, or that you made any partial movement to do so?

- Circle one: A. I made at least an observable partial movement to touch my right ankle.
B. I did not make even a partial movement to touch my right ankle, which would have been observable.

CONTINUE ON NEXT PAGE

YOU MAY NOW REFER TO EARLIER PAGES -
BUT PLEASE DO NOT WRITE ANYTHING FURTHER ON THEM

SECTION ON INNER, SUBJECTIVE EXPERIENCES

(1) Regarding the suggestion of EXPERIENCING A VOICE ASKING QUESTIONS - how real was it to you? How vividly did you hear and feel it? Did you really believe at the time that it was there? Was there any doubt about its reality?

(2) Regarding the two suggestions of HAND LOWERING (RIGHT) and RIGHT HAND MOVING TOWARD THE LEFT HAND - was it subjectively convincing each time that the effect was happening entirely by itself? Was there any feeling either time that you were helping it along?

(3) On the remainder of this page please describe any other of your inner, subjective experiences during the procedure which you feel to be of interest.

THANK YOU FOR YOUR COOPERATION

APPENDIX D

PLEASE SUPPLY THE INFORMATION REQUESTED BELOW

Name: _____ Date: _____

Age: _____ Sex: _____ School: _____ Class: _____

Occupation: _____

Present Address: _____

_____ Phone: _____

Permanent Address: _____

_____ Phone: _____

Have you ever been hypnotized? Circle: Yes No
If so, please cite the circumstances and describe your
experiences. Please be brief.

DO NOT OPEN THIS BOOKLET until the examiner specifically
instructs you to do so.

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Listed below in chronological order are the eleven specific happenings which were suggested to you during the standard hypnotic procedure. We wish you to estimate whether or not you objectively responded to these eleven suggestions, that is, whether or not an onlooker would have observed that you did or did not make certain definite responses by certain specific, pre-defined criteria. In this section we are thus interested in your estimates of your outward behavior and not what your inner, subjective experience of it was like. Later on you will be given an opportunity to describe your inner, subjective experience, but in this section refer only to the outward behavioral responses irrespective of what the experience may have been like subjectively.

It is understood that your estimates may in some cases not be as accurate as you might wish them to be and that you might even have to guess. But we want you to make whatever you feel to be your best estimate regardless.

Beneath a description of each of the eleven suggestions are sets of two responses, labeled A and B. Please circle either A or B for each question, whichever you judge to be the more accurate. Please answer every question. Failure to give a definite answer may lead to disqualification of your record.

I. HEAD FALLING

You were first told to sit up straight in your chair for 30 seconds and then to feel the tendency of your head to fall forward. Would you estimate that an onlooker would have observed that your head fell forward at least two inches during the time you were thinking about it happening?

Circle one: A. My head fell forward at least two inches.
B. My head fell forward less than two inches.

II. EYE CLOSURE

You were next told to rest your hands in your lap and pick out a spot on your left hand as a target and concentrate on it. You were then told that your eyelids were becoming tired and heavy. Would you estimate that an onlooker would

have observed that your eyelids had closed (Before the time you were told to close them deliberately)?

- Circle one: A. My eyelids had closed by then.
B. My eyelids had not closed by then.

III. HAND LOWERING

You were next told to extend one of your arms straight out and feel it becoming heavy as though a weight were pulling the hand and arm down. Would you estimate that an onlooker would have observed that your hand lowered at least six inches (before the time you were told to let your hand down deliberately)?

- Circle one: A. My hand had lowered at least six inches by then.
B. My hand had lowered less than six inches by then.

Which arm did you extend?

- A. Left
B. Right

IV. ARM IMMOBILIZATION

You were next told how heavy one of your hands and arms felt and then told to try to lift your hand up. Would you estimate that an onlooker would have observed that you did not lift your hand and arm up at least one inch (before you were told to stop trying?)

- Circle one: A. I did not lift my hand and arm at least one inch by then.
B. I did lift my hand and arm an inch or more by then.

Which hand were you concentrating on?

- A. Left
B. Right

V. FINGER LOCK

You were next told to interlock your fingers, told how your fingers would become tightly interlocked, and then told to try to take your hands apart. Would you estimate that an onlooker would have observed that your fingers were

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You were next told to extend one of your arms straight out and make a fist, told to experience it becoming stiff, and then told to try to bend it. Would you estimate that an onlooker would have observed that there was less than two inches of arm bending (before you were told to stop trying)?

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- Circle one: A. My hands were not more than six inches apart by then.
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VIII. COMMUNICATION INHIBITION

You were next told to experience how hard it might be to shake your head to indicate "no", and then told to try. Would you estimate that an onlooker would have observed you to make a recognizable shake of the head "no"? (That is, before you were told to stop trying.)

- Circle one: A. I did not recognizably shake my head "no".
 B. I did recognizably shake my head "no".

IX. EXPERIENCING OF TUNE

You were next told to become aware of the tune in the background, and then you were told to let your head move in response to the rhythm. Would you estimate that an onlooker would have observed you make any movement, any outward acknowledgement of an effect (regardless of what it was like subjectively)?

- Circle one: A. I did make some outward acknowledgement.
 B. I did not make any outward acknowledgement.

X. EYE CATALEPSY

You were next told that your eyelids were so tightly closed that they could not be open, and then you were told to try to do so. Would you estimate that an onlooker would have observed that your eyes remained closed (before you were told to stop trying)?

- Circle one: A. My eyes remained closed.
 B. My eyes had opened.

XI. POST-HYPNOTIC SUGGESTION (TOUCHING LEFT ANKLE)

You were next told that after you were awakened you would hear a tapping noise at which time you would reach down and touch your left ankle. You were further informed that you would do this but forget being told to do so. Would you estimate that an onlooker would have observed either that you reached down and touched your left ankle, or that you make any partial movement to do so?

- Circle one: A. I ~~made~~ at least an observable partial movement to touch my left ankle.
 B. I did not make even a partial movement to touch my left ankle, which would have been observable.

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SECTION ON INNER, SUBJECTIVE EXPERIENCES

(1) Regarding the suggestion of EXPERIENCING A TUNE - how real was it to you? How vividly did you hear and feel it? Did you really believe at the time that it was there? Was there any doubt about its reality?

(2) Regarding the two suggestions of HAND LOWERING AND HANDS MOVING TOGETHER - was it subjectively convincing each time that the effect was happening entirely by itself? Was there any feeling either time that you were helping it along?

(3) On the remainder of this page please describe any other of your inner, subjective experiences during the procedure which you feel to be of interest.

THANK YOU FOR YOUR COOPERATION

Footnotes

1. Special thanks are due to Jonathan Smith and to Ruben Gur who devoted their time and skills to help construct these scales.
2. The interaction also was significant without the deletion of the two items that were not common to the three scales. There also was a significant, but spurious, columns effect. The results are summarized in Table 11. The columns represent the three different susceptibility scales and the rows divide the subjects into Right-Movers (RM), Left-Movers (LM), and Bidirectionals (BD).

Table 11

Analysis of Variance of Susceptibility

Scores of Nine Groups of Subjects

<u>Source of Variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>
Rows	17.52	2	8.76	1.67
Columns	57.35	2	28.68	5.48*
Interaction	66.25	4	16.56	3.17**
Error	<u>659.47</u>	<u>126</u>	<u>5.23</u>	
Total	800.59	134		

* $p < .01$

** $p < .025$

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