

THE NATURE OF HYPNOSIS:
AN INVESTIGATION OF SOME ASSERTIONS OF
THE LATE MILTON H. ERICKSON

Peter Arthur McCUE

Thesis submitted for the award of the degree of
Ph.D. in Psychology.

Faculty of Social Sciences,
University of Glasgow.

July 1985

ACKNOWLEDGEMENTS

I am very grateful to the numerous subjects and colleagues who assisted me in my research and made this thesis possible. I owe especial thanks to my supervisor, Dr. A.W. Shirley, and to Dr. S.J.T. Robertson, Mr. R.E. Cassidy, Dr. J.A. Crocket, Mr. J. Fraise, Ms. S. Paterson, Dr. B.J. Fellows, Mr. J. Currie, and Professor R.M. Farr. I am very grateful to Mrs. M. Milloy for her invaluable help in typing the earlier drafts of the thesis and to Mrs. M. Steventon for typing it in its final form. I am especially indebted to my wife, Elspeth, for the very many hours she spent assisting me in experiments and helping me check the typescript and tables of this thesis.

CONTENTS

<u>ACKNOWLEDGEMENTS</u>	ii
<u>CONTENTS</u>	iii
<u>SUMMARY</u>	vi
<u>CHAPTER I: INTRODUCTION</u>	1
Overview of the Problem	1
The History of Hypnosis: A Brief Outline ..	2
A Note on Terminology	6
Hypnotic Susceptibility Scales	7
<u>CHAPTER II: SOME THEORIES OF HYPNOSIS</u>	20
Introductory Comments	20
Psychoanalytic Formulations of Hypnosis	21
Pavlov's Neurophysiological Theory of Hypnosis ...	29
Edmonston's Equation of Hypnosis with Relaxation ..	33
White's Motivational and State Interpretation of Hypnosis	38
Sarbin's Social Psychological Analysis of Hypnosis .	41
Three Dimensions of Hypnotic Depth: Shor's Theory .	45
Hilgard's Theories of Hypnosis	49
The Theoretical Position of Barber	59
Conditioning as an Explanation of Hypnosis	67
General Comments on Theories of Hypnosis	68
<u>CHAPTER III: THE STATE—NON-STATE ISSUE</u>	70
Introductory Comments	70
Orne's Real-Simulator Methodology	71
Hypnosis as an Altered State of Consciousness ...	73
The Validity of the Hypnotic State Concept ...	119
<u>CHAPTER IV: ERICKSON'S CONCEPTUALIZATION OF HYPNOSIS</u> ..	123
Biographical and General Information	123
Erickson as a State Theorist	125
Unsuggested Effects following the administration of Hypnotic Induction Procedures	135
Do Subjects enter a Trance State when executing Post-Hypnotic Suggestions?	165
Erickson's Understanding of the relation between Suggestion and "Trance"	180
The Credibility of Erickson's Assertions about Hypnosis	182

CHAPTER V: AN INVESTIGATION OF SOME OF ERICKSON'S

CLAIMS BEARING ON THE STATE—NON-STATE

ISSUE, I: METHOD 194

Overview 194

Recruitment of Subjects 197

Stage I Experiments 198

Stage II Experiments 218

Stage III Experiments 228

Non-Experiments 228

Tests for Literalness with "Unhypnotized" Adults,
Adolescents and Children, 235

Supplementary Experiments concerned with Literalness . 237

CHAPTER VI: AN INVESTIGATION OF SOME OF ERICKSON'S

CLAIMS BEARING ON THE STATE—NON-STATE

ISSUE, II: RESULTS 240

Evidence from Stage I Experiments regarding Literalness 240

General Comments on the Performances of the Stage I
Experiment Subjects 259

Evidence from Stage II Experiments regarding
Literalness 266

Positions for Hypothetical Pictures selected by
Stage II Experiment Subjects 267

Evidence from Stage II Experiments bearing on Erickson
and Erickson's (1941) assertions about a "Post-
Hypnotic Trance" 271

General Comments on the Performances of the Stage II
Experiment Subjects 280

Stage III Experiments 285

Results of the Non-Experiments 314

Results of Tests for Literalness with "Unhypnotized"
Adults, Adolescents and Children 319

Results of the Supplementary Experiments concerned
with Literalness 321

Summary of the Experimental Findings 329

* Findings from Experiments with Subjects who were
excluded from the "Final Subject Pool" 333

<u>CHAPTER VII: CONCLUSIONS</u>	336
Comments on the Research Strategy and the Validity of the Experimental Findings	336
The Relevance of the Experimental Findings to the State—Non-State Issue	340
Some Comments on the Disparity Between Erickson's reported Findings and those of the Present Writer	346
Résumé and Concluding Comments	349
<u>APPENDIX I: DETAILS OF SUBJECTS</u>	351
<u>APPENDIX II: TRANSCRIPT OF THE LENGTHY TAPE-RECORDED HYPNOTIC INDUCTION PROCEDURE USED WITH STAGE II EXPERIMENT SUBJECTS</u>	359
<u>APPENDIX III: TABLES I - XII</u>	365
<u>BIBLIOGRAPHY</u>	391

SUMMARY

Many researchers and clinicians believe that responsive subjects enter an altered state (variously called the "hypnotic state", "hypnotic trance" or simply "hypnosis") when they are exposed to hypnotic induction procedures. However, some investigators and theorists question the validity and usefulness of the concept of a hypnotic state. The present thesis focuses on this issue and, in particular, examines some assertions about the nature of hypnosis made by Milton H. Erickson (1901-1980), a clinician and experimenter who reported observations and findings that appear to support an altered state conceptualization of hypnosis.

Chapter I contains a brief outline of the history of hypnosis and a discussion of terminology, followed by a description of the Stanford Hypnotic Susceptibility Scale, Form C, the Harvard Group Scale of Hypnotic Susceptibility, Form A, and the Creative Imagination Scale (scales that the present writer used in the research reported in Chapters V and VI). Chapter II discusses some theories of hypnosis and in Chapter III the state—non-state issue is discussed at some length. Chapter IV discusses Erickson's conceptualization of the "hypnotic state" and his claims that there are spontaneous (unsuggested) manifestations of this condition. In Chapters V and VI the present writer reports on his attempts to replicate some of Erickson's findings in this area. Thus, the present writer investigated Erickson's claim that "hypnotized" subjects are peculiarly literal in response to questions and requests and his claim that when "hypnotized", highly responsive ("somnambulistic") subjects behave in an unusual manner when they are asked where they would place hypothetical pictures of persons or objects present. The present writer also examined the assertion of Erickson and Erickson (1941) that subjects executing post-hypnotic suggestions briefly re-enter a trance state, a condition which can be perpetuated if a suitable intervention is made by an experimenter. The present writer's findings do not support Erickson's claim regarding literalness and provide only very limited support for his claims regarding the other alleged phenomena under investigation. In Chapter VII the present writer comments on his research strategy and on the validity of his experimental findings, and he discusses the relevance of his findings to the state—non-state issue.

CHAPTER I

INTRODUCTION

OVERVIEW OF THE PROBLEM

Although the phenomena subsumed under the term "hypnosis" are well known, there is lack of agreement among researchers as to how they can be explained and integrated within contemporary approaches to understanding behaviour and experience. One issue that divides researchers is the question whether responsive subjects who are exposed to hypnotic induction procedures enter a special altered state. Bowers (1966) contends that "Most investigators interested in hypnosis believe that there is an hypnotic state which fundamentally differs from the waking state" (p.42). However, over the last three and a half decades "non-state" theorists (e.g. Barber, 1979; Sarbin & Coe, 1972; Wagstaff, 1981) have advanced alternative ways of conceptualizing the behaviour and experience of responsive hypnotic subjects - ways that attempt to dispense with the concept of a "hypnotic state" or "hypnotic trance". There has been some debate between the protagonists of the two viewpoints and claims and counter-claims have been made regarding experimental findings that supposedly support or fail to support an altered state viewpoint. (Theorists adopting an altered state viewpoint differ in their formulations of this presumed condition. The concept of an altered state is discussed in some detail in Chapter III and at various points elsewhere in the present thesis.)

The present thesis focuses on the state—non-state issue and in particular on some assertions about the nature of hypnosis made by the late Milton H. Erickson, who reported observations and experimental findings that appear to lend credence to an altered state conceptualization of hypnosis. After reviewing Erickson's assertions, the present writer will report on his efforts to replicate some of Erickson's findings that bear on the state—non-state issue. In particular, the

present writer will report on his attempts to test Erickson's assertions that (1) "hypnotized"¹ subjects are peculiarly literal in response to questions and requests, (2) that when "hypnotized", highly responsive subjects ("somnambulists") behave differently from "unhypnotized" subjects when they are asked where they would place hypothetical pictures of persons or objects present, and (3) that when executing post-hypnotic suggestions, subjects briefly re-enter a trance state which can be perpetuated if a suitable intervention is made by an experimenter. It will be seen in Chapter VI that the present writer's findings do not support Erickson's claim regarding literalness. The present writer's results provide only very limited support for Erickson's observations regarding the other alleged phenomena under investigation.

THE HISTORY OF HYPNOSIS : A BRIEF OUTLINE

Practices bearing some resemblance to those of modern hypnotists have probably been employed since ancient times.

Edmonston (1981) writes:

It is not fortuitous that the fifth century B.C. Egyptian temples of healing are referred to as sleep temples. According to summary accounts, individuals came to these temples of the healing goddess, Isis, for an incubation period of nine days, during which they would sleep and be cured of their afflictions through the intervention of gods in their dreams.

So influential were the Egyptian sleep temples that by the fourth century B.C. Trikkia, Greece, became the site of the Temple of Asklepios. Satellite temples were soon spawned throughout the countryside, and Greece was caught up in the sleep cult. As with their Egyptian predecessors, the Grecian seekers of solence gained entrance to the sacred sleep room by cleansing themselves physically (by bathing), spiritually (by giving valuable objects to the temple), and by serving

¹ Since traditional terms such as hypnotized, hypnotic state, hypnotic trance and hypnosis are not theoretically neutral (they seem to imply the existence of a special state), the present writer will often use these terms in inverted commas throughout this thesis. In doing so, he does not wish to imply that he has prejudged the issue and rejected the possibility that susceptible subjects respond to hypnotic induction procedures by entering a special state.

a series of probationary periods of prayer and education by the priests. Once in the Abaton, the sleep cure took place, often with the priests serving as intermediaries, making suggestions and performing "minor miracles". (pp.2-3)

Edmonston comments that "The striking resemblance of the activities outlined above to what in later time has been successively labeled 'mesmerism' and hypnosis led Charcot (1893) to write of the 'faith-cure' and to attribute the cures described in these ancient temples to autosuggestion" (p.3).

A major figure in the history of hypnosis was Franz Anton Mesmer (1734-1815). Mesmer's ideas and practices, and their impact, are discussed by Sheehan and Perry (1976). Mesmer was granted a medical degree from the Faculty of Vienna in 1766 after submitting a thesis relating human health and disease to the movements of planets. Mesmer argued for the existence of a universal fluid which he conceived of as a kind of impalpable and invisible gas in which all bodies were immersed. He believed that this fluid had many of the attractive qualities of a magnet and that through it the planets influenced the body. Mesmer believed that human beings were constructed like a magnet, with the left side containing poles in opposition to those of the right side. He believed that disease represented a disharmony in the distribution of these fluids and could be cured by magnetism.

While practising as a physician in Vienna and later in Paris, Mesmer employed treatment methods based on his beliefs about magnetism. Sheehan and Perry (1976) describe Mesmer's first magnetic treatment as follows:

Fraulein Oesterlin, a 29-year-old patient, suffered from a convulsive malady with such symptoms as severe toothache and earache, delerium, rage, vomiting, and swooning. Using astronomical criteria, Mesmer felt he was able to predict the occurrence of these various disorders. He then proceeded to attempt to modify their incidence. Armed with a set of Father Hell's plates¹, Mesmer set about altering the course

¹ Mesmer's work was influenced by Father Hell, a Jesuit who, in line with ancient belief, maintained that the human body had magnetic properties and that magnetism could be curative of physical illness. He believed that healing by magnetic methods could be facilitated if magnetic steel plates were custom-made to be attached and fit closely to the diseased body site.

- 4 -

of her condition by attempting to establish a magnetic tide inside her body. One day, when the patient had a renewal of her usual attacks, Mesmer had her swallow a preparation containing iron and proceeded to attach magnets to her stomach and to each leg. Mesmer (1779) describes what ensued:

Not long afterwards, this was followed by extraordinary sensations; she felt inside her some painful currents of a subtle material which, after different attempts at taking a direction, made their way towards the lower part and caused all the symptoms of the attack to cease for six hours. Next day, as the patient's condition made it necessary for me to carry out the same test again, I obtained the same success with it [pp. 37-38] .

The remissions of symptoms obtained using these methods with this patient were frequently accompanied by what Mesmer called beneficial crises. It is difficult to ascertain whether such crises were coincidental to the therapeutic techniques used, or were the results of Mesmer communicating his belief in the efficacy of crisis through his procedures, or even whether they were based upon cultural beliefs shared by doctor and patient as to the nature of cure. But it is clear that Mesmer at this early stage, considered them important. Further, he quickly decided that his success with Fraulein Oesterlin could not have been caused by the magnets themselves. Rather, it reinforced his belief about the influence of the "General Agent" - that animal magnetism could be accumulated in his own person and then transferred to patients with ensuing curative effects. (Sheehan & Perry, 1976, pp. 5-6)

After moving to Paris in 1778, Mesmer's fame increased and he developed group methods of treatment. Thus, up to 30 people might be treated while sitting around a circular oak cask (the baquet) containing powdered glass, iron filings and bottles of "mesmerized" water arranged in various ways, and from which protruded movable metal rods positioned so as to be applicable to different parts of the body.

In 1784 the King of France appointed two commissions of inquiry into animal magnetism. The reports of these commissions, one

of which was chaired by Benjamin Franklin, were generally very critical. Thus, the Franklin commission concluded that animal magnetism did not exist and that the effects attributed to it could be explained in terms of imagination, touch and imitation. However, in rejecting the theoretical basis of mesmeric practices, the Franklin commission took an excessively negative view of their therapeutic effect (Sheehan & Perry, 1976). Mesmeric practices continued to flourish but over the years there was an increasing move away from a belief in the existence of external factors in promoting mesmeric cures and a shift in emphasis towards concepts such as, imagination and suggestibility. This more psychological orientation is, of course, characteristic of much present-day thinking about hypnosis.

In the 19th century an acrimonious debate occurred between the so-called Nancy and Salpêtrière schools regarding the nature of hypnosis. The eminent neurologist Charcot (1825-1893) investigated hypnotic phenomena in hysterical patients and wrongly concluded that hypnotic responsiveness was indicative of hysteria. Bernheim (1840-1919), a medical professor at the University of Nancy, contested this view. Drawing on his clinical experience and that of Liébeault (1823-1904), he contended that the phenomena of hypnotic "somnambulism" were not confined to hysterics. Sheehan and Perry (1976) outline some of the shortcomings of Charcot's work with hypnosis. For example, Charcot believed that the "hypnotized" person was in some sense unconscious and could not perceive what was happening in his immediate environment. This led Charcot to discuss his doctrines in the presence of subjects, unaware of how that could help to elicit behaviour consistent with his theories.

So far as the adjunctive use of hypnosis in treatment is concerned, Charcot's work influenced Freud (1856-1939) who employed hypnosis in his early therapeutic work before abandoning it in favour of free association. Despite the impetus it gave to early psychoanalytic thinking, hypnosis remains generally unpopular among psychoanalytically-oriented therapists, although there are some notable exceptions (e.g. Gill & Brenman, 1959; Wolberg, 1948a,b). There is a growing literature on the adjunctive use of

hypnotic procedures in behaviour therapy (e.g. Dengrove, 1973; Kroger & Fezler, 1976; Vingoe, 1981). Hypnotic procedures have also been employed by therapists working without a clear behaviour therapy or psychoanalytic orientation. For example, Hartland (1971) recommends the use of direct suggestive techniques in the management of a variety of psychological and psychosomatic conditions, and considerable emphasis is given to the use of indirect suggestion in the writings of Erickson (e.g. Erickson & Rossi, 1979; Erickson, Rossi & Rossi, 1976).

A NOTE ON TERMINOLOGY

We owe our present-day hypnosis terminology to James Braid (1795-1860), a Manchester-based surgeon who called the condition of "hypnotized" individuals a "nervous sleep". Initially Braid used the term neuro-hypnology (from the Greek hypnos, meaning to sleep), which he contracted to neurypnology before settling on the less awkward terms hypnotize, hypnotism and hypnotist. (Sheehan & Perry, 1976). In his later theorizing, Braid gave increasing emphasis to the role of suggestion in eliciting hypnotic phenomena.

Pavlov (1923) regarded hypnosis as a condition of partial sleep, but this view finds little support among present-day researchers. Evans (1979) states that "There is no new evidence to challenge the generally accepted conclusion that the physiology of hypnosis reflects a waking state rather than a sleep state" (p.180). However, the literal implication of the term "hypnosis" continues to influence some people's thinking. Thus many lay people seem to assume that a "hypnotized" person is more or less unconscious and unaware of his surroundings.

The term hypnosis tends to be used in a number of related but conceptually different ways:

- (1) As a label for the presumed condition or state produced in a responsive subject by a hypnotic induction procedure.

- (2) As a general term for the area or field of investigation and practice associated with "hypnotic" phenomena. ("He is doing research in hypnosis.")
- (3) As a label for procedures carried out by hypnotists to bring about "hypnotic" behaviour and experiences in subjects. Thus, some writers refer to subjects responding or not responding to hypnosis.
- (4) In the clinical literature one occasionally encounters the use of the term "hypnosis" as if it referred to a distinctive type of therapy. In fact, "hypnosis" is not a recognizable therapy, although hypnotic techniques can be used adjunctively in various types of treatment. (Frischholz & Spiegel, 1983).

Users of hypnosis terminology have to be wary of slipping into sterile, circular logic such as attributing responsiveness to suggestions to a subject's being in a "hypnotic state" and inferring that the subject is in a "hypnotic state" because he or she responds to suggestions. As Barber (1969a) argues, if behaviours that are to be explained are said to be functionally related to a state of hypnosis, then criteria for that state are needed which are independent of the behaviours that are to be explained.

HYPNOTIC SUSCEPTIBILITY SCALES

It is well recognized by experimenters and clinicians that not all subjects are equally responsive to hypnotic induction procedures and hypnotic-type suggestions. The scientific study of hypnosis has been facilitated by the development of reasonably reliable and valid measures of hypnotic susceptibility such as the Stanford Hypnotic Susceptibility Scale, Forms A and B (Weitzenhoffer & Hilgard, 1959) and the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer & Hilgard, 1962).

Regarding individual differences in hypnotic susceptibility (or what is variously termed "hypnotizability", "hypnotic responsiveness", "hypnotic responsivity" or "hypnotic talent"), Hilgard (1977a) comments that "Although hypnotic tests conform roughly to the

usual pattern of a very few who are totally unresponsive to hypnotic induction and hypnotic suggestions and a few unusually responsive, with others falling in the middle range, a peculiarity in the distribution commonly noted is that there is often bimodality..." (p.156).

Although hypnotizability may be increased to some extent by various training procedures (Diamond, 1974), researchers tend to regard it as a fairly stable trait. Morgan, Johnson and Hilgard (1974) obtained a correlation of 0.6 between the hypnotizability scores of 85 subjects who were retested after 8 - 10 years. Although there are no marked sex differences in hypnotic responsiveness, there are some systematic changes with age (Hilgard, 1965; Morgan & Hilgard, 1973). Hilgard (1965) writes: "It may be stated with a high degree of confidence that children in the age range of 8 to 12 respond more readily to hypnoticlike suggestions (with or without induction of hypnosis) than either younger or older children, and that the adult level of responding is reached perhaps between ages 14 and 18" (p. 295). The adult level of responding is generally lower than that of children in the age range 8 - 12 years and elderly people tend to be less responsive than younger adults. However, M. Gibson (1984) writes:

In their examination of the experimental work, Gardner and Olness (1981) accept London's (1962) point that there appear to be methodological flaws in those studies which purport to demonstrate a peak in hypnotic responsiveness ... between the ages of 8 yrs and 12 yrs. The reasoning used is that children under the age of 8 yrs are viewed as being poor simulators of hypnotic responses while the adolescents over the age of 12 yrs are seen as being too honest to simulate. The intervening age group is construed as containing the most convincing simulators who on the tests of hypnotic responsiveness used, are difficult to distinguish from the genuinely responsive children. It is argued that failure to detect and exclude the scores of the simulators from the research results has produced this peak or overestimate of hypnotic responsiveness between the ages of 8 yrs and 12 yrs. (pp. 31-32).

In pursuing the research described in Chapters V and VI, the present writer employed two hypnotic susceptibility scales and a related measure for which a hypnotic induction procedure is optional. Some details will now be given of these instruments.

The Stanford Hypnotic Susceptibility Scale, Form C

Administration of the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) involves a hypnotic induction procedure followed by 12 test-suggestions. The manual for the SHSS:C (Weitzenhoffer & Hilgard, 1962) includes a standard eye-closure induction procedure but alternative induction procedures can be employed. The test-suggestions are as follows:

Hand lowering (right hand): The subject is asked to extend his right hand out at shoulder height with the palm facing upwards. He is asked to imagine that he is holding something heavy in his hand such as a heavy baseball or a billiard ball. He is asked to shape his fingers around as though he were holding this heavy object that he imagines is in his hand. Suggestions are given that the hand and arm feel heavy and that they are beginning to move down. The item is passed if the hand lowers at least six inches by the end of a 10-second waiting period.

Moving hands apart: The subject is asked to extend his arms ahead of him, with palms facing each other. He is asked to imagine that there is a force acting on his hands to push them apart, as though one hand were repelling the other. Suggestions are given that the hands are separating. The item is passed if, after 10 seconds without further suggestions, the hands are six or more inches apart.

Mosquito hallucination: It is suggested to the subject that there is a mosquito buzzing around his right hand and that the insect is landing on his hand. The subject is instructed to brush it off and get rid of it if it bothers him. The item is passed if there is any grimacing, any movement or any acknowledgement of effect within a 10-second interval.

Taste hallucination: The subject is asked to think of something sweet-tasting in his mouth, like a little sugar. Suggestions are given that as he thinks about the sweet taste he will

begin to experience a sweet taste. Later, suggestions are given that he can experience a sour taste. The item is passed if the subject reports experiencing both tastes and either (1) exhibits some overt signs such as lip movements or grimacing in association with at least one of these suggested tastes, or (2) one of these tastes is reported as strong.

Arm rigidity: The subject is asked to hold his right arm straight out with the fingers straight out too. Suggestions are given that as the subject thinks of his arm's becoming stiffer and stiffer, he will feel it become stiff, as if tightly splinted. He is asked to test how stiff and rigid it is by trying to bend the arm. The item is passed if there is less than two inches of arm bending in a 10-second interval.

Dream: The subject is told that he will be allowed to rest for a little while and in that period he will have a dream of the type one has when asleep at night. He is told that when the experimenter stops talking, he will begin to dream about what hypnosis means. After a two-minute interval, he is told that the dream is over and that if he had a dream he can remember every detail of it clearly. He is asked to describe the dream to the experimenter from the beginning. The item is passed if, in the words of the test manual, the subject "dreams well (i.e., has an experience comparable to a dream - not just vague, fleeting experiences, or just feelings or thoughts without accompanying imagery)."

Age regression: The subject is supplied with an 8½ x 11 inch pad of paper and a soft lead pencil. He is asked to write his name, age, and date on the paper. He is told to think about when he was in the "fifth grade of school" (in using this scale in the United Kingdom, the experimenter might prefer to ask the subject to think back to when he was 10 years-old at school) and it is suggested that in a little while he will find himself once again sitting in a class in the fifth grade, writing or drawing on some paper. The experimenter counts from one to five, interpolating suggestions to facilitate the "age regression". After reaching five, the experimenter says, "You are now a small boy (girl) in

a classroom in school." The experimenter asks the subject how old he is, where he is, what he is doing, and who his teacher is. He is asked to write his name on the pad with the pencil and then write down his age, the date, if he can, and the day of the week. Further suggestions are then given to the effect that the subject will find himself back at an earlier period - when he was in the "second grade" (i.e. about seven years-old)¹. After the experimenter has counted from one to two, he tells the subject that he is now in the second grade, sitting happily in school with some paper and pencil. The experimenter asks the subject his name, how old he is, where he is, and who his teacher is. He then asks the subject to write his name on the paper, followed by how old he is. He then asks the subject, "And can you tell me what the date is today? Or the day of the week?" Suggestions are then given to re-orient the subject to the present time. The item is passed if there is a clear change in handwriting between the present and one of the "regressed ages".

Arm immobilization: Suggestions are given to the subject that his left arm and hand are becoming heavy. It is suggested that the subject might like to find out how heavy his hand is and he is instructed to try to lift the hand up. The item is passed if the arm rises less than one inch in a 10-second period.

Anosmia to ammonia: Suggestions are given to the subject to the effect that shortly he will be unable to smell any odours. Eventually an open bottle of ammonia is held three inches away from his nose and he is instructed to take a good sniff. The subject is asked whether he smelled anything, and if his reply is yes, what it smelled like to him. The suggestions for anosmia are then cancelled. The item is passed if the subject denies experiencing the odour of ammonia and gives no overt signs of having smelled it.

¹ In using the SHSS:C in his research, the present writer did not speak of the subject's being in the "fifth grade" and "second grade" since such expressions would be foreign to the majority of British subjects. Instead, the present writer referred to the subject's being 10 and 7 years-old respectively.

Hallucinated voice: The subject is told that there is someone in the office¹ who wants to ask him some questions about himself for record purposes, such as how old he is, where he was born, how many brothers and sisters he has, and a few other factual questions. The subject is told that the questions will be asked over a loud speaker microphone combination which is on the wall to his right. He is asked to talk "good and loud" when answering so that he can be heard clearly. He is told that the loud speaker has just been turned on and that the first question has been asked. If the subject says that he has heard the question but does not answer aloud, he is told that the experimenter could not hear what he said and he is asked to answer so that the experimenter can hear too. The item is passed if the subject answers realistically at least once, or gives evidence of having hallucinated his answers.

Negative visual hallucination: While the subject sits with his eyes closed, a small table is placed before him with three coloured boxes lined up from left to right. The subject is told that in a little while he will be asked to open his eyes and look at the table in front of him, remaining hypnotized. He is told that there are two boxes on the table and nothing more. He is instructed to open his eyes and look at the boxes. He is asked whether he sees them and whether he sees anything else on the table. If the subject seems to accept that there are two boxes, he is asked to tell the experimenter what the boxes look like, whether they are large, and whether they are alike. The item is passed if the subject reports seeing only two boxes, even though the failure to see the third box may not be sustained. If the third box is perceived vaguely as a coloured spot or shadow, the item is still regarded as passed .

¹ In using the SHSS:C with subjects, the present writer substituted the word "room" for "office".

Post-hypnotic amnesia: The subject is told that shortly the experimenter will count back from 20 to one and that when he reaches five the subject will open his eyes but will not be fully awake. He is told that when the experimenter gets to one he will be entirely roused up, in his normal state of wakefulness. He is further told, "You will have been so relaxed, however, that you will have trouble recalling the things I have said to you and the things you did or experienced. It will prove to cost so much effort to recall that you will prefer not to try. It will be much easier just to forget everything until I tell you that you can remember. You will forget all that has happened until I say to you: 'Now you can remember everything!' You will not remember anything until then. After you wake up you will feel refreshed, and not have any pain or stiffness or other unpleasant aftereffects." After being counted back to one, the subject is asked to tell the experimenter in his own words everything that has happened since he began looking at the target (the target being an object of eye fixation, assuming an eye fixation hypnotic induction procedure was employed). The item is passed if the subject recalls three or fewer items before being told by the experimenter, "Now you can remember everything."

The SHSS:C has been a popular assessment tool in hypnosis research and has an advantage over Forms A and B of the SHSS in that it covers a wider range of "hypnotic" behaviours and experience. (The SHSS:A and SHSS:B [Weitzenhoffer & Hilgard, 1959] contain more "motor" items, whereas the SHSS:C has a greater preponderance of "cognitive" items than the earlier versions of the scale.)

The norms for Stanford University undergraduate students given in the SHSS:C manual (Weitzenhoffer & Hilgard, 1962, p.40) are reproduced below¹. It can be seen that relatively few subjects score 10 or more on the scale. In the normal course of events, one would expect someone who is described as being a "good" hypnotic subject to score highly on a scale such as the SHSS:C.

¹ Where the present writer has reproduced tables from other writers' work, he has labelled them with capital letters (i.e. Tables A, B and C on pp. 14, 137 and 142 respectively). The tables summarizing his own experimental findings appear in Appendix III and are labelled with upper case Roman numerals (i.e. Tables I-XII).

TABLE A

General Level	Raw Scores	Number of Cases		Total	Percent of Cases	Centile Equivalent	Standard Score *
		Male	Female				
Very high	12	3	3	6	3)	99	72
	11	4	2	6	3)	96	69
High	10	6	2	8	4)	92	66
	9	5	3	8	4)	88	63
	8	9	12	21	10)	81	59
	7	11	9	20	10)	71	56
	6	8	9	17	8)	62	53
	5	12	12	24	12)	52	50
Low	4	9	6	15	7)	42	47
	3	8	14	22	11)	33	43
	2	11	24	35	17)	19	40
	1	9	4	13	7)	7	37
	0	6	2	8	4)	2	34
Cases		101	102	203	100%		
Mean		5.28	4.86	5.07			
S.D.		3.27	2.91	3.15			

* Mean of 50, standard deviation of 10.

The Harvard Group Scale of Hypnotic Susceptibility, Form A

The Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) (Shor & E.C. Orne, 1962) is an adaptation for group administration with self-report scoring of the individually-administered and objectively-scored Stanford Hypnotic Susceptibility Scale, Form A (SHSS:A).

Administration of the HGSHS:A proceeds with introductory remarks by the experimenter, a test item in which subjects are asked to think of their heads falling forwards, and a standardized hypnotic induction procedure and further test-suggestions. One of these, "Eye Closure", is given during the induction procedure. In total, the HGSHS:A contains 12 test-suggestions as follows:

Head falling: This item is passed if the subject judges that his head fell forward at least two inches during a period of 30 seconds of thinking of the head falling forward.

Eye closure: This item is passed if the subject judges that his eyes closed before a point during the induction procedure when an instruction was given to close them deliberately.

Hand lowering: This item is passed if the subject judges that when told to extend his left arm straight out and feel it becoming heavy as if a weight were pulling the hand and arm down, an onlooker would have judged that the hand lowered at least six inches (before the time when the experimenter gave an instruction to lower the hand deliberately).

Arm immobilization: This item is passed if the subject judges that after he was given suggestions for heaviness of the right arm and hand, an onlooker would have observed less than an inch of lifting of the hand and arm (before the time when the experimenter gave an instruction to stop trying).

Finger lock: This item is passed if the subject judges that after being given suggestions to the effect that he would be unable to separate his interlocked fingers, an onlooker would have observed that the subject's fingers were incompletely separated (before he was told to stop trying to take his hands apart).

Arm rigidity: This item is passed if the subject judges that after being asked to extend his left arm straight out, make a fist, notice the arm becoming stiff and then try to bend it, an onlooker would have observed less than two inches of arm bending (before the subject was told to stop trying).

Moving hands together: This item is passed if the subject judges that before he was told to return his hands to their resting position, an onlooker would have observed that the subject's hands were not more than six inches apart after instructions were given to hold the hands out in front, about a foot apart, and then imagine a force pulling the hands together.

Communication inhibition: This item is passed if the subject judges that an onlooker would have observed no recognizable shake of the subject's head indicating "No" after the subject had been told to think how hard it might be to shake his head to indicate "No" and was then told to try. (That is, before the subject was told to stop trying.)

Experiencing of a fly: This item is passed if the subject judges that an onlooker would have observed some grimacing, a movement, or some other outward acknowledgement of an effect after the subject had been told to become aware of the buzzing of a fly, which was described as annoying and which he was told to shoo away.

Eye catalepsy: This item is passed if the subject judges that an onlooker would have observed that the subject's eyes remained closed after the subject was told that his eyelids were so tightly closed that he could not open them and was then told to try to do so (before being told to stop trying).

Post-hypnotic suggestion: This item is passed if the subject judges that an onlooker would have observed the subject to have reached down and touched his left ankle or to have made a partial movement to do so after awakening from hypnosis and hearing a tapping noise.

Amnesia: This item is passed if the subject recalls fewer than four of the nine test-suggestions given during the period beginning with the induction procedure and ending with the dehypnotization ritual (a countback from 20 - 1).

Like the SHSS:A, the HGSHS:A is heavily weighted with items concerned with motor functions (e.g. suggestions for arm immobilization, arm rigidity, and hands moving together). The individually-administered SHSS:C is generally regarded as a better all-round hypnotic susceptibility scale since it contains more "cognitive" items pertaining to phenomena of the type traditionally subsumed under the term "deep hypnosis", e.g. the "Dream", "Hallucinated Voice" and "Negative Hallucination" items.

Discussing the HGSHS:A, Hilgard (1979a) comments:

The test is adapted from the SHSS:A and correlates substantially with it. Those completing the scale score their own responses in a booklet that is provided. This causes fewer difficulties than might have been expected. Even so, for more precise findings, it is preferable to consider the HGSHS:A as a screening test to be followed by individual testing. Experimenters in our laboratory commonly begin with the HGSHS:A and then retest individually with the SHSS:C. This procedure produces a relatively stable estimate of an individual's level of hypnotizability. (p.7)

The hypnotic induction procedure and test-suggestions of the HGSHS:A can be administered via a tape-recording.

Shor and E.C. Orne (1963) and Coe (1964) provide normative data for the HGSHS:A.

The Creative Imagination Scale

The Creative Imagination Scale (CIS) (Wilson & Barber, 1978) contains 10 test-suggestions and was designed so that it could be given as easily to individuals or to groups. The scale can be administered with or without a preceding hypnotic induction procedure and thus differs from scales such as the HGSHS:A. Wilson and Barber are critical of earlier scales such as the SHSS:C, the HGSHS:A and the Barber Suggestibility Scale (Barber, 1969a) because of the authoritarian manner in which the suggestions of these scales are couched. They claim that "A new scale is needed containing nonauthoritatively worded test-suggestions which emphasize to subjects that they are to produce the suggested experiences by their own thinking and creative imagining rather than as a result of being under the control of the experimenter, physician,

or hypnotist" (p. 236). Despite this assertion, the test-suggestions of the CIS describe specific imaginal strategies for experiencing the suggested effects, which is not the same as leaving it to subjects to produce suggested experiences by their own thinking and creative imagining.

Administration of the 10 test-suggestions takes 18 minutes. Subjects are asked to close their eyes and keep them closed while the scale is administered.

Wilson and Barber (1978, pp. 236-237) summarize the test-suggestions as follows:

- 1) Arm Heaviness: Starting with the subjects' left arm extended and horizontal with the palm facing up, suggestions are given to guide them in imagining that three heavy dictionaries are being placed in the outstretched hand causing the arm to feel heavy.
- 2) Hand Levitation: Starting with the subjects' right arm extended and horizontal with the palm facing down, suggestions are given to guide them in imagining that a strong stream of water from a garden hose is pushing against the palm of the hand, pushing the hand up.
- 3) Finger Anesthesia: Starting with the subjects' left hand placed in the lap with the palm facing up, suggestions are given to guide them in imagining that Novocain has been injected into the side of the hand next to the little finger, causing two fingers to feel numb.
- 4) Water "Hallucination": Suggestions are given to guide the subjects in imagining that they are drinking a cup of cool mountain water.
- 5) Olfactory-Gustatory "Hallucination": Suggestions are given to guide the subjects in imagining smelling and tasting an orange.
- 6) Music "Hallucination": Suggestions are given to guide the subjects in thinking back to a time when they heard some wonderful music and to reexperience "hearing" it.
- 7) Temperature "Hallucination": Starting with the subjects' hands resting in their lap with the palms facing down, suggestions are given to guide them in imagining that the sun is shining on the top of the right hand, causing it to feel hot.

- 8) Time Distortion: Suggestions are given to guide the subjects in imagining that time is slowing down.
- 9) Age Regression: Suggestions are given to guide the subjects in recreating the feelings that they had experienced as a child in elementary school.
- 10) Mind-Body Relaxation: Suggestions are given to guide the subjects in imagining that they are lying under the sun on a beach and becoming very relaxed.

After the administration of the 10 test-suggestions, subjects indicate what they experienced using a self-scoring form. For each test suggestion, the subject is asked to rate his experience on a five-point scale ranging from 0% (meaning that the experience was "Not at all the same" as the real thing), through 25% (meaning that the experience was "A little the same" as the real thing), 50% (meaning that the experience was "Between a little and much the same" as the real thing), 75% (meaning that the experience was "Much the same" as the real thing) to 90+% (meaning that the experience was "Almost exactly the same" as the real thing). An endorsement of 0% receives a score of 0, 25% a score of 1, 50% a score of 2, 75% a score of 3, and 90+% a score of 4. Given that the scale contains 10 test-suggestions, the maximum possible score a subject could obtain is 40.

Wilson and Barber (1978) present norms for the CIS based on the administration of the scale to 217 students enrolled into an introductory psychology course at the College of Basic Studies at Boston University. These norms indicate that 18 per cent scored in the range 29-40, 34 per cent scored in the range 21-28, 35 per cent scored in the range 11-20, and 13 per cent scored in the range 0-10.

Wilson and Barber (1978) claim that the CIS is a single-factor scale but Hilgard, Sheehan, Monteiro and Macdonald (1981) report two studies from which they conclude that the CIS is highly loaded on two factors which they describe as "hypnotic responsiveness" and "absorption/imagination".

CHAPTER II

SOME THEORIES OF HYPNOSIS

INTRODUCTORY COMMENTS

In outlining some attempts at explaining hypnotic behaviour and reported hypnotic experiences, emphasis will be mainly on contemporary psychological theories rather than on physiological speculations, although mention will be made of Pavlov's view of hypnosis (understood as a state) as a type of partial sleep and Edmonston's recent equation of "neutral hypnosis" with relaxation. No claim is made that the present discussion of theories of hypnosis is comprehensive. Considerations of space alone would preclude a comprehensive review. The aim of the present chapter is essentially to outline a number of approaches and to set the background for a discussion of the state—non-state issue and some relevant aspects of Erickson's work.

Sarbin (1950) argues that a theory of hypnosis must account for many phenomena subsumed under a single label. He groups these phenomena and the conditions that elicit them under four headings: the apparent discontinuity or dissociation of behaviour (e.g. anaesthesia, amnesia, and post-hypnotic compulsive behaviour); the apparent automaticity of response (e.g. apparent absence of volitional activity); the disjunction between the magnitude of the response and the procedure which instigates the response (i.e. marked changes in behaviour evoked by the experimenter's merely talking to the subject); individual differences in responsiveness to hypnotic induction procedures (i.e. the way in which some subjects are responsive to hypnotic procedures to a greater or lesser extent, with some subjects being completely unresponsive).

Sarbin and Coe (1972), in discussing their own and alternative theories of hypnosis, differentiate between two major categories: specific theories, which have been constructed purposely to explain hypnosis, and general theories, which have broad application across many situations and whose concepts can be applied to hypnotic phenomena (on the grounds that hypnosis is not a unique phenomenon and is subject to analysis under the same set of principles as

other constellations of behaviour). Sarbin and Coe (1972) recognize that another division applying to theories of hypnosis pertains to the emphasis placed on "state" concepts and unusual changes in behaviour following hypnotic induction procedures. They point out that Pavlov's theorizing lies at one extreme, with hypnosis being seen as a neurologically determined "state" created by the induction procedures. On the other hand, role theory lies at the other extreme and applies the same concepts in accounting for hypnotic behaviour as it does for other social psychological events.

As will be seen in the following discussion of some contemporary theories of hypnosis, theorists of different persuasions employ different descriptive language and metaphors in advancing their explanations of hypnotic behaviour and experience. The abstract and metaphorical language often used in attempts to explain hypnosis can prove problematic for the empirically-minded researcher who wishes to test the validity of such theories. For example, it may prove difficult to confirm or disconfirm empirically the assumptions of a psychoanalytically-oriented theory of hypnosis couched in terms such as "regression" and "transference" - hypothesized processes that are themselves difficult to define and pin down in an experimental setting.

PSYCHOANALYTIC FORMULATIONS OF HYPNOSIS

In terms of the distinction made by Sarbin and Coe (1972) between specific and general theories, psychoanalytic approaches to hypnosis fall under the latter heading. Although various psychoanalytic writers have discussed hypnosis, consideration here will be restricted to the theorizing of two sets of authors who have considered the topic in some detail: Kubie and Margolin (1944), and Gill and Brenman (1959).

Kubie and Margolin's Theory

Kubie and Margolin (1944) differentiate between the "hypnotic process" (hypnotic induction) and the "hypnotic state". They argue that these differ on both psychological and physiological levels but they discuss the latter only in rather general terms.

They argue that ontogenetically the hypnotic process can be viewed as a phenomenon of regression in that it approaches the sensori-motor state of an infant in the first weeks of life. They state:

Naturally, in the hypnotic process this regression cannot divest itself completely of all that has been acquired subsequently; but the expression of all later experiences is channeled through this earlier mechanism.

According to this description, the onset of the hypnotic state can be defined as a condition of partial sleep, in which one or two open channels of sensori-motor communication are maintained between the subject and the outside world. A consideration of the full implications of this fact makes it possible to explain the transition to the fully developed hypnotic state. Awareness of self as distinct from the world which impinges from without depends in its ultimate analysis upon multiple avenues of communication. The fewer are the open channels and the more completely is the subject restricted to one avenue of impression, the less clearly differentiated will be the boundaries between his "Ego" and the external world. Thus at the outset a state is created in which each successive sensory stimulus from the hypnotist operates less and less as though it reached the subject from the outside world: instead, the incoming stimuli become indistinguishable from the self, seemingly as endogenous as the subject's own thoughts and feelings. Once the subject is going "under", it is only in a purely geographical sense that the voice of the hypnotist is an influence from the outside. Subjectively it is experienced rather as an extension of the subject's own psychic process. The hypnotist's words are the nucleus of thoughts that the subject is thinking; the hypnotist's commands become his own spontaneous purposes, even to the point of acquiring the ambivalence of neurotic conflicts. This dissolution of Ego boundaries creates a psychological state which is analogous to that brief period in early infancy in which the mother's breast in the mouth of the infant is psychologically a part of that infant far more than his own toes and hands, as much a part of the infant's Ego as is his own mouth. It is this dissolution of Ego boundaries that gives

the hypnotist his apparent "power"; because his "commands" do not operate as something reaching the subject from the outside, demanding submissiveness. To the subject they are his own thoughts and goals, a part of himself. (pp. 611-612)

So far as the "fully developed hypnotic state" is concerned, Kubie and Margolin argue that:

As the process of inducing the hypnotic state achieves its goal, a remarkable and highly significant change occurs. The subject again becomes able to communicate freely with the outside world. He reestablishes the boundaries of his ego both in time and place at least partially, and towards everything and everyone including the hypnotist. At the same time the hypnotist becomes partially engulfed within him ("incorporated"), almost as an amœba flows around a food particle by re-expanding the pseudopodia which it has first withdrawn and then put out again. (pp. 617-618.)

Kubie and Margolin draw a parallel between hypnotic induction, the development of the "fully developed hypnotic state", and the psychological evolution of infancy:

In this process, parental figures are at first the only avenue of communication with the world, and are therefore an integral part of the infant Ego because of the lack of clearly defined Ego boundaries. Subsequently they are in part dissociated from the infant and in part even more deeply buried ("incorporated") in the unconscious levels of the personality. Similarly the hypnotist who begins as a part of the subject, subsequently is partly disowned, the subject conversing with him on an impersonal level as though he were any casual companion. At the very same time, however, on a still deeper level, the subject is living, thinking, feeling and acting at the behest of the secret voice of the hypnotist which he carries within him. It is this voice which echoes the spoken words of the real hypnotist, turning them into the subject's own purposes. Thus the hypnotic process parallels with singular precision the development of the relationship of the infant Ego to the adult parental world.

Yet just as it is never the actual parent but an image of the parent, so it is not the hypnotist, himself, but a complex image of the hypnotist which becomes part of the subject. This image functions in the subject as does the residue of parental images in adults. It delimits memories and contacts, dictates purposes, distributes inner rewards and inner punishments, and engenders strong affects. (pp. 618-619.)

The notion that a hypnotic subject is "living, thinking, feeling and acting at the behest of the secret voice of the hypnotist which he carries within him" is echoed by H.B. Gibson (1977), a non-psychoanalytic writer, who, discussing the use of hypnosis in the treatment of emotional disorders, states that "Hypnosis works because the voice and the assertions of the hypnotist come to replace our own thoughts in certain situations" (p.62).

In their contentions regarding physiological factors in the induction of the "hypnotic state", Kubie and Margolin reveal the influence of Pavlov. Thus they write:

The basic physiological prerequisite for the induction of the hypnotic state is the creation of a focus of central excitation with surrounding areas of "inhibition" (or "non-excitation"). In turn, this depends upon two related factors, (1) relative immobilization, and (2) a monotonous stimulus of low intensity, either continuous or rhythmical. (pp. 613-614).

Kubie and Margolin suggest that the fixing of a subject's gaze on a single point, a common feature in hypnotic induction procedures, has a valid physiological basis. They write:

Pavlov showed that "exploratory" or "investigatory" impulses of animals are basic in maintaining a state of general alertness, and that any interference with them is the first step towards the induction of the hypnotic immobilization which is described by all who work with animals, both in animal husbandry and in the experimental laboratory. (p.614.)

Kubie and Margolin suggest that at the same time, eye fixation reduces visual input to a low, continuous monotone with the eye seeing only one spot, just as the ear hears only a droning voice or sound. They suggest that this simultaneous restriction of

both motor activity and sensory stimulation reduces to a minimum "the variegated sensory contrasts upon which the Ego boundaries depend" (p. 614). With regard to the role of monotony in the process of hypnotic induction, Kubie and Margolin identify two important factors: sensory adaptation and rhythm. They argue that sensory adaptation is one of the physiological prerequisites to all sleep-like or hypnoidal states. They contend that rhythm is a significant factor in the induction of sensory adaptation. They employ these constructs to explain what other writers have labelled "rapport":

This makes it clear why it is difficult for one hypnotist to step into the role of another in the midst of a seance; since changes in voice, in intonation, in rate, accent and enunciation, will usually tend to disrupt the constancy and rhythm of the stimulus thus rousing to a sudden alert the sleeping sentinels of the sensory system. (p.615.)

In contrast to the situation of a subject undergoing "hypnotic induction", Kubie and Margolin argue that in a state of alertness or wakefulness there is a "lack of adaptation of the sensory modalities, which allows the organism to orient itself to its environment with as much of its perceptual mechanism as can be brought into play" (p.615).

It can be seen that Kubie and Margolin's view of hypnosis clearly embraces the notion of an alteration in state. In the "fully developed hypnotic state", for example, there is an incorporation of a fragmentary image of the hypnotist within the expanded ego boundaries of the subject, this image of the hypnotist playing the same role in the hypnotic subject as does the incorporated and unconscious image of the parental figure in the child or adult according to psychoanalytic thinking. Of course, one's evaluation of such a notion depends on the credence given to, and the judged usefulness of, psychoanalytic concepts such as "ego", "ego boundaries" and "incorporation". Kubie and Margolin's physiological speculations may be seen to have some commonsense appeal, particularly with regard to a traditional type of hypnotic induction procedure incorporating eye fixation and soothing but monotonous verbalizations on the part of the hypnotist. There are, however, induction procedures that do not fit this pattern and to which Kubie and Margolin's analysis cannot be applied so easily. For example,

Erickson (1964a; reproduced in Rossi, 1980a) describes approaches to hypnotic induction that rely explicitly on confusing the subject:

... the Confusion Technique is a presentation of ideas and understandings conducive of mental activity and response but so intermingled with seemingly related, valid but actually nonpertinent communications that responses are inhibited, frustration and uncertainty of mind engendered. The culmination occurs in a final suggestion permitting a ready and easy response satisfying to the subjects and validated by each subject's own, though perhaps unrecognized, on a conscious level, experiential learnings. (Rossi, 1980a, p.291).¹

Gill and Brenman's Theory

In their book Hypnosis and Related States, Gill and Brenman (1959) also approach the topic from a psychoanalytic stance. Unlike Kubie and Margolin (1944), they largely avoid physiological speculations. Like Kubie and Margolin, Gill and Brenman differentiate between the process of "hypnotic induction" and the "established hypnotic state". They take the view that hypnosis involves regression. More specifically, they contend that induction is the process of bringing about a regression, while the hypnotic state is the established regression. Their understanding of the term "regression" is illustrated in the following quotation:

A regressive process is one in which the balance of forces shifts so that freer and more primitive impulses come to expression, while the control system likewise becomes more primitive and relatively less stringent and determining of the course of psychic life vis-à-vis the impulses. Regression is not only a matter of previously hidden content coming to the fore, but also an alteration in the mode of functioning of the psychic apparatus, what we are calling here an altered state. (p.106)

1

Since Erickson's papers, including previously unpublished papers, are available in a convenient four-volume compilation (Rossi, 1980a,b,c,d), the present writer will cite page numbers from that source when quoting from Erickson's papers.

In support of their contention that "hypnotic induction" involves a regressive shift, Gill and Brenman refer to manifestations such as freer expression of repressed affect and ideas, the availability of motility to repressed impulses, and changes in body experience. With regard to the latter, they argue that such changes bespeak the occurrence of a regressive movement because of their similarity to those which have been described in psychoanalysis as aspects of archaic ego states. They write:

The spontaneous changes during induction in body sensation, the most common of which are the sensations of floating, dizziness, and descending, provide further evidence for the revival of archaic states ...

The bulk of evidence linking these body sensations to archaic ego states comes from the data which associate them with regressive revivals of pregenital sexuality. Fenichel ... finds that equilibrium and space sensations are essential components of infantile sexuality and may therefore come to represent infantile sexuality in general. He believes these sensations are especially likely to occur during falling asleep and when sexual excitement arouses anxiety. It may be that only in people in whom the excitement arouses anxiety do the sensations appear in consciousness. (p.110)

To the present writer, Gill and Brenman's readiness to subsume all sorts of altered subjective sensations under the rubric of regression lacks credibility since many of the sensations and feelings experienced by subjects exposed to hypnotic induction procedures may be explicable in terms of relaxation, reduced kinaesthetic and proprioceptive feedback, hyperventilation, and expectation.

Gill and Brenman argue that the established "hypnotic state" involves a regressed sub-system of the ego which is responsive to and enacts the suggestions of the hypnotist. The persistence of the overall ego structure enables the subject to retain some reality contact and to terminate the state of hypnosis himself if necessary. In support of their contention that the "hypnotic state" is a regressed one, Gill and Brenman stress that the thought

processes of the "hypnotized" subject have the earmarks of primary-process organization. They write:

Further evidence for the reorganization of the thought process in the hypnotic state is the manipulability of various aspects of thought organization, such as memory, attitudes, opinions, etc. The phenomena of hypnotic hypermnesia and posthypnotic amnesia are probably the best known, but one of the ever fascinating aspects of hypnosis is the extent to which it may be employed to alter a subject's views and beliefs and to induce ideas at considerable variance to his usual ones. We believe these phenomena are indicative of the dependence of these aspects of thought organization on the emotional relationship to the hypnotist, and are therefore evidence that in the hypnotic state thought moves away from relative autonomy to a greater dependence on emotion and drive organization. (pp. 146-147.)

Like other psychoanalytic writers (e.g. Ferenczi, 1950; Freud, 1905), Gill and Brenman describe the relationship between the subject and hypnotist in transference terms, but the present writer finds Gill and Brenman's treatment of the topic somewhat lacking in clarity.

Sarbin and Coe (1972) note that even though psychoanalysis encompasses a broad range of concepts that are applicable to the explanation of individual differences, Gill and Brenman have not focused their theorizing on differential hypnotic responsiveness:

Differential motivation resulting from the transference relationship presumably accounts for the responses of a particular subject. [Gill and Brenman] do not speculate on the kinds of early experiences that result in a particular response pattern, nor do they indicate particular kinds of global experiences that allow a person to enter hypnosis, that is, experiences that permit a regression in the service of the ego. Therefore, their explanation for individual differences requires a great deal more specification and elaboration before it will have much to offer in guiding research efforts. (p.168.)

PAVLOV'S NEUROPHYSIOLOGICAL THEORY OF HYPNOSIS

Pavlov (1923, 1927) conceptualizes hypnosis, like sleep, in terms of a struggle between processes of excitation and inhibition, the difference between ordinary sleep and hypnosis being one of degree, not kind. According to Pavlov's theory, brain cells are capable of excitation (an increased alertness and functioning) and inhibition (a reduced state of cell functioning). Inhibition can be seen as a protective mechanism guarding against extreme and/or monotonous stimulation. With the approach of sleep, major areas of the cortex, and some subcortical regions, undergo increasing inhibition. As well as being brought about by cellular fatigue, sleep may occur as a conditioned response. Thus, relaxation of muscle groups commonly associated with sleep may act to bring about the beginnings of sleep even though the individual is not in his otherwise normal sleep environment. Before a state of total sleep supervenes, there are regions where neural excitation continues and these, according to Pavlov's theory, are important in explaining hypnosis because they permit communication (rapport) with the hypnotist. In this view, therefore, the "hypnotic state" is seen as a condition of partial sleep with rather widespread inhibition throughout the cortex but with rapport centres remaining. The rapport centres spread excitation to the neural centres that must be activated to carry out the content of the verbal instructions. Hypnosis, then, is a process of inhibition but the enactment of the various hypnotic behaviours is a process of disinhibition.

The nomenclature of Pavlov's theory of hypnosis is a little confusing in that he applied the term "hypnotic sleep" to non-verbally induced partial sleep (which, he contended, could occur in both animals and humans) and the term "suggested sleep" for hypnosis induced verbally. "Suggested sleep" differs from "hypnotic sleep" in that rapport centres are available for further verbal instructions. The lack of other areas of excitation brings about a heightened receptiveness to these centres.

Working within the framework of Pavlov's theory, Katkov (1941) identifies three stages of "suggested sleep", each with three subdivisions.. Edmonston (1981, pp. 31-32) summarizes these stages and subdivisions as follows:

First Stage, First Degree. This degree has been called the pre-hypnoidal state, in which cortical tone is weakening and the subject reports pleasant sensations of restfulness. All sensibility is retained and the subject can be easily awakened. Although the eyes are generally closed, they need not be.

First Stage, Second Degree. With the progressive drop in cortical tone there is now an inhibition of the "kinesthetic system" and a growing feeling of heaviness. The eyes are closed, and although the subject still retains usual sensitivity to his environment and can easily awaken, the latency of motor reactions lengthens.

First Stage, Third Degree. Cortical tone and kinesthetic system activity drop off dramatically, and the subject now exhibits a pronounced increase in verbal, as well as motor response, latency. Although the subject reports that he could have terminated the hypnosis or resisted the hypnotist's suggestion if he wanted to, "he just did not feel like it."

Second Stage, First Degree. As before, there is continued inhibition across the cortex and in the kinesthetic analyzer. Inhibition of the second-signal system is more pronounced, and there now appear the symptoms of catalepsy. The subject is now very "sleepy", motor latencies are prolonged, the breathing is regular, and interest in environmental sounds is lost.

Second Stage, Second Degree. By this time the kinesthetic system is totally inhibited and the cutaneous analyzer is beginning to show the effects of deepening. Although spontaneous analgesias are noted, suggested illusions are not yet available.

Second Stage, Third Degree. As increasing inhibition of the second-signal system continues, some suggested illusions begin to be effective, provided the subject's eyes remain closed. In particular, negative olfactory illusions can be elicited. The subject reports that his own thoughts have receded to the background and only the verbal suggestions of the hypnotist retain importance.

Third Stage, First Degree. By this point, the subject is operating mainly on the first-signal system (excluding the rapport zone, of course). Consequently, motor latencies to suggestions are shorter than in previous degrees. Illusions, with the eyes closed, are now easily evoked in all spheres except visual and auditory. Auditory illusions can be elicited with difficulty, yet there is no spontaneous amnesia.

Third Stage, Second Degree. With the exception of the rapport zone, the subject's spontaneous use of his second-signal system is obliterated, and positive hallucinations in all senses can be effected. However, the subject's eyes are still closed during hallucinations; opening them destroys the illusion and often initiates awakening. Partial spontaneous amnesias appear in this next-to-last degree of suggested sleep.

Third Stage, Third Degree. Only the rapport zone of the second-signal system remains; the unified work of the cortex is now fragmented, awaiting the suggestions of the hypnotist. It is during this degree of suggested sleep that all of the phenomena usually associated with "deep trance" are manifested - positive and negative hallucinations, total spontaneous amnesias, age regression, and the like. For Katkov, and for the Pavlovian scheme, this degree is what others have labeled somnambulism, the plenary trance, or simply deep hypnosis (Erickson, 1952).

Edmonston (1981) summarizes experimental data related to Pavlov's theory of hypnosis. He claims that one of the most prevalent errors in attempts to evaluate the theory experimentally has come from authors who have misinterpreted Pavlov as equating hypnosis with sleep, whereas Pavlov understood hypnosis as lying on a dimension of increasing inhibition that eventually leads to total sleep. Edmonston (1981) also considers experimental evidence pertaining to hypnosis and conditioned responses. This is because Pavlov's theory (and Platonov's [1959] restatement of it) indicates that changes in establishing new conditioned responses and changes in already established conditioned responses should occur in "suggested sleep" because of the increased cortical inhibition. Overall,

Edmonston seems to judge that the available experimental data are not inconsistent with Pavlov's understanding of hypnosis.

Sarbin and Coe (1972) argue that in Pavlov's theory, discontinuity of behaviour is accounted for by the spread of cortical inhibition as induction progresses and that the subject's responses take on an automatic quality as awareness becomes more limited and the voice of the hypnotist gains control through "rappport" regions of cortical excitation. As the process continues, verbal symbols take on concrete meanings for the subject and therefore effects such as hallucinations are possible. Thus, "The amplitude of response to verbal requests seems overdetermined to an outside observer who is not experiencing the same neurophysiological changes to the seemingly benign verbal inputs" (Sarbin & Coe, 1972, p.163). However, Sarbin and Coe argue that Pavlov's theory is embarrassed by individual differences. They write:

The only recourse is to state that some people can, or do, experience the internal changes postulated by the theory, and, apparently, people reach various levels of hypnosis. Other than these after-the-fact and empirically untestable explanations, however, Pavlovian theory does not account for individual differences. Like Mesmer and Charcot, Pavlov focused on explaining the behavior of "good" subjects, not on accounting for subjects who are unresponsive to identical stimulus conditions. (p.164.)

Pavlov's theory of hypnosis is part of a more general theory, just as psychoanalytic approaches to hypnosis derive from a more general theoretical background. Like the psychoanalytic approaches of Kubie and Margolin (1944) and Gill and Brenman (1959), Pavlov's theory involves the notion of a change of state in "hypnotized" subjects. There is clearly some common ground between Pavlov's speculations and those of Kubie and Margolin who, for example, use the expression "partial sleep" in describing the condition of "hypnotized" individuals.

EDMONSTON'S EQUATION OF HYPNOSIS WITH RELAXATION

In the preface to his book Hypnosis and Relaxation: Modern Verification of an Old Equation, Edmonston (1981) describes how, as a young investigator, his initial concern was with finding some response or behaviour that marked hypnosis out as a unique state, despite its similarity to other conditions. He writes:

... I carefully measured several behavioral and physiological responses, and in the course of seeking more refined experimental control in my studies I utilized a group instructed to relax but not to be hypnotized.

Even then I was shackled by my history, for I continued to search for the unique response, claiming, each time a response did not differ between hypnosis and my new-found control group of relaxed subjects, that this or that response did not constitute a signal marker of the state of hypnosis. It was in the refutation of slow eye movements (SEMs) as a response unique to hypnosis that the more important meaning of my data began to become clear. As I indicate herein, it was not so much that SEMs or any other responses were not unique to hypnosis, but that none of these responses were different in hypnosis when compared to the same responses in nonhypnotic relaxation. This one salient reorientation set me on a course of exploring the entire field of hypnosis for other indications of similarities between hypnosis, as traditionally understood, and states of relaxation. (p.ix.)

In arguing for the identity of hypnosis and relaxation, Edmonston concentrates on what he calls "neutral hypnosis". He claims that relatively few investigations of hypnosis have tackled the problem of understanding it from a fundamentally neutral base; that is, "from the presentation of hypnotic induction instructions without the confound of additional instructions suggesting either the hypnotic phenomena or that hypnosis would be effective in alleviating this or that disorder, worry, or distress" (p.2).

After discussing physiological and psychophysiological studies of relaxation by workers such as Hess (1957) and Wallace, Benson and Wilson (1971), Edmonston reviews numerous studies bearing on the relation between "hypnosis" and relaxation. One of these

studies, by Coleman (1976), is of particular interest. Coleman set out to compare relaxation with "hypnosis" using physiological indices (EEG and EMG), responses to suggestion, and self-reports of individual subjective experiences as measures. Coleman used three self-report scales in his study, one to assess responsiveness to suggestion and two to assess the subjective experiences in either "hypnosis" or relaxation. Edmonston describes Coleman's study thus:

Four groups of seven males and females each were treated in the following manner: (a) subjects in one group were individually hypnotized through the SHSS:A eye-closure induction, (b) those in another group were relaxed through the Wolpe and Lazarus (1967) relaxation procedure, while (c) those in another (the contrast-training group) received the same relaxation procedure with the descriptive language removed. In other words, the latter group was merely instructed "forehead, tight", "loose", "crease your brow, tight", "loose". Thus muscle groups were tightened or relaxed, as in Wolpe and Lazarus's procedure, but without the surrounding context indicating the goal of relaxation. The subjects in the fourth group (d) were told to remain in a chair but otherwise allowed freedom of choice as to their mental activity.

The responsivity scale measure was taken following the "inductions", while the experiential scale measures were obtained after the instructions had been countermanded. EEG and EMG were recorded throughout the inductions and the responsivity testing. Following the experiment proper, a second group session was conducted in which all subjects were presented with the HGSHS.¹ This measure was used to demonstrate that the groups did not differ with respect to hypnotic susceptibility, which they did not. (pp. 191-192.)

Edmonston explains that using four different multivariate analyses, Coleman's data revealed that neither alpha production nor muscle tension distinguished among the groups, with the exception that the experimental groups yielded increased EMG during their respective instruction periods, whereas the control group did not. (Edmonston

¹ Harvard Group Scale of Hypnotic Susceptibility.

speculates that this increased EMG in the experimental groups may relate to the fact that the subjects were being bombarded with auditory stimulation.) Coleman found that EEG and EMG measurements during relaxation and "hypnosis" did not reveal a clear difference between the two. With regard to responsiveness to 10 standard suggestions gleaned from various scales of hypnotic susceptibility, Coleman found that both the "hypnosis" and non-hypnosis relaxation groups scored significantly higher than the control group, but did not differ from each other. Edmonston (1981) explains that "a comparison of those subjects who associated the relaxation and control procedures with hypnosis and those who did not revealed that being told or suspecting that the investigation involves hypnosis does not affect responsiveness to suggestions" (p. 193). Edmonston claims that this finding, which runs somewhat counter to those of Dorcus, Brintnall and Case (1941) and Barber, Spanos and Chaves (1974), seems to indicate that what is more important in the situation is the particular set of instructions offered the subjects, rather than any preconceived anticipations about hypnosis they may acquire either directly or indirectly from the situation.

Although most hypnotic induction procedures include relaxation-type suggestions, there are reports in the literature of alerting or activating suggestions being given to subjects prior to the administration of standard hypnotic susceptibility test items. For example, Vingoe (1968) has developed a Group Alert Trance Scale (GAT) which urges subjects to be mentally alert but physically relaxed. Vingoe (1973) reports a correlation of 0.64 between the scores of subjects on the GAT and the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A). Banyai and Hilgard (1976) tested a group of 50 subjects serving as their own controls on eight items of the SHSS:A and SHSS:B, following either traditional relaxation-type hypnotic or alerting instructions, properly counterbalanced. In addition to the differences in the instructions given to the subjects, the two conditions also differed in the subjects' general activity. While the subjects exposed to the traditional type of hypnotic induction were seated comfortably with their eyes closed, subjects receiving alerting instructions rode a Monark bicycle ergometer. Comparing the mean scores on their eight-point scale, Banyai and Hilgard found that "the two induction procedures were equivalent in their influence on

responsiveness to hypnotic test items" (p.220).

Edmonston (1981) recognizes that the above and other studies and observations might be adduced to challenge the proposition that neutral hypnosis is relaxation. Edmonston's basic response to this problem is to assert that despite investigators' use of the term hypnosis in conjunction with alerting procedures, the latter do not produce the same state as traditional hypnosis. In the case of Vingoe's Group Alert Trance Scale, however, Edmonston observes that it is not surprising that there is a positive correlation between scores on this measure and the HGSHS:A since despite instructions for mental alertness, physical relaxation is explicitly suggested to the subject:

Let the muscles in your toes relax ... your ankles ... your feet ... relax your calf muscles ... let your thighs relax ... relax the muscles of your back ... of your shoulders ... relax the muscles of your neck ... let all your facial muscles relax ... relax your forehead ... all the muscles of your head Just relax all over, but as you've relaxed in body your mind has become very alert. Just relax your body all over, just relax your body all over. (Vingoe, 1968, pp. 123-124)

Regarding Banyai and Hilgard's (1976) study, Edmonston writes:

It is not until we look at what the authors have called the "secondary consequences of induction" and some of the subjective differences between the conditions that there is a hint that even in this study we may still be dealing with two related, but different, phenomena when we speak of trance and hypnosis in the same context. As one would expect, postural and motoric differences appear in the subjects under the different conditions. They were calm and relaxed and moved slowly and laboriously following traditional hypnosis, and displayed a tense posture, with rapid motor responsiveness, following the alerting instructions. (p.203)

Edmonston also criticizes this study on methodological grounds. He points out that assessment of the adequacy or inadequacy of response to suggestion was done by the experimenters themselves. He writes:

Obviously such a procedure is potentially confounding, since it was these same investigators who presented the two instructional sets to the subjects in the first place. Even if that had not been the case, the fact that the two physical settings during the different instructions (alert - on a bicycle; traditional - seated in a chair) were so different would have given any observer information as to which set of instructions had been administered, and thus brought the observers' preconceived expectations into play. The mean score similarities become suspect, then, due to the subjective nature of the behavior ratings and their possible confounding by observers, who were not naive to the experimental condition of the subjects. (pp. 203-204.)

Sarbin (1983), reviewing Edmonston's (1981) book, points out that Edmonston gives short shrift to the counter-expectational features of hypnosis that have stimulated most experimental and clinical work. In his review, Sarbin indicates something of his very different approach to hypnosis:

Suppose one were to begin from another perspective: that the subject and the hypnotist are each enacting roles appropriate to their conceptions of a developing script. To enter into the role of hypnosis subject calls for an entrance ritual. The induction serves as such a ritual. The subject, and to a lesser extent, the hypnotist, may attribute significance to the somatic components of the relaxation exercise (i.e., the feeling of relaxation confirms the entrance ritual). Having completed the ritual, the actor is then ready to perform the work of the hypnotic subject - that is, to utter counter-factual statements, to demonstrate multiple personalities, to expose a hidden observer, to become analgesic, etc.

In such a context, the equation of hypnosis and relaxation makes sense. It is the case that most inductions emphasize relaxation; it is the case that many subjects do relax; it is the case that subjects can be responsive to proprioceptive and other somatic features of relaxation. To complete the picture, we must ask a nonmechanistic question: what meanings does the subject assign - given the social context - to the self-observed proprioceptive changes? Such questions are absent from Edmonston's work. (p.58.)

Sarbin's approach to hypnosis will receive further attention later in this chapter.

WHITE'S MOTIVATIONAL AND STATE INTERPRETATION OF HYPNOSIS

In an interesting analysis, White (1941) places large emphasis on the hypnotic subject's motivation. He writes:

The concept of striving, so useful in other parts of psychology, needs to be applied in thoroughgoing fashion to the behavior of the hypnotized person. This application may be embodied in the following statement: hypnotic behavior is meaningful, goal-directed striving, its most general goal being to behave like a hypnotized person as this is continuously defined by the operator and understood by the subject. (p.483.)

White concedes that this point of view is not original with him, having been previously maintained by a number of other writers (Dorcus, 1937; Lundholm, 1928; Pattie, 1935, 1937; Rosenow, 1928) who have found it more satisfactory in explaining the facts subsumed under the concepts of automatism and dissociation. In arguing for the rejection of the latter concepts and substitution of goal-directed striving, White adduces various strands of evidence. For example, with regard to the concept of "automatism", White points out that hypnotized subjects make substantial spontaneous additions to what is stated in suggestions, a fact which marks the difference between automatism and a goal-directed striving to act as if hypnotized.

White accepts that a "hypnotized" person may exhibit surprise or even alarm when discovering that a suggestion has taken effect and that what he conceives to be his will cannot break the pattern set by the hypnotist. White does not see such a happening as being at variance with his hypothesis:

What [the subject] does not realize, however, is that it was not "truly" his will to overcome the suggestion. Had it been "truly" his will, he would have succeeded, and been pronounced an insusceptible subject, as happens in many cases. But if the motive of behaving like a hypnotized person is regnant, the operator's command to try to overcome a

suggestion calls for a token display of will which the subject secretly hopes will not prevail. There can be no justification for assuming that he does not understand the operator's hopes and intentions, or for supposing that one command can be isolated from the total pattern and attached to a separate part of his personality. The vain struggle of the hypnotized person is an instance of willing when you do not want your will to succeed, a situation in which we need not be surprised to find volition singularly ineffective. (p. 488.)

White goes on to state that, even in the simple example quoted above, he does not propose to minimize the difference between hypnotic behaviour and voluntary compliance in a wide-awake, alert state. He contends that the subject's surprise, the changes in his experience of intention, and the unwitting character of his collaboration serve to remind us that hypnotic behaviour, the striving to behave as if hypnotized, takes place in an altered state of the person. He further claims that this assumption is still more necessary when account is taken of phenomena which transcend the usual limit of volitional control. (The question of transcendence of normal volitional control will not be pursued further at this point. Suffice it to say that the prevalent view among contemporary hypnosis researchers is that "hypnosis" does not permit a transcendence of normal capabilities. The belief that "hypnotized" subjects can have markedly unusual experiences and transcend their normal capacities has doubtless encouraged many observers to believe in the existence of a hypnotic state.)

Discussing the "hypnotic state", White offers the following hypothesis:

the peculiarities of hypnotic behavior discussed earlier, the involuntary feeling, the literal, humorless manner, the un-self-consciousness, inattentiveness, and poor subsequent memory, can all be plausibly related to the changes which take place in drowsiness. When a person is drowsy, his images and experiences tend to become more vivid, more concrete, and more absolute. Abstract processes and complex frames of reference seem to be highly vulnerable to fatigue.

The operator avails himself of this vulnerability, reduces as far as possible the perceptual supports which might serve to sustain a wider frame of reference, bids the subject relax his mind as well as his body, and thus encourages drowsiness to take a small toll from the higher integrative processes. (p. 501)

A little later, White writes:

There would appear to be enduring value ... in the hypothesis of lowered functioning, of activity a little removed from, the alert, wide-awake, self-conscious level which we ordinarily consider the best of all possible mental states. Physiology has accustomed us to the idea that the highest centers are mainly inhibitory in function, so that their withdrawal tends to release the energy of more primitive processes. Psychopathology has accustomed us to the notion that unconscious strivings may possess a peculiarly direct communication with the autonomic system, as in the psychosomatic disorders, and even with certain functions of the cerebro-spinal system, as in conversion hysteria. It may well be that hypnotic behavior lies somewhere between the level of volition and the level of unconscious strivings, enjoying some of the privileges of the latter in the way of extended control. The two hypotheses here discussed, the creation of an unusually weighted motivational field and the production of a moderate degree of disinhibition, while they by no means exhaust the problem of hypnotism, point the direction in which the scientific caravan should move. (p.502)

White's contentions are similar to those of other authors. His emphasis on goal-directed striving has clear affinities with Sarbin's role-taking theory (e.g. Sarbin, 1950; Sarbin & Coe, 1972). Similarly, White's arguments can be related to Shor's (1959, 1962) notion that hypnotic role-taking involvement is one dimension of hypnotic depth. White's speculations about an "altered state of the person" have some affinities with Pavlov's emphasis on inhibition and partial sleep and with Edmonston's identification of "neutral hypnosis" as relaxation.

Approaches to hypnosis that stress drowsiness or relaxation as important elements of the presumed "hypnotic state" might be seen as vulnerable to criticism on the ground that apparently "hypnotized" subjects sometimes manifest strong, negative emotions without necessarily becoming less responsive to further suggestions. For example, in a treatment setting a patient may recall an upsetting incident from the past and "re-live" some of the associated distress or fear. Despite this arousal of strong emotions, the patient may remain responsive to the therapist's suggestions and display apparent post-hypnotic amnesia. A theory of hypnosis placing emphasis on relaxation, lowered arousal, or drowsiness also needs to explain how induction techniques based on confusion, authoritarian command, or other apparently "non-relaxing" manoeuvres bring about their effects. For example, there seems nothing very relaxing about the procedure Erickson claims he used to induce a "deep trance" in a woman in the presence of her husband (Rossi, 1973; reproduced in Rossi, 1980d). Erickson explains that at the time of his session with the couple it was the style for women to wear their skirts down to mid-calf. He reports that he explained to the woman:

"Now I'm going to start moving your skirt a little bit over your thighs, I'll stop moving them only when you are in a deep trance. And you'll listen to me. And you'll not say you can't." Half an inch at a time I slowly began lifting her skirt. This was an unendurable thing for her to be aware of consciously, therefore her only escape was to go into a trance. She was aware of my use of hypnosis, since I had treated a friend of hers. (Rossi, 1980d, p. 453)

SARBIN'S SOCIAL PSYCHOLOGICAL ANALYSIS OF HYPNOSIS

It is now more than 30 years since the publication of Sarbin's (1950) paper arguing that hypnosis is a form of role-taking. A more recent statement of his position can be found in Hypnosis: A Social Psychological Analysis of Influence Communication (Sarbin & Coe, 1972).

Sarbin (1950) argues that in a hypnosis experiment, the subject strives to take the role of a hypnotized person and the success of this striving depends on favourable motivation, role-perception

(the subject must perceive the role he is to play), and role-taking aptitude. Sarbin argues that this orientation breaks completely with the tradition of looking on hypnosis as some strange phenomenon for which it is necessary to invent psychophysiological constructions. Instead, hypnosis is placed in continuity with other social psychological conceptions. Sarbin likens hypnotic behaviour to dramatic acting:

Introspective accounts and observers' reports of stage actors taking roles reveal a kind of behavior which may be characterized in much the same way as hypnosis. The apparent discontinuity, for example, has been established as an important factor in dramatic role-taking. The actor's stage behavior appears to be dissociated or discontinuous from his "normal personality". In Archer's¹ classical study of acting ... some actors report losing themselves completely in certain roles so that they are relatively unaware of the audience or of other physical or social objects. The role may even carry over to off-stage statuses. The introspective accounts of actors taking roles are often undifferentiated from the accounts of hypnotic subjects ... (p.260)

Sarbin suggests that the stage director stands in the same relation to the actor as the hypnotist does to the subject and that the statuses or positions are defined beforehand, with the specific role-behaviours being dictated by the attempt of each participant to validate his status.

Sarbin argues that because acting has not been burdened with the incubus of dissociation or ideomotor theory, we are not amazed at the frequent marked changes in skeletal and visceral behaviour that occur merely because the director tells the actor what to do.

Sarbin proposes a dimension of role-taking ranging from states of ecstasy and mystical experiences, where role and self are undifferentiated, through hysterias, hypnosis, "heated" acting, and technical acting, where there is increasing differentiation of role and self.

¹ Archer (1889).

Sarbin argues that role-taking aptitude is "organismic" (it tends to involve the whole organism) and depends upon imagination (or what Sarbin calls "as-if behavior"). He refers to a study by Arnold (1946) who tested the hypothesis that a suggestion is acted upon only if the subject actively imagines the suggested effect. Subjects were told to imagine falling forwards and the amount of postural sway was recorded. Comparisons were made between the amount of sway and the reported vividness of imagery, and Arnold's conclusion was that the more vivid the imaginative process, the more pronounced the overt movements. Sarbin notes that in his clinical experience he has never found an adult with eidetic or vivid imagery who was not a good hypnotic subject ¹.

Sarbin and Coe (1972) present in book form ideas essentially similar to those of Sarbin (1950) although with greater elaboration and with some alterations in terminology. Sarbin and Coe define their position more explicitly as a "non-state" one than did Sarbin (1950), who used the term "trance" in a descriptive sense to refer to the condition of the "hypnotized" subject.

In his 1950 paper, Sarbin identified favourable motivation, accurate role-perception, and role-taking aptitude as important for successful hypnotic role-taking. Sarbin and Coe (1972) discuss additional variables, which they believe affect the quality of hypnotic role enactment. For example, they consider the reinforcing properties of the audience, i.e. the extent to which the person or persons interacted with during a hypnosis session give sustenance and support in their reactions to the subject's role behaviour. Another variable they discuss is "self-role congruence", the extent to which a subject has characteristics that match the requirements of the role he is being requested to enact. The period of preparation for hypnosis, when the subject might ask questions about hypnosis and when the hypnotist seeks to allay fears and to correct misconceptions, may be seen as a way of establishing self-role congruence.

¹ An emphasis on imaginative processes features large in much present-day research and theorizing concerned with hypnosis. See, for example, J.R. Hilgard (1979) and Sheehan (1979).

Sheehan and Perry (1976) review a number of studies bearing on Sarbin's analysis of hypnosis in terms of role-enactment. They lament that, despite Sarbin's "prodigality as a theorist and his long-standing concern to operationalize his concepts", the evidence bearing on hypnosis as role-enactment is relatively sparse. Since the principal object of this chapter is to outline a number of different approaches to understanding hypnosis and to set the scene for a later discussion of the state-non-state issue and relevant aspects of Erickson's work, no attempt will be made here to give a full account of the various studies conducted by Sarbin and his colleagues bearing on the rôle-enactment theory. However, to convey some flavour of the type of research conducted in this area, brief mention will be made of a study by Sarbin and Lim (1963) who looked at the relation between role skill and hypnotizability utilizing two small student groups possessing no known special acting skills. This study is discussed by Sheehan and Perry (1976). In a pilot study, 13 of the subjects were tested on the Friedlander-Sarbin Scale (Friedlander & Sarbin, 1938), a forerunner of the Stanford and Harvard scales. In a further session, one week later, the subjects had to improvise two pantomimed performances of coming home drunk and trying to find their door key without disturbing the neighbours, and of passing by the coffin containing the body of a recently deceased loved one. The same design was used in the main study, which employed 20 subjects, but this time subjects were required to portray a haughty, egotistical person who had just been bumped at a social gathering, causing him to spill a cup of tea over his lap. In both parts of the experiment, the dramatic improvisations were rated on a four-point scale of role skill by a panel of faculty members of the University of California's Dramatic Arts Department. A non-significant rank order correlation between hypnotizability and role ability ($r = 0.39$) was found in the pilot study. In the main study, a point biserial correlation of 0.52 was found between the same two variables ($p < .05$), and the two studies combined yielded a chi square significant at $p < .01$. Commenting on this study, Sheehan and Perry (1976) observe that, as has been found in many studies investigating possible correlates of hypnotizability, the relationship between hypnotizability and role skill appeared

to be nonlinear - some of the subjects low on role skill were highly hypnotizable, although all subjects rated high on role ability were above the mean of hypnotizability.

A question that can be asked about Sarbin's formulation of hypnosis in role-enactment terms is whether it provides anything more than a verbal reassessment of traditional problems. Hilgard (1973a) contends that the role theoretical account of complex post-hypnotic behaviours like amnesia:

appears to fly in the face of facts in two ways: (a) by implying that the labeling of features of the subject-hypnotist interaction has explained the behavior and (b) by implying that the subject is not amnesic to himself, but only in his verbal behavior towards the hypnotist. Of course, if he is sufficiently 'organismically involved' he may be amnesic to himself. The authors (Sarbin & Coe, 1972) depend a good deal upon 'as-if' skills, but this question dodges the question of how convincing the 'as-if' experience is to the subject. If it is accepted that he is amnesic to himself through organismic involvement, role theory and trance theory converge, with neither having an explanation of how, in detail, the amnesia is produced and relieved. (p.69)

In terms of their distinction between specific theories which have been constructed purposely to explain hypnosis and general theories which have broad application across many situations, Sarbin and Coe's role enactment theory clearly falls in the latter category. The authors' non-state position has affinities with that of Barber, whose approach will be discussed shortly. In their emphasis on imaginative processes, Sarbin (1950) and Sarbin and Coe (1972) are travelling down the same road, so to speak, as a number of other contemporary theorists, both state and non-state in orientation.

THREE DIMENSIONS OF HYPNOTIC DEPTH: SHOR'S THEORY

Shor (1959, 1962, 1970, 1979) has developed an eclectic theory of hypnosis which has clear affinities with some of the other theories already discussed in this chapter. Shor contends that there are three dimensions of hypnotic depth, not one. One of

these dimensions he calls trance depth. To Shor, this refers to the degree to which the hypnotic subject's "generalized reality orientation" has been relinquished in the hypnotic situation. He describes the generalized reality orientation as existing within the usual state of consciousness and providing a structured frame of reference in the background of attention which supports, interprets and gives meaning to all experience. Fading of the usual generalized reality orientation is not specific to hypnosis. For example, mystical experiences and certain pathological states may involve non-operation of the generalized reality orientation. Shor contends that the generalized reality orientation requires active effort to maintain itself and where energy is not devoted to this task, it slips more and more into the background of attention and becomes less "functionally available". This can happen when one becomes so absorbed in one part of reality that the rest temporarily slips away as it were. Typical hypnotic induction procedures tend to create a situation where the subject focuses attention on a small range of preoccupations, thus making it possible for the more general orientation to be disregarded. Shor argues that:

Because in deep trance the ongoing conscious experiences are isolated from the usual interpretative framework of cognitive understandings of everyday life, the deeply entranced individual is not consciously aware of the distinction between imagination and reality; it simply could not occur to him at the time to make the distinction. It does not occur to him to doubt or to question the reality of the experience at the moment of the experience. Similarly, there is an obliviousness to abstract meanings. The subject ceases to be consciously aware of time, self, surroundings, etc. Obliviousness can take two forms. One is obliviousness to the entire world in eyes-closed hypnosis. More generally it can take the form of obliviousness to the abstract meanings of the world in which the subject opens his eyes and interacts with reality objects but perceives them in a fresh, literal, concrete, here and now way, isolated from their conventional meanings and abstract evaluative interpretations. (Shor, 1979, p.123)

Shor points out that vividness of imagery does not necessarily covary with depth of trance. He argues that because the usual "waking" standards of judgement are so faded in "deep trance", a subject will accept weak and shoddy imagery as subjectively real. Similarly, the degree of absorption (the extent to which at a given moment a subject is attentively engrossed in the ongoing hypnotic experiences) does not necessarily covary with depth of trance: a subject may be very extensively engrossed while simultaneously possessing an intact generalized reality orientation; conversely, a subject may have diffuse attentiveness while simultaneously possessing a markedly faded generalized reality orientation.

A second factor or dimension in Shor's theory is "non-conscious involvement" or the extent of hypnotic role-taking involvement. Shor's theorizing here is similar to that of White (1941) and also has some affinity with Sarbin's position. Shor writes:

A hypnotized subject is not a will-less automaton. The hypnotist does not crawl inside a subject's body and take control of his brain and muscles. Motivated behaviors are carried out by the hypnotized subject only because at some level he himself is motivated to carry them out. Although the hypnotic subject may look as if he is no longer in control of his own volitional activities - for example, he may behave as if he is unable to bend his hypnotically stiffened elbow - that is only because at some deeper level than is operative within the boundaries of consciousness, he is actively, deliberately, voluntarily keeping his elbow stiff while simultaneously orchestrating for himself the illusion that he is really trying his best to bend it. In this case the volition that the subject is aware of within consciousness is subordinated to the volition that the subject is unaware of beyond consciousness. (Shor, 1979, p.124)

To the present writer, it seems unsatisfactory to say that one can "voluntarily" and "deliberately" conduct operations outside the "boundaries of consciousness", since by definition "voluntary" and "intentional" acts are conscious ones!

Shor argues that the hypnotic phenomena included in traditional hypnotic depth assessment measures tend to be largely dependent on the depth of non-conscious involvement:

For example, by its inherent nature a challenged arm rigidity (in the form: "You will be unable to bend your straight, stiff and rigid arm no matter how hard you may try to do so.") is largely dependent upon nonconscious involvement because the very phrasing of the phenomenon is to produce a contest between conscious and nonconscious volition. (Shor, 1979, p.125)

It follows from Shor's theory that a subject who is deep on the dimension of "nonconscious involvement" but who is not very deep on the dimension of trance will readily manifest a number of classic hypnotic phenomena but will retain an awareness that the suggested state of affairs is not real.

Shor's third dimension is that of depth of archaic involvement. Shor (1979) writes:

Depth of archaic involvement is the extent to which there occurs a temporary displacement or "transference" of core personality emotive attitudes formed early in life (most typically, in regard to parents) onto the hypnotist. In other words, depth of archaic involvement is the extent to which at any given moment in time there are archaic, primitive modes of relating to the hypnotist that echo back to the love relationships of early life. Thus, as archaic involvement deepens, (a) the subject experiences attitudes, yearnings, and modes of relating to the hypnotist as if he were an object of love and admiration; (b) profound psycho-dynamic meanings become infused into the interpersonal transactions of the subject to the hypnotist; (c) the central core of the subject's personality unreservedly consents to the hypnotic proceedings; (d) the central core of the subject's personality eagerly craves to please the hypnotist; and (e) the central core of the subject's personality eagerly craves to incorporate the hypnotist's wishes as his own. (p.126)

Shor contends that in non-clinical, research settings, it is unlikely that a hypnotist will produce much development along the dimension of archaic involvement. However, in clinical settings, manifestations of archaic involvement may be more prominent.

Sarbin and Coe (1972), commenting on Shor's theory, contend that several difficulties arise from his approach. They claim, for instance, that Shor has not yet provided ways to measure the various depths of trance except through the occurrence of the behaviours they are supposed to explain. They contend that psychological speculations about trance are no more explanatory than physiological speculations unless they can be anchored to observable events; and the role-taking involvement depth carries an added concept in Shor's theorizing, the unconscious, which for similar reasons makes it particularly cumbersome for empirical investigation.

To the present writer, it seems unfortunate that Shor should have chosen the label "trance" for one of his proposed dimensions of hypnotic depth, since the term is already in wide currency among clinicians, hypnosis researchers, and the general public, and is used in different senses. Thus some writers seem to use the term in a descriptive sense to refer to the condition of so-called hypnotized subjects and many writers (e.g. Hartland, 1971) use the expression "trance depth" synonymously with "hypnotic depth" whereas Shor would apply the former term to only one of three dimensions of hypnotic depth. In order to avoid confusion, then, it might have been better if Shor had chosen a different term to refer to the degree of fading of what he calls the generalized reality orientation.

HILGARD'S¹ THEORIES OF HYPNOSIS

A Developmental-Interactive Theory

In Chapter 19 of his book Hypnotic Susceptibility, Hilgard (1965, pp. 377-397) sets out a "developmental-interactive" theory of hypnotic susceptibility, which is stated in the form of three

¹References to Hilgard in this thesis pertain to Ernest R. Hilgard. When reference is made to E.R. Hilgard's wife, who is also a hypnosis investigator, her initials (J.R.) will be inserted before her name to avoid confusion.

sets of propositions: developmental propositions (D-propositions), interactive propositions (I-propositions), and state propositions (S-propositions).

The developmental propositions are as follows:

All normal infants are born with the potential to develop the ability for profound hypnotic experiences.

The ability of a child to disengage himself from reality-orientation and to become deeply involved in fantasy or adventure may be preserved if sufficient experiences of this kind are encouraged by example and tolerated or rewarded in childhood.

There is probably a critical period during which these behaviors will either be sustained or lost, the period lying between the acquisition of language and the onset of adolescence.

Once a favorable background has been created for sustaining the natural capacity for involvement, new experiences can be grafted upon this background, thus reinforcing the appropriate abilities.

Parental influences and identifications are very important in preserving and extending or reducing and destroying hypnotic susceptibility.

Not all "favorable" parental attitudes from a mental hygiene standpoint are conducive to susceptibility; contrariwise, not all "unfavorable" ones inhibit it.

Individualizing experiences of various kinds may produce selective responsiveness within hypnotic susceptibility.

The interactive propositions are as follows:

Providing that the setting for hypnosis is one that evokes confidence, initial responsiveness to attempted hypnotic induction depends very little upon the personal characteristics of the hypnotist.

In the first few sessions, a susceptible subject learns to enter the trance much more promptly than he did initially but this does not mean that the depth of the trance is also increased.

With repeated inductions by the same hypnotist, a differentiated transference results, and the individual characteristics of the hypnotist and subject in their interaction become more important than they were initially.

The hypnotic interaction goes on most smoothly in conflict-free areas; if a conflict area is tapped in the hypnotic interaction, defenses are aroused that may interfere with the hypnosis.

The various dissociative experiences activated by hypnotic induction and by suggestions within hypnosis are correlated with specific developmental experiences.

There are multiple paths into hypnosis that can be activated through induction; if any one of these exists in sufficient strength as a substructure (or habit system) within the personality, induction may communicate with it and thus lead to the hypnotic state.

The state propositions are as follows:

The trance is itself a product of suggestion and can be considered separately from the responsiveness to suggestions given within this state.¹

Although there is some increase in suggestibility following trance induction, it is relatively slight and not sufficient to define susceptibility.

Hypnosis is not to be identified with suggestibility in general.

The hypnotic state is characterized by various partial dissociations.

Commenting on this theory of Hilgard's, Sarbin and Coe (1972) judge that in most cases, Hilgard's developmental propositions are stated with sufficient clarity to permit measurement and to enable them to be related to empirical observations of hypnotic

¹Hilgard comments that this proposition refutes the definition of hypnosis as a state of hypersuggestibility. He writes: "It may very well be such a state, but it need not be; one can be hypnotized and not at all responsive to ordinary suggestions. If this proposition is accepted, then different kinds of trances can be recognized " (Hilgard, 1965, p. 391).

behaviour. Likewise, they argue that Hilgard's interactive propositions are worded in a way to encourage empirical study and to provide a test of their validity. They contend, however, that the state propositions "are not easily defended on their explicitness and testability":

Vague terms, not clearly defined or independently measured, occur in the S-propositions, that is, trance, partial dissociation, and consciousness. Although he does not state it precisely, Hilgard seems to define the presence of trance from the subject's report of his experience. Using private experience as a criterion for the existence of a concept poses huge problems for a naturalistic science. Determining the veridicality of a subject's report calls for a number of assumptions, some of which may be incongruent with a scientific orientation. Hilgard's cautiousness in theory building is noteworthy. However, the espousal of the S-propositions is a departure from caution. (Sarbin & Coe, 1972, p. 160.)

Neo-dissociation Theory

Hilgard's recent theorizing (e.g. Hilgard, 1973b, 1977a,b, 1979b) has placed heavy emphasis on presumed dissociative mechanisms. The concept of dissociation was introduced by Janet (1889) to account for "split-off" parts of the personality or experience in patients that he studied. Hilgard dubs his own approach a neo-dissociation one in order that it should not be confused with older, more extreme variants of dissociation theory. Hilgard's recent theorizing has largely arisen from some experimental work concerned with the recovery of supposedly covert experiences in "hypnotized" subjects. Brief mention will be made of this work before Hilgard's recent theoretical position is outlined.

Hilgard (1979b) gives a summary description of a chance observation which led to a new direction in hypnosis research in his laboratory (for further details, see Hilgard, 1973b, 1977a,b). Hilgard explains that:

a hypnotically deaf subject was asked in a quiet voice, while still deaf, to permit the index finger of his right hand to rise if "some part" of him was hearing the hypnotist's voice. The finger rose, and the subject asked to have his

hearing restored because he felt the finger rise, but did not know what had been done to him. This led to an inquiry by an "automatic talking" technique, in which he was told that, when the hypnotist placed a hand on his arm, there would be contact with a concealed part of himself, unknown to the hypnotized part, that could describe what had gone on while he was deaf, but would recede again when the hypnotist's hand was lifted. The subject ... gave a description of what he had heard while deaf; when the hypnotist's hand was lifted, and he was questioned, he recalled something having been said about his talking, and asked: "Did I talk?" The metaphor of a "hidden observer" has since been used to describe the part of him that knew what was going on, without implying that there is a homunculus inside him responsible for such observations. (pp. 55-57.)

Since stumbling across the "hidden observer" in the manner described above, Hilgard and his colleagues have sought "hidden observer" reports in studies of hypnotically suggested deafness and analgesia. In addition to relying on "automatic talking", they have also elicited reports via "automatic writing" and "automatic key-pressing". Hilgard (1979b) claims that with performances such as the reduction of intense pain, the method is applicable only to very hypnotizable subjects, perhaps not over 1 - 5 per cent of an unselected student population.

Hilgard (1979b) explains that in pilot experiments, highly hypnotizable subjects, experienced in hypnotic pain reduction, would report pain as completely absent when one hand was immersed in circulating ice water but at the same time the other hand, writing "automatically", would report pain with ascending magnitude the longer the other hand was immersed in the water. The level of pain reported in this way approached but remained somewhat below the pain normally felt in the ice water when the subjects were not "hypnotized". Systematic experiments were conducted with less experienced subjects who could reduce their pain by a third or more through suggested hypnotic analgesia. It transpired that the maximum pain reported via "automatic writing" was consistently the same as that reported by the "automatic talking" technique, the maximum typically being lower than in the normal waking condition.

Hilgard (1979b) argues that to describe what happens in hypnosis as an altered state of consciousness may overlook the fact that an alteration in control systems is more often in evidence than any profound change in subjective experience. However, he also argues that:

under some circumstances of deep hypnosis profound changes do take place. When profound and significant changes occur they lead to such descriptive expressions as "timelessness", "pure being" or "ecstasy". These alterations, prominent in discussions of human potential and consciousness expansion, are worthy of investigation and interpretation. In the more usual behavior of the hypnotized person, shown in responses to specific suggestions of the hypnotist, the changes in experience that occur are often very moderate ones. (p. 46.)

Hilgard (1979b) distinguishes between "central controls", which have executive and monitoring functions, and "subsystems" (which he referred to in his 1973b paper as "cognitive control structures"). The subsystems are hypothesized to be organized hierarchically, with one being actuated while others are latent. Hilgard writes:

Hypnosis may modify executive and monitoring functions so that the hierarchical relationships of the subsystems are changed. What was voluntary may become involuntary; what was involuntary may come under voluntary control; what was perceived may not now be perceived; something absent in perception may be hallucinated. Hence some subsystems are split off from their usual relationships and it is this split-off character that is described as dissociative. (Hilgard, 1979b, pp. 47-48)

Hilgard (1979b) states that "The central executive functions in hypnosis are typically thought to be divided between the hypnotist and the hypnotized person" (p. 49). He suggests that the retained and relinquished fractions will depend upon circumstances, including the subject's degree of hypnotic responsiveness or talent, and "the depth of involvement in hypnosis as a function of what transpires between subject and hypnotist" (p. 50). As for "monitoring functions" Hilgard (1979b) writes:

After the executive functions have "issued orders" to the monitoring functions to reduce the amount of critical scanning, to relinquish, as Shor (1970) has put it, the usual "reality orientation", the monitoring functions recede, without completely destroying the observing function. That is; the monitoring function may report, "The arm is now stiff", a correct interpretation of the phenomenal reality, without showing an understanding of the causes of the arm's stiffness. In the normal waking condition the monitoring functions are satisfactorily integrated as they perceive and account for the information that becomes available from the external world and from the body. (p. 50.)

The present writer finds Hilgard's terminology somewhat opaque and he is unsure to what extent Hilgard is merely describing hypnotic processes in terms of dissociation rather than explaining them. The vagueness of Hilgard's terminology is illustrated in the following quotation:

Examples of hypnotic distortion include hallucinations, both positive and negative. The exact relation between the monitoring and the actuated subsystem is not readily specified. For example, in age regression the subject may feel himself to be a child again on the playground of the third grade in school. The details of this actuated experience, whether it is a reliving of an actual experience or a fantasy construction, are reported accurately by the monitor. The activated subsystem - the child in age regression - does not use all the information about how the regression was suggested and produced, and the monitoring functions do not offer any correction for this omission. This lack of normal criticism was called "trance logic" by Orne (1959) who used as his illustration the ready acceptance of the hallucination of a person who was the double of one actually present. The point is that, within hypnosis, the monitoring functions have been limited until their full capacities are reactivated by terminating hypnosis. (Hilgard, 1979b, p. 51.)

In the above quotation, Hilgard is equating "the child in age regression" (i.e. the subject's experience or portrayal of being a child during suggested age regression) with an "activated subsystem". To the present writer, this labelling of the subject's experience

during suggested age regression adds little but confusion and unnecessary terminology to our attempts to understand the phenomenon.

As commented above, Hilgard's recent emphasis on dissociative mechanisms derives in large measure from experiments in which highly hypnotizable subjects have exhibited the "hidden observer" phenomenon, i.e. shown evidence of apparently split-off ("covert") mental processes. Hilgard (1979b) is aware that compliance might be posited as an alternative to dissociative mechanisms in explaining "hidden observer" reports. Hilgard (1979b) states that in a study that applied Orne's real-simulator design¹ (Hilgard, Hilgard, Macdonald, Morgan & Johnson, 1978), it was found that the demands created by the hidden observer instructions were strong enough for simulating subjects of low hypnotizability to be able to predict very well the objective behaviour of highly hypnotizable subjects. Thus, the simulating subjects could imitate the objective performances of the "real" subjects during simulation of hypnosis. Hilgard points out, however, that in their subjective reports, the real subjects insisted on the genuineness of their testimony, both with regard to the reduced pain during hypnotically suggested analgesia and the increase in pain during the hidden observer condition. The simulators, on the other hand, reported that they had been uninfluenced by any of the suggested procedures except the waking suggestion of analgesia which had reduced their pain slightly. Of course, the fact that the "real" subjects insisted on the genuineness of their testimony cannot be an absolute guarantee of the veracity of their reports - it would be much easier for simulating subjects, who were explicitly asked to fake being hypnotized, subsequently to admit to not having had the suggested subjective experiences, whereas compliant "real" subjects could face considerable embarrassment if they were to admit to giving contrived performances and having told lies.

Wagstaff (1981) discusses the possible role of compliance in the "hidden observer" experiments of Hilgard and his colleagues. He suggests that in the case of, say, cold-pressor pain, a subject may experience pain on immersing his hand in cold water but may deny feeling much in the way of pain. By pretending that he

¹ Orne's real-simulator methodology is described in Chapter III of this thesis (pp.71-73).

can speak through a "hidden observer", a part of him hidden from the "hypnotized" part, he can quite legitimately say what he really feels - that he feels considerable pain. Wagstaff writes:

In fact some of the reports given by the subjects after the experiment are most revealing, for instance, they include statements like (my emphasis in all cases¹), 'the hidden observer is more aware and reported honestly what was there', 'the hidden observer is like the way things really are', 'When the hidden observer was called up, the hypnotized part had to step back for a minute and let the hidden part tell the truth' (Knox et al. 1974, pp. 845-6), 'I'm not sure if the hypnotized part may have known it was there but didn't say it' (Hilgard, Morgan, and Macdonald, 1975, p. 286).

To those sceptical of how 'hidden' the 'hidden observer' is, these comments look suspiciously like the attempts of some subjects to appease their consciences and tell the truth; they lied when they said they felt little or no pain. (Wagstaff, 1981, pp. 180-181)

A little later, Wagstaff (op.cit.) writes:

Perhaps at our present stage of knowledge, genuine automatic talking, out of awareness, under hypnosis, could be viewed as no more likely on a priori grounds than an explanation of these results in terms of voluntary compliance on behalf of the subjects. It should perhaps be reiterated that an important feature of compliance put forward in this book is that it may not be all-or-none. These same subjects might feel genuinely that they are 'hypnotized', and maybe some of them can genuinely experience some hypnotic scale items, but this cannot be used as an argument that ipso facto their analgesia reports are genuine, or that all these subjects really can 'dissociate' the 'hypnotized' part from the hidden part so that neither is aware of the other. (p. 181)

Coe and Sarbin (1977) approach Hilgard's findings on hypnotic analgesia and the "hidden observer" from their perspective of hypnosis as role enactment. They write:

¹ I.e. Wagstaff's emphasis.

In preselecting subjects with high scores on hypnotizability scales, the experimenter automatically selects persons who have demonstrated (1) a readiness to engage in a miniature drama in response to the counter-factual statements of the hypnotist, and (2) a skill in employing actions that lead to credibility enhancement. To the role theorist, pre-selection of subjects on these dramatic dimensions makes hypnotic analgesia expectational.

The subject employs whatever skills, techniques, and maneuvers he can to disattend the pain stimulus. In this respect, he is like the youth who engages in the macho game of not expressing pain through grimacing, flinching, weeping, or shouting when ferociously pinched by his antagonist. He may use distraction techniques such as talking, counting, laughing, imagining a contrary state of affairs, or others. Meditation, relaxation, fantasy, prayer, and laying on of hands are some of the distraction procedures that have been successful with some persons in producing analgesia. Distraction (or disattending) is a more transparent term than dissociation. It is a term that denotes actions, actions that are observable and even measurable. (p.10)

Coe and Sarbin (1977) contend that hidden observer instructions induce the subject to shift his orientation from that of agent or actor to that of spectator. They write:

From the perspective of the spectator, the subject can now report both the happenings and the doings of the analgesia scene. He can report the immediate sensory experience, a happening over which he has little control; he can report his efforts to minimize the effects of the sensory experience, he can report the anguish and suffering; and he can report the actions taken to reduce overt communication about anguish and suffering. (p.12)

Despite their criticism of other theorists' use of "opaque" language in trying to account for hypnosis, Coe and Sarbin's terminology is itself at times convoluted, which threatens the clarity of their argument. However, it appears that in trying to account for the data of Hilgard and his associates concerned

with hypnotic analgesia and the "hidden observer", they are not arguing that subjects are telling lies and trying to fool the experimenters. Their position therefore differs from a straightforward compliance explanation of the data.

THE THEORETICAL POSITION OF BARBER

The American psychologist T.X. Barber ranks along with Sarbin as a prominent non-state theorist. Barber and his colleagues have conducted and reported scores of investigations associated with the topic of hypnosis. Much of his earlier work is summarized in his 1969 book, Hypnosis: A Scientific Approach. A more recent statement of his approach can be found in Hypnosis, Imagination, and Human Potentialities (Barber, Spanos & Chaves, 1974), and Barber (1979) gives a clear exposition of his non-state orientation.

Much of Barber's work can be seen as a reaction against the traditional view that individuals described as "hypnotized" are in a special altered state ("hypnosis" or "hypnotic trance") which underlies their responsiveness to suggestions and their looking and feeling "hypnotized". As an alternative to the traditional, trance formulation of hypnosis, Barber and his associates have advanced what they call a cognitive-behavioural theory which, according to Barber and Wilson (1977):

postulates that regardless of whether or not a trance-induction procedure is administered, subjects are responsive to test-suggestions for limb heaviness, anesthesia, time distortion, age regression, and so on, to the extent that they think along with and imagine the themes that are suggested. The theory also postulates that subjects do not think along with and imagine with the suggested themes when they have passive attitudes, negative attitudes, or cynical attitudes toward the test situation. Following these postulates of the Cognitive-Behavioral Theory one could predict that a very proficient method for producing a high level of responsiveness to test-suggestions in unselected subjects would include instructions designed both to remove passive or negativistic attitudes and also to demonstrate to the

subjects how to think and imagine with the themes of the suggestions (Think-With Instructions). (p.34.)

Barber and Wilson report an experiment in which 66 subjects were randomly assigned to one of three groups: one in which Think-With Instructions were used, one in which a hypnotic induction procedure was used, and a control group. The subjects were tested with the Creative Imagination Scale (CIS). (This scale is discussed in Chapter I, pp. 17-19.) In terms of the cognitive-behavioural theory, Barber and Wilson predicted that subjects exposed to preliminary instructions designed to demonstrate how to think with and imagine along with suggested themes (Think-With Instructions) would be more responsive to test-suggestions for anaesthesia, time distortion, age regression, and so on, than subjects exposed to a hypnotic induction procedure. The authors argue that the "traditional Trance State Theory" would predict that a trance induction would be more effective than Think-With Instructions in enhancing responses to such suggestions. In fact, subjects exposed to the Think-With Instructions obtained significantly higher scores on the test-suggestions than those subjects exposed to a hypnotic induction procedure and those in the control group. The latter were simply told, "In this study you will be given a series of tests in which you will be asked to focus your thoughts and to imagine certain events. When asked to do so, please focus your thoughts and imagine to the best of your ability" (p. 37).

Barber and Wilson refer to two further studies, carried out independently of theirs, in which "Think-With" or similar instructions enhanced responsiveness to test-suggestions more than a traditional hypnotic induction procedure (De Stefano, 1976; Katz, 1975).

Barber and Wilson (1977) recognize that all studies involving suggestions or "hypnosis" are open to the criticism that subjects may exaggerate their experiential reports in order to be "good" subjects or to please the experimenter or hypnotist or to comply with the "demand characteristics" of the experimental situation. They point out that to ascertain to what extent the subjects may be exaggerating - or possibly under-emphasizing - their experiences,

researchers can use a technique adapted from Bowers (1967). Thus, subjects can be interviewed after the experiment by a person other than the experimenter and strongly urged to give unexaggerated or literally truthful reports concerning what they had experienced. Barber and Wilson predict from previous studies that used this kind of post-experimental inquiry (Comins, Fullam & Barber, 1975; Spanos & Barber, 1968; Spanos, Barber & Lang, 1974) that all the groups - i.e. "trance induction", "Think-With Instructions", and control - would to some degree reduce their estimates pertaining to how intensely they experienced the suggested effects, and that the degree of reduction in the experiential reports would be more or less equal among the groups. The latter conclusion - that the degree of reduction in the experiential reports would be more or less equal among all three groups - is not supported by any empirical data in Barber and Wilson's (1977) paper and one might ask whether Think-With Instructions carry more pressure for compliance than a traditional hypnotic induction procedure. In an appendix to their paper, Barber and Wilson reproduce their Think-With Instructions verbatim. Part of this appendix is reproduced below:

In this study I'm going to give you a series of tests in which I'll ask you to focus your thinking and to use your imagination creatively to produce certain effects and to experience certain events. You'll benefit from these tests if you let yourself think along with the instructions. When you think along with the instructions you'll find that you can use your mind to do many interesting and useful things.

Let me give you an example of the kind of tests I might give you. I might, for example, ask you to close your eyes and feel as if you're looking at a T.V. program. Now, there are a number of possible ways to respond to these tests. For instance, if someone asks me to close my eyes and to imagine I'm watching a T.V. program, one way I could respond is to close my eyes and say to myself, "There's no T.V. screen there. I can't see a T.V. show when there's no T.V. there. This is ridiculous. It's a lot of baloney. I can't do it." Obviously, if I take this kind of negative

attitude and say these negative things to myself, nothing's going to happen. I'm not going to visualize a T.V. screen or feel as if I'm looking at a T.V. program, and I won't find this to be an interesting or worthwhile experience.

There is another way of responding to this test in which I also do not benefit from the test. This way is to close my eyes and passively wait for a T.V. screen to appear. Once again nothing will happen, because only my own mind, my own thoughts, can make a T.V. screen appear before my eyes. It won't happen magically by itself.

A third way I could respond, and this is the way in which I benefit most from this test, is when somebody tells me, "Close your eyes and imagine you're watching a T.V. program," I let myself think of a T.V. program that I like or one that I can remember easily, like "All in the Family." Then I close my eyes [experimenter closes her eyes] and tell myself that I'm looking at Archie Bunker and I see him in my mind's eye. I visualize him walking in his front door, in his own way, hanging up his hat and jacket on the hook by the door as he calls to Edith that he's home and then yells at Michael to get up off of his chair. And I feel as if I'm looking at the T.V. program [experimenter opens her eyes], and I find this to be a very interesting experience. In the same way, I could feel as if I'm watching the newscast or a football game or any other program on T.V. By using my creative imagination and thinking of a T.V. program I've seen previously, I create it myself and I see it in my mind's eye. Now, everybody can do this although not everyone does. Some people block themselves by negative attitudes such as telling themselves that it's silly and can't happen, or by passively waiting for something to happen to them.

(Barber & Wilson, 1977, p. 46)

If a subject failed to respond to suggestions following a typical hypnotic induction procedure, he or she might attribute this to lack of hypnotic talent ("I must be a poor subject"), whereas an individual failing to have a subjectively convincing experience with suggestions preceded by Think-With Instructions might feel some degree of embarrassment in that despite detailed

instructions on how to respond to suggestions, he or she was unable to have the required experience. Such embarrassment could induce a subject to give an exaggerated report as to his or her responsiveness. In support of this possibility, one can point to the case of the "Task Motivational Instructions" that were employed in a number of Barber's earlier studies. Barber argued that high response to test-suggestions following hypnotic induction procedures might arise not from an induced "trance state" but from factors such as the definition of the situation as hypnosis, motivational instructions and statements that it is easy to respond to suggestions and to experience suggested effects. Accordingly, Barber and his colleagues compared responsiveness to suggestions following "hypnotic induction" with responsiveness following so-called Task Motivational Instructions. The latter included statements indicating that previous subjects had passed all the tests when they tried and that if the present subjects did not try to the best of their ability, the experiment would be worthless and the experimenter would tend to feel silly. In a number of studies, Barber and his colleagues typically found that the administration of Task Motivational Instructions increased subjects' responses to test-suggestions to a degree not significantly different from that obtained with a hypnotic induction procedure. For example, Barber and Calverley (1964a) demonstrated that base-level response to suggestions to hallucinate (both visually and auditorily) was augmented to the same degree by a hypnotic induction procedure and by Task Motivational Instructions. However, Bowers (1967) conducted an experiment in which subjects were told to hallucinate. Pretest ratings were taken on the reality of visual and auditory hallucinations. The subjects were then given Task Motivational Instructions to hallucinate. However, before this retesting, half the subjects saw a second experimenter who demanded an honest hallucination report while the other half made their retest ratings in routine fashion. The results showed that for both sensory modalities the demand for honesty appreciably reduced the change in hallucination response from pretest to retest and only when honesty was not demanded was there a significant change. In a more comprehensive study, Spanos and Barber (1968) tested the "demand for honesty" instruction on responsiveness to suggestions

following both Task Motivational Instructions and a hypnotic induction procedure. These authors found that when honest reports were demanded, the hypnotic induction condition, but not the Task Motivational Instructions condition, raised reports of visual hallucinations above base-level. With regard to auditory hallucinations, the hypnotic induction procedure just failed to raise the reports significantly above base-level, even with no demand for honesty. Where honest reports were demanded, Task Motivational Instructions failed to raise reports of auditory hallucinations significantly above base-level. These findings suggest that Task Motivational Instructions transmit strong pressure for compliance. If Think-With Instructions similarly exert a pressure for compliance (greater than any pressure for compliance contained in a typical hypnotic induction procedure), then evidence for the cognitive-behavioural theory based on studies employing Think-With Instructions must be regarded as suspect.

As indicated above, Barber and his colleagues contend that it is unnecessary to import the concept of a "hypnotic trance" to make sense of phenomena such as anaesthesia, amnesia, hallucinations, and age regression. In a relevant study, Wilson and Barber (1982) conducted in-depth interviews with 27 women whom they had rated as excellent hypnotic subjects and 25 women whom they had rated as non-excellent (poor, medium, and medium good) hypnotic subjects. They found that 26 of the 27 excellent hypnotic subjects exhibited a constellation of characteristics which the authors labelled the fantasy-prone personality. As children, these individuals lived in a make-believe world much or most of the time and as adults they typically spent a large part of their time fantasizing. For example, during a social conversation, while speaking or listening to another person, the subjects might "see", "hear", "smell", and "feel" what was being described. Wilson and Barber report that 65 per cent of the fantasy-prone subjects typically experienced their fantasies "as real as real" in all sense modalities and the remaining 35 per cent also commonly experienced fantasies of hallucinatory intensity in all senses except vision - they heard imagined sounds, smelled imagined aromas, tasted imagined food, and so forth - but the visual component of the fantasy was located either in the "mind's eye", where it could be vivid, or in the external environment, where it was more vague and "ghost-like" and not "as real as real".

Wilson and Barber report that all of the fantasy-prone subjects (but none of the comparison subjects) stated that their fantasies had an involuntary, automatic, or self-propelling quality. Although this proved useful and entertaining for the fantasizers (e.g. they never needed to be bored), the involuntary quality could present problems. Thus 70 per cent of the fantasizers (especially those whose fantasies were associated with visual hallucinatory imagery when their eyes were open) had difficulty when driving. Wilson and Barber (1982) write:

They might imagine or "see" in front of them on the road whatever they may be expecting. For example, if any of these subjects happens to think to herself while driving, "I better be careful because a child or animal might dart into the street", then she is very apt to see an imaginary child or animal run into the street. To block their fantasies while driving, they typically force themselves to concentrate on the mechanics of driving and to carry on a continuous verbal monologue such as "I'm now approaching an intersection, there's a lot of traffic, slow down, be ready to stop, and so on." Some of the fantasizers also reported other strategies that they feel helped to make their driving safer; for instance, three subjects picture a protective white light around the car and another imagines four small angels, one on each corner of her car, that help her to focus on driving. (p. 354)

Wilson and Barber note that the individuals whom they have labelled fantasy-prone personalities have many experiences, as part of their ongoing lives, that are similar to those that have been associated with hypnosis. They write:

We would conjecture that these are the people who are the subjects when we hear dramatic accounts of hypnotic phenomena. We would also conjecture that throughout the history of hypnotism, when these individuals were the subjects, most hypnotists and observers believed (incorrectly) that they manifested limb rigidity, positive hallucinations, negative hallucinations, anesthesia, age regression, automatic writing, and so on, because they had been hypnotized. Apparently most hypnotists

did not realize that these excellent hypnotic subjects (or "somnambules") were able to experience the classical hypnotic phenomena primarily because they had had practice in experiencing similar phenomena during their daily lives. Our data indicate that the hypnosis setting provides a situation in which those with a secret fantasy life can publically demonstrate their special abilities or talents. In the hypnosis situation, their ability to fantasize with hallucinatory intensity is not only socially permissible; it is also rewarded. (p. 376)

Sheehan and Perry (1976) recognize three phases in Barber's work. In his early work (e.g. Barber, 1958) he saw hypnosis as primarily a transactional process between the subject and hypnotist with the subject being attuned to the words of the hypnotist and being "set" to carry out the latter's instructions. Although Barber even then rejected the idea that hypnosis is a state, aspects of his approach were not entirely dissimilar to those of state theorists. Sheehan and Perry note that from the early 1960s, Barber's work entered an "operational" phase in which he and his colleagues conducted numerous studies to elucidate the relation between independent variables (e.g. statements that define the situation as "hypnosis") and dependent variables (e.g. response to test-suggestions and the subject's testimony of having felt "hypnotized"). The third, most recent, phase of Barber's work has been characterized by the development of a theoretical position in which the "hypnotized" subject is seen as one who has positive attitudes, motivations and expectancies and who lets himself imagine and think along with the themes suggested by the hypnotist. As in his previous phases, Barber rejects the notion that hypnotic responding arises from subjects being in a special altered state ("hypnosis" or "hypnotic trance").

As with other hypnosis investigators, Barber has his critics. For example, Watkins (1972), reviewing Barber's (1970) book, LSD, Marihuana, Yoga, and Hypnosis, comments that with regard to hypnosis:

the author has apparently made up his mind about its nature and limitations. He seems already to have decided that there is no such phenomenon as "the hypnotic state", that trance-inducing suggestions are not necessary for the

securing of so-called hypnotic behaviors, and that all that can be accomplished with or under "hypnosis" can be achieved equally well through "task-motivated" suggestions given in the "non-hypnotic condition". Accordingly, the findings of each study he reports are filtered most meticulously through this belief system when making his conclusions. (p. 268)

Tellegen (1970) argues that there are no compelling reasons for adopting Barber's negative view of hypnotic state theory. He argues that "no matter how well considered Barber's methodological orientation may be, it remains a matter of personal preference, and cannot in all fairness, be treated as if it were the only defensible stance" (p. 266). Tellegen sees Barber's arguments as reflecting a general reluctance to incorporate inferential mentalistic concepts into his thinking. It could be argued, however, that this criticism does not apply to Barber's recent theorizing which emphasizes internal and unobservable processes such as thinking along with suggested themes and involvement in suggestion-related imaginings.

Barber's criticisms of hypnotic state theorizing receive further attention in the next chapter.

CONDITIONING AS AN EXPLANATION OF HYPNOSIS

Some writers have tried to apply Pavlovian or classical conditioning explanations to account for hypnotic phenomena. Welch (1947), for example, proffers what he calls a "behaviouristic" explanation of the mechanism of suggestion and hypnosis. Taking the case of a subject exposed to an eye-fixation induction procedure, i.e. where the subject is asked to stare at a light or small bright object, usually held in a position that will cause a slight eye strain, Welch points out that when the hypnotist says that the subject's eyes are feeling tired, they will indeed feel tired from staring. Similarly, when the hypnotist tells the subject that his eyes will blink, they will tend to do this because of the strain. Again, when the subject is told that he feels like closing his eyes, there will be a tendency for this to happen because of the eye strain. The physiological process of eye strain is associated with the hypnotist's suggestions, just as in Pavlov's well-known experiments, dogs' salivation to the presence

of food became associated with the sound of a bell. Welch further argues that if the hypnotist's instructions are given in a soft, monotonous tone of voice, this will in itself tend to facilitate drowsiness, an effect that will be consistent with the hypnotist's suggestions of relaxation and sleepiness. Welch goes on to say that eventually the hypnotist can give an instruction that is not aided or associated with an extraneous causal factor and, if the subject is adequately conditioned, the instruction will be carried out. He writes:

Of course, the generalization in this conditioning is much broader, at a higher level of abstraction than the generalization in the case of Pavlov's dog, who salivates when a bell of a slightly different pitch is sounded. (p. 361)

The present writer finds this extrapolation very speculative, and, by virtue of its vagueness, unconvincing. Moreover, elsewhere in his article, Welch compromises his purportedly "behaviouristic" stance by adopting "mentalistic" constructs. For example, he writes:

A series of instructions may be given to enlist the subject to perform an act A. The instructions focus attention upon, and intensify, the kind of feeling which in everyday life causes a subject to perform A. If A is "uncrossing the legs", then indirect instructions will call to mind the feelings which in the past have led the subject to uncross his legs. (p. 362)

In summary, then, Welch's approach constitutes neither a clear explanation nor a truly behaviouristic account of hypnosis.

GENERAL COMMENTS ON THEORIES OF HYPNOSIS

There is much common ground between some of the theories of hypnosis discussed in this chapter. For example, an emphasis on the subject's striving to act like a hypnotized person features in White's theory, Sarbin's formulation of hypnosis, and Shor's three dimensional theory of hypnosis. There are affinities between White's theory, Pavlov's neurophysiological theory, and Edmonston's theorizing in these workers' emphasis on drowsiness, inhibition,

and relaxation as important aspects of the presumed hypnotic state. The theories of Sarbin and Barber are the only two considered in this chapter that specifically reject the usefulness of the notion of a "hypnotic state"¹.

The various theories discussed differ in the extent to which they are rooted in broader theories of human behaviour. Thus, while Gill and Brenman's account of hypnosis is clearly rooted in psychoanalytic theory, other theories have a more "synthetic" or eclectic appearance, e.g. Shor's three dimensional theory.

Although it has not been the aim of this chapter to provide a complete review of all the evidence for and against the theories discussed, it is instructive to ask to what extent the various theories are couched in terms that would permit confirmation or disconfirmation through observation and experiment. An immediate difficulty faced by some of the theories discussed (for example, Gill and Brenman's psychoanalytic theory, Hilgard's neo-dissociation theory, and Shor's three dimensional theory) is that to some extent they rely on constructs that do not appear to be readily capable of assessment through independent, empirical observations. This difficulty also applies, in part, to Erickson's speculations about the nature of hypnosis, which receive special attention in Chapter IV. As will be seen, however, despite the vagueness and inconsistency of his assertions about hypnosis, Erickson did report some definite observations relevant to the notion of "hypnosis" as an altered state, and these clearly permit attempts at replication.

1

Arguably, Edmonston's equation of "neutral hypnosis" with relaxation is only a state theory insofar as a "hypnotized" (i.e. relaxed) subject can be said to be in a "state of relaxation". In concentrating on "neutral hypnosis", Edmonston avoids coming to grips with some of the observations that other theories seek to explain, viz. the "counter-expectational" behaviour of subjects who respond to suggestions after exposure to hypnotic induction procedures.

CHAPTER III

THE STATE—NON-STATE ISSUE

INTRODUCTORY COMMENTS

The question whether individuals who are said to be hypnotized are in a state fundamentally different from their normal waking state is central to this thesis. The view that individuals described as hypnotized are in an altered state is the traditional one and is probably held by the majority of hypnosis researchers and clinicians as well as by the majority of the general public, who tend to assume that there must be a special hypnotic state to account for the unusual behaviours manifested by hypnotic subjects. While of interest to those with an academic, research or theoretical interest in hypnosis, the state—non-state issue may be seen by others as rather sterile. Thus, in the present writer's experience, clinicians who employ hypnotic techniques seem generally uninterested in questioning the existence of a hypnotic state, perhaps in part out of a fear that such questioning might be tantamount to querying the usefulness of hypnotic procedures in various types of psychological and medical therapy. Arguably, the latter would be a mistaken view since there is nothing in essence to stop a clinician who adopts a "non-state" position from employing hypnotic procedures in his or her therapy.

Irrespective of whether the available evidence supports the notion of an altered state in persons who are described as hypnotized, it seems probable that the popularity of hypnotic state notions derives in part from the terminology associated with the field of hypnosis. One often reads and hears of subjects entering hypnosis and being under hypnosis, expressions that clearly imply the existence of a special state. Equally, the term hypnotized implies a change of state, presumably one more marked than that indicated by terms such as relaxed and attentive. It is not always clear in writings on the topic of hypnosis whether terms such as hypnotic state and trance are being used merely as a descriptive shorthand for the condition of responsive subjects who have been exposed to procedures customarily labelled hypnotic inductions or whether these terms are meant to indicate a special altered state.

Hilgard (1975) contends that arguments over the state—non-state issue centre round three polar concepts that are not clearly distinguished in much of the controversial discussion. He writes:

The first pair of concepts can be designated the trait vs state distinction, that is, whether hypnotic responsiveness is more a matter of the characteristics of the subject than of the state produced by hypnotic induction. This is subject to empirical answer, and the bulk of the evidence, so far as this issue is concerned, favors trait over state. The second of the polarities has to do with the relative importance of traits vs situational factors. While the question of state is not at issue here, a preference for the influence of situational factors is evidenced by those who object to the state concept, reflecting similar controversies in contemporary social psychology ... Here again the empirical evidence favors trait over situation, in that baseline responses to hypnotic suggestions contribute more to the variance of hypnotic responses than to modifications in the experimental manipulations ... The third dichotomy is that between state and situation. Granted that an experimental and control group are equated for their individual differences by random selection, hence alike in "traits", does hypnotic induction (presumably producing a "state" according to state theorists) succeed any better than nonhypnotic manipulations in producing hypnotic-like responses? The evidence increasingly favors some enhancement of hypnotic-like behavior as a consequence of induction, but the enhancement is not great and the theoretical problems are not simple, so that this is the least resolved of the three issues. (pp. 20-21)

ORNE'S REAL-SIMULATOR METHODOLOGY

Before proceeding with a discussion of some of the lines of argument and evidence surrounding the state—non-state issue, mention will be made of Orne's real-simulator methodology, which has featured prominently in hypnosis research over the last 25 years.

The procedure, first described by Orne (1959), involves comparing the behaviour of "good" hypnotic subjects with that of motivated "unhypnotizable" subjects who have been instructed by the experimenter to fake or simulate being hypnotized in the presence of a second experimenter who acts as the hypnotist. This second experimenter is blind to whether any particular subject is a "real" or a simulator. The simulators are told that the hypnotist will stop the experiment if he detects that they are faking, and this statement is intended to reassure the simulators that it is still worth their while proceeding with the simulation even if they do not think they are doing a very good job. (In actual practice, the hypnotist does not stop the experiment if he suspects that the subject is faking.) If "real" and simulating subjects perform similarly in an experiment, it follows from the logic of the real-simulator methodology (which is discussed at some length by Sheehan & Perry, 1976) that the behaviour of the "real" subjects could have been determined by the same factors that determined the performance of the simulating subjects, viz. expectations or cues in the experimental situation (what Orne [1959] calls the "demand characteristics" of the experimental situation) rather than some "essence" feature of hypnosis. Of course, if simulating and "real" subjects perform alike, it does not necessarily follow that they do so for the same reasons - similarity of performance merely indicates that expectations and demand characteristics might have determined the "real" subjects' behaviour. If a difference emerges between the behaviour of "real" and simulating subjects, this could reflect some effect special to being "hypnotized". However, other possibilities have to be taken into account. Since "real" and simulating subjects receive different instructions and are in a different psychological situation when tested, it is possible that these factors could give rise to differences between their behaviour. One could also ask whether personality differences between "real" and simulating subjects result in their behaving differently in the experimental situation. (See Sheehan and Perry [1976] for further discussion of these issues.)

Orne (1971) argues that although for many experimental questions the real-simulator methodology is neither necessary nor useful, it is "uniquely helpful" as a procedure for evaluating three specific types of questions: (1) When a claim is made that the

hypnotized individual is able to transcend his normal volitional capacity. For example, if it transpires in an experiment investigating a suggested analgesia that simulating subjects, run by a hypnotist blind as to their identity, produce data indistinguishable from that of "hypnotized" individuals, it is possible to assert with confidence that the particular behaviours under investigation are within the repertoire of the un hypnotized ("waking") individual.

(2) Whenever hypnosis appears to result in an unusual willingness of subjects to carry out behaviours requested of them. Orne (1971) writes:

Since Ss' behavior is greatly influenced by the relatively subtle communication of expectations by E, it is useful to have a group for whom a wide range of behaviors has been legitimized, on the one hand, and a situation in which E expects the behaviors to be carried out, on the other. These are attributes which the simulating situation shares with hypnosis but in the absence of hypnotic experience. (pp. 203-204)

(3) Whenever an experimental deception is involved. Orne argues that, in this case, simulators, by virtue of the instructions given to them, are hyper-alert to experimental subtleties and hence their behaviour can help to evaluate in a very rigorous way the extent to which a subject might have figured out what was going on.

HYPNOSIS AS AN ALTERED STATE OF CONSCIOUSNESS

In considering the state—non-state issue, a subtle distinction is worth bearing in mind. Although in some, perhaps most, state-oriented accounts of hypnosis, the hypothesized altered state might be described as an "altered state of consciousness", this is not always the case. As pointed out in Chapter II, for example, Hilgard (1979b) has argued that to describe what happens in hypnosis as an altered state of consciousness may overlook the fact that an alteration in "control systems" is more often in evidence than any profound change in subjective experience.

Hunt (1979) applies Milgram's (1974) notion of an "agentic state" to understanding the situation of a hypnotic subject. Hunt writes:

According to Milgram the person who enters any authority system no longer views himself as subject to his own will, but rather comes to see himself as an agent for carrying out the wishes of another person or persons. This change to an 'agentic state' involves the subject's perception of himself as being legitimately regulated by a person of higher status and/or power. After the subject enters the 'agentic state' certain 'binding factors' act so as to keep him in the situation whilst at the same time there may be 'strains' inherent in the situation which act so as to push the subject towards disobedience. Individual susceptibility can thus be accounted for by the interplay of binding and strain factors. (pp. 21-22)

It can be seen that the notion of an "agentic state" is rather different from the concept of an "altered state of consciousness" understood as a state involving marked changes in perception, feeling, memory or reasoning.

Despite the above caution against automatically identifying "altered state" notions with the narrower concept "altered state of consciousness", the latter concept will be considered in some detail since it certainly features large in the thinking of some prominent hypnosis researchers who adopt a "state" point of view.

Tart's Systems Approach to Understanding

States of Consciousness

In an interesting, if speculative, analysis, Tart (1975) describes a "systems approach" to understanding states of consciousness. He writes:

The terms state of consciousness and altered state of consciousness have come to be used too loosely, to mean whatever is on one's mind at the moment. The new term discrete state of consciousness (d-SoC) is proposed for greater precision. A d-SoC is a unique, dynamic pattern or configuration of psychological structures¹, an active system of psychological subsystems. Although the component

¹ For footnote, see p.75.

structures/subsystems show some variation within a d-SoC, the overall pattern, the overall system properties remain recognizably the same. If, as you sit reading, you think, "I am dreaming", instead of "I am awake", you have changed a small cognitive element in your consciousness but not affected at all the basic pattern we call your waking state. In spite of subsystem variation and environmental variation, a d-SoC is stabilized by a number of processes so that it retains its identity and function. (p.5)

Tart cites as examples of d-SoCs the ordinary waking state, non-dreaming sleep, dreaming sleep, hypnosis, alcohol intoxication, marijuana intoxication, and meditative states. He uses the term discrete altered state of consciousness (d-ASC) to refer to a d-SoC that is different from some baseline state of consciousness (b-SoC). Normally, the ordinary state is taken as the baseline state. Tart describes a d-ASC as "a new system with unique properties of its own, a restructuring of consciousness" (p.5).

Tart claims that a d-SoC is stabilized by four kinds of process: loading stabilization (keeping attention/awareness and other psychological energies deployed in habitual, desired structures by loading the person's system heavily with appropriate tasks); negative feedback stabilization (correcting the functioning of erring structures/subsystems when they deviate too far from the normal range that ensures stability); positive feedback stabilization (strengthening activity and/or providing rewarding experiences when structures/subsystems are functioning within desired limits);

Footnote from p.74:

Tart describes a psychological structure as "a relatively stable organization of component parts that perform one or more related psychological functions" (p.18). He writes: "We infer (from outside) the existence of a particular structure by observing that a certain kind of input information reliably results in specific transformed output information under typical conditions. For example, we ask someone, 'How much is fourteen divided by seven?' and he answers, 'Two.' After repeating this process, with variations, we infer the existence of a special structure or related set of structures we can call arithmetical skills. Experientially, we infer (from inside) the existence of a particular structure when, given certain classes of experienced input information, we experience certain transformed classes of output/response information. Thus, when I overhear the question about fourteen divided by seven and observe that some part of me automatically responds with the correct answer, I infer an arithmetical skills structure as part of my own mind" (pp. 18-19).

limiting stabilization (restricting the range of functioning of structures/subsystems whose intense operation would destabilize the system). Tart lists 10 major subsystems (what he describes as "collections of related structures") that show important variations over known d-ASCs:

- (1) Exteroception - sensing the external environment.
- (2) Interoception - sensing what the body is feeling and doing.
- (3) Input-processing - automated selecting and abstracting of sensory input so one perceives only what is "important" by personal and cultural standards.
- (4) Memory.
- (5) Subconscious - the classical Freudian unconscious plus many other psychological processes that go on outside one's ordinary d-SoC, but that may become directly conscious in various d-ASCs.
- (6) Emotions.
- (7) Evaluation and decision making - cognitive evaluating skills and habits.
- (8) Space/time sense - the construction of psychological space and time and the placing of events within it.
- (9) Sense of identity - the quality added to experience that makes it a personal experience instead of just information.
- (10) Motor output - muscular and glandular outputs to the external world and the body.

Tart suggests that there are very important individual differences in the structure of d-SoCs:

If we map the experiential space in which two people function, one person may show two discrete, separated clusters of experiential functioning (two d-SoCs), while the other may show continuous functioning throughout both regions and the connecting regions of experiential space. The first person must make a special effort to travel from one region of experiential space (one d-SoC) to the other; the second makes no special effort and does not experience the contrast of pattern and structure differences associated with the two regions (the two d-SoCs). Thus what is a special state of consciousness for one person may be an everyday experience for another. Great confusion results if we do not watch for these differences: unfortunately, many widely used experimental procedures are not sensitive to these important individual differences. (pp. 6-7)

Regarding the induction of a discrete altered state of consciousness, Tart identifies two basic operations that, if successful, lead to the d-ASC from the b-SoC. First, disrupting forces are applied to the b-SoC. These are psychological and/or physiological actions that either interfere with the stabilization processes that maintain the b-SoC or withdraw "attention/awareness energy or other kinds of energies from them" (p. 7). Tart argues that because a d-SoC is a complex system, with multiple stabilization processes operating simultaneously, induction procedures may not work. Thus a psychedelic drug may not produce a d-SoC because psychological stabilization processes hold the b-SoC stable in spite of the disrupting action of the drug on a physiological level. If, however, the induction proceeds successfully, the disrupting forces push the various structures/subsystems to their limits of stable functioning and then beyond, destroying the integrity of the system. In the second part of the induction process, patterning forces are applied - these being psychological and/or physiological actions that pattern new structures/subsystems into a new system, the desired d-ASC. If it is to last, the new system must develop its own stabilization processes. Return to the b-SoC ("deinduction") is a similar process to induction: the d-ASC is disrupted, a transitional period occurs, and the b-SoC is reconstructed by patterning forces.

Tart describes the process of inducing hypnosis in terms of his "systems approach". He contends that having the subject sit or lie comfortably so that he does not have to exert any effort to maintain bodily position and telling the subject not to move and to relax his body as much as possible, limits the subject's ability to feel anxiety, making it easier for the subject to experience an alteration in his state of consciousness. When the body is in a relaxed position and lying still, many of the kinaesthetic adaptors "adapt out", as in going to sleep. The body as a whole thus begins to fade out as a conscious experience and no longer serves as a "load" and "patterning force" to help stabilize the subject's b-SoC. Tart contends that another major loading and patterning process is attenuated by the hypnotist's telling the subject to listen only to his voice and to ignore other thoughts or sensations that come into his mind. Tart argues

that ordinarily one constantly scans the environment to see if important stimuli are present, and this constant scanning keeps up a continuous, varied pattern of information and energy exchanges among subsystems, which tends to keep subsystems active in the waking state pattern. He claims that a third common instruction during a hypnotic induction procedure is that the subject should not think about what the hypnotist is saying, but just listen to it passively. Tart argues that in the ordinary state of consciousness one constantly thinks about what is being said and what is happening, and this maintains a great deal of evaluative and decision-making activity, which helps to maintain the ordinary d-SoC through loading stabilization. If the hypnotist has the subject focus his attention on some particular thing in addition to the hypnotist's voice, this reduces further scanning of the environment and can result in various unexpected visual effects because of retinal fatigue. To the extent that these are not part of the subject's usual experience, they constitute a kind of input that the "Input-Processing subsystem" is not used to handling, and so tend to disrupt the normal functioning of the subsystem. Tart argues that the "Sense of Identity subsystem" is affected by the subject's giving credit to the hypnotist for various effects that are actually brought about by physiological processes such as staring at something. The hypnotist's suggesting that the subject is falling asleep or is drowsy elicits a variety of memory associations that help the induction process since going to sleep means that the b-SoC breaks down. Since going to sleep is associated with a fading out of the body image, this suggestion enhances the fading of the body image that is already occurring because of the adaptation of kinaesthetic receptors to the relaxed, still posture of the subject. Additionally, since going to sleep is a passive activity, the suggestion encourages a sense of passivity on the part of the subject and so reinforces the earlier instructions not to think about what the hypnotist is saying but simply to accept it. Tart adds that the references to sleep also draw up memories and expectations of one's identity fading, so energy is not required to keep evaluating the situation in terms of personal values. Since the hypnotist does not want the subject to actually fall asleep, he may indicate that unlike real sleep, the subject's condition will permit him to continue to hear the hypnotist:

a "patterning force" to produce a passive sleep-like state in which communication with the hypnotist is still effective. The hypnotist's prestige may be enhanced by successful response on the subject's part to motor suggestions. The automatic response to suggestion affects the "Sense of Identity subsystem":

Ordinarily it is your own "voice" inside you that tells you to do a thing that you then do. Now the hypnotist's voice takes over this role, and your sense of self begins to include the hypnotist. The special modulation from this subsystem that constitutes the ego sense ... is added to the stimuli that would ordinarily be perceived as the voice of an outsider. Psychoanalysts call this the transference element of hypnosis¹, especially when some of the transference involves parental transferences onto the hypnotist. The deliberate or implicit encouragement of identification with the hypnotist's voice is an application of patterning forces. (p. 80)

Tart suggests that success with simple motor suggestions also produces a novel kind of body stimulation: feeling one's body moving, but with different qualities than ordinarily. This experience again does not fit the "habitual input-processing patterns", and so tends both to disrupt the stabilization of one's d-SoC and to help pattern the hypnotic state. Finally, Tart suggests that one must consider the subject's implicit expectations of what it is like to be hypnotized and how a hypnotized subject behaves. He refers to a survey conducted by Shor (1964) showing that among college students there was fairly good general knowledge of what hypnosis is like, in spite of some misconceptions. Thus, if a subject agrees to be hypnotized and believes that the hypnotist can do it, he has implicit expectations that affect his reaction to the particular things the hypnotist does.

According to Tart, if the induction is successful, and a "neutral hypnotic state" is developed, the result is a d-ASC characterized by a quiet mind. He claims that typically, if a deeply hypnotized subject is asked what he is thinking about

¹ The present writer doubts whether many psychoanalysts would endorse Tart's use of the term "transference" in this way.

or experiencing, the answer is "Nothing". He also describes the state as being "characterized by greatly enhanced suggestibility¹, a greater mobility of attention/awareness energy, so when a particular experience is suggested to the subject he usually experiences it far more vividly than he could in his ordinary d-SoC, often to the point of total experiential reality" (p. 81). Thus, Tart contends that the hypnotic state shows a high flexibility of functioning, even though it is relatively quiet between particular functionings. He also describes the state as being characterized by a quality of rapport which he sees as a functioning of the "Sense of Identity subsystem" to include the hypnotist as part of the subject's own ego.

In his approach to "states of consciousness", Tart displays a willingness to draw on both objective and experiential data. There is also an eclectic flavour to the terminology and ideas he incorporates in his theorizing. Thus, he uses terms derived from the area of computer science (programming, input, etc.) and he is not averse to certain Freudian notions such as transference and the unconscious. While conceding that the "components of consciousness" can be studied in isolation, Tart contends that they can only be fully understood in the context of their dynamic relations with one another - hence he dubs his position a "systems approach". Tart clearly echoes the clarion call of the Gestalt psychologists of past decades: the whole (in this case "consciousness") is more than the sum of its parts.

Some Criticisms of Altered State Theorizing

In contrast to Tart (1975), who clearly sees "hypnosis" as a "discrete altered state of consciousness", Coe (1980) argues that, with very little effort, most of the concepts offered by state and non-state theorists may be restated in terms of the other. He contends that in common, they all recognize the

¹ Tart is probably guilty of hyperbole in stating that "induction" leads to "greatly enhanced suggestibility". Hilgard (1975) claims that the "evidence increasingly favors some enhancement of hypnotic-like behavior as a consequence of induction, but the enhancement is not great and the theoretical problems are not simple ..." (p. 21).

importance of motivations, expectations and abilities in hypnotic responsiveness. He points out that Spanos and Barber (1974) have argued that a central notion for most state and non-state theorists is that responsive subjects are involved in suggestion-related imaginings and at the same time they are inattentive to information that is inconsistent with these imaginings. Coe writes:

Nonstate theorists accept this construct as a sufficient description in and of itself. However, state theorists postulate an altered state of consciousness as well, which as Spanos and Barber (1974) point out, is not clearly related to the involved-in imaginings concept. They raise the questions: Are the two concepts synonymous? Does the state have to exist before involved-in imaginings occur? Is state a superordinate concept which includes involved-in imaginings as well as other processes? (p.8)

Coe suggests that if "state" is synonymous with "involved-in imaginings", then the state and non-state views essentially agree but if they are not synonymous, then the characteristics of the altered state of consciousness need to be made explicit. Coe limits his analysis to the theoretical propositions of four prominent hypnosis researchers: Orne, Hilgard, Shor, and Fromm.

Coe argues that although Orne (1977) attempted theoretical neutrality, his writings strongly imply that hypnotized subjects experience a subjective alteration that is personally compelling, a view compatible with the notion of an altered state of consciousness. However, in Coe's view, Barber and his colleagues' concept of involved-in imaginings is essentially the same as Orne's view of "state". Similarly, Coe contends that there seems to be no difference between Orne's view and Sarbin's postulate about "believed-in imaginings" (e.g. Sarbin & Coe, 1972).

Coe (1980) states that Hilgard (1977b), arguing from his "neodissociation" perspective, has attempted to resolve the state — non-state issue by defining state as an extreme end of a dissociative continuum. Thus, Hilgard argues that it is not necessary to speak of a state simply because people respond to suggestions. Instead, he limits the range of conduct that can be considered a hypnotic state to times when dissociations are sufficiently widespread.

Coe suggests that three criteria for the presence of a hypnotic state are suggested by Hilgard's definition: the subject must be hypnotized; the subject is, outwardly, highly responsive to hypnotic suggestions; and the subject verifies being deeply hypnotized by his or her self-report, reports that presumably indicate that the subject's experiences are "real". To Coe, Hilgard's state concept "is simply a description, based on observable responses and subjects' reports, of how highly responsive subjects behave" (p. 9).

Coe (op.cit.) contends that Shor's view of state is best presented in his notion of the fading of the "generalized reality orientation into the background of awareness" (Shor, 1959, 1962). Coe suggests that this concept is very similar to that of believed-in imaginings as well as Orne's and Hilgard's positions which stress the importance of the subjective convincingness of the hypnotic experience.

With regard to the psychoanalytically-oriented "ego-psychological" analysis of state propounded by Fromm (e.g. Fromm, 1977), Coe (1980) observes that this appears to be similar to other state positions except for the expansion of terms that are employed to describe ego functioning. Coe contends that Fromm's hypnotic state concept seems to describe highly responsive subjects who view their hypnotic experiences as vivid, convincing and capable of being described as "real". Coe thinks there is nothing in Fromm's description that he would consider to be incompatible with non-state views. He contends that, like other state theorists, Fromm is not clear as to when persons are in an altered state and when they are not:

The bipolar concepts that she employs to describe altered states - ego receptivity/ego activity; primary process/secondary process; fantasy/reality orientation; imagery/conceptualization; unfocused attention/focused attention, ... imply continuous variables. The ego can presumably be more or less receptive, for example. If the implication of continuums is correct, then the hypnotic state for Fromm, as it is for Hilgard, is a difference in quantity rather than in quality. Postulating an altered state adds nothing in way of understanding. It simply serves as a term that describes how very responsive, hypnotized subjects act and report their experiences. (Coe, 1980, p.9)

Another prominent critic of attempts to explain hypnotic behaviours and experience in terms of an altered state is Barber. Barber (1979) comments on the differing conceptions of hypnotic state employed by some investigators. He points out that during the nineteenth century terms such as "hypnotic trance" or "hypnosis" typically implied that the subject resembled a sleep walker or somnambule, i.e. resembled a person who arises from his bed at night, walks around while "half asleep", and responds in a dissociated, rather automatic way to a narrow range of stimuli. Barber points out that some present-day investigators who utilize the terms "hypnotic trance" or "hypnosis" do not seem to mean that the subject resembles a sleep walker. He cites Bowers' (1966) view that hypnosis is an "altered state within which suggestions have a peculiarly potent effect". Gill and Brenman (1959), however, use the term "hypnotic state" to refer to an "induced psychological regression, issuing, in the setting of a particular regressed relationship between two people, in a relatively stable state which includes a subsystem of the ego with various degrees of control over the ego apparatuses". Barber points out that other investigators attach different connotations to the term hypnotic trance. Among the essential characteristics of the hypnotic state, Orne (1959) includes a tolerance for logical inconsistencies and alterations in subjective experiences induced by suggestions. Evans (1968) views hypnosis as an altered subjective state in which dissociative mechanisms are operating. Meares (1963) sees the basic element in hypnosis as an atavistic regression to a primitive mode of mental functioning, whereas Shor (1962) views the hypnotic state as having three dimensions - hypnotic role-taking, trance, and archaic involvement. Barber comments that although these and other theoretical formulations attribute somewhat different properties to the hypnotic state, they derive from a common set of basic assumptions (an underlying paradigm). He writes:

Some of the underlying assumptions of the hypnosis or trance paradigm appear to include the following:

1. There exists a state of consciousness, a state of awareness, or a state of the organism that is fundamentally (qualitatively) different from other states of consciousness such as the waking state, the deep sleep

state, and the state of unconsciousness. This distinct state is labeled "hypnosis", "hypnotic state", "hypnotic trance", or simply "trance".

2. The state of hypnotic trance may occasionally occur spontaneously, but it is usually induced by special types of procedures that are labeled "hypnotic inductions" or "trance inductions". Although trance induction procedures vary in content - for example, they usually include, but they need not include, fixation of the eyes, suggestions of relaxation, and suggestions of drowsiness and sleep - they all appear to have two essential features in common: they suggest to the subject that he is entering a special state (hypnotic trance) and investigators who adhere to the traditional paradigm agree that the procedures are capable of producing hypnotic trance.
3. The hypnotic trance state is not a momentary condition that the subject enters for only a few seconds. On the contrary, when a person has been placed in a hypnotic trance, he remains in it for a period of time and he is typically brought out of it by a command from the hypnotist, such as, "Wake up!"
4. Subjects who are in a hypnotic state are responsive, both overtly and subjectively, to test suggestions for rigidity of the muscles or limbs, age regression, analgesia and anesthesia, visual and auditory hallucination, deafness, blindness, color blindness, negative hallucination, dreaming on a specified topic, heightened performance (on physical or cognitive tasks), amnesia, and posthypnotic behavior.
5. As Sutcliffe (1960) pointed out, some investigators who adhere to the trance paradigm believe the suggested phenomena are "genuine" or "real", whereas others are far more skeptical. For example, some investigators who accept the trance paradigm view hypnotic deafness as indistinguishable from actual deafness, and the hypnotic dream as indistinguishable from the nocturnal dream. However, other investigators who accept the trance paradigm view the hypnotic deaf subject as a person who is able

to hear but thinks that he cannot, and they perceive the hypnotic dream as differing in essential respects from the night dream. Although investigators who adhere to the trance paradigm disagree on the "reality" of the suggested phenomena, the important point to emphasize is that they all view the phenomena as associated with hypnotic trance, and they consequently label the phenomena as "hypnotic phenomena", not simply as "suggested phenomena".

6. There are levels or depths of hypnotic trance; that is, hypnotic trance can vary from light, to medium, to deep, to very deep (somnambulism).
7. As the depth of hypnotic trance increases, the subject's ability to experience suggested phenomena vividly and intensely also increases. For example, as the subject becomes more deeply hypnotized, he is more able to have a vivid and intense experience of age regression, analgesia, hallucination, or amnesia. (Barber, 1979, pp. 219-220)

Barber contends that there is another way of viewing responsiveness to test-suggestions, which does not involve special state constructs such as "hypnosis", "hypnotized", "hypnotic state", or "trance". This alternative paradigm does not hypothesize a qualitative difference in the "state" of the person who is and the one who is not responsive to test-suggestions. To clarify this paradigm, Barber cites the analogy of members of an audience watching a motion picture or a stage play:

One member of an audience may be attending a performance with the purpose of having new experiences. His attitude is that it is interesting and worthwhile to feel sad, to feel happy, to empathize, and to have the other thoughts, feelings, and emotions the actors are attempting to communicate. He both desires and expects the actors to arouse in him new or interesting thoughts and emotions. Although he is aware that he is watching a contrived performance and that he is in an audience, he does not actively think about these matters. Since this member of the audience has "positive" attitudes, motivations, and expectancies toward

the communications emanating from the stage, he lets himself imagine and think with the statements and actions of the actors; he laughs, weeps, empathizes and, more generally, thinks, feels, emotes, and experiences in line with the intentions of the actors. (p. 221)

Barber contrasts this response with that of a member of the audience who has had an anxious and tiring day at the office and who wanted to go to bed early in the evening, and unwillingly came to the performance in order to avoid an argument with his wife. He is not interested in having the emotions and experiences the actors are attempting to communicate, he does not especially desire and does not expect to feel empathic, happy, sad, excited or shocked, and he is continually aware that he is in an audience and that he is observing a deliberately contrived performance. This constellation of attitudes, emotions, and expectancies does not lead the individual to imagine and think with the statements and actions of the actors. These two styles of response - that of the interested cinema or theatre-goer versus the reluctant attender - are, according to Barber, analogous to that of a good and a poor hypnotic subject respectively, and the concept of a "hypnotic state" is unnecessary in explaining the behaviour of a hypnotic subject.

Barber (1979) points out that a substantial number of subjects are highly responsive to test-suggestions even when no attempt is made to place them in a "hypnotic trance state". For example, Barber (1965) reported experiments in which 62 unselected college students were assigned at random to a control condition (they were simply told that they were to receive a test of imagination). They were then assessed individually on objective and subjective responses to the eight standardized test suggestions of the Barber Suggestibility Scale (BSS)¹. About a quarter of these control subjects passed the Arm Lowering, Arm Levitation, Verbal Inhibition, and Body Immobility items both objectively (manifesting the suggested overt behaviour) and subjectively (they testified after the experiment that they had actually experienced the suggested effects).

¹ The BSS is described in Barber (1969a). It can be given with or without a hypnotic induction procedure.

Additionally, nearly half of these control subjects passed the Thirst "Hallucination" item and 40 per cent passed the Hand Lock item (i.e. they tried to unclasp their hands but had not succeeded after 15 seconds and they testified that they actually felt that their hands were stuck). About 13 per cent of these control subjects passed the "Posthypnotic Like" Response and the Selective Amnesia items. When another group of 62 subjects, randomly selected from the same college population, were tested individually on the same test-suggestions after receiving "task-motivational instructions" for 45 seconds, they were generally as responsive to test-suggestions as a group of similar subjects who had undergone a standard hypnotic induction procedure¹.

Barber (1979) considers a variety of data that ostensibly support the traditional trance paradigm:

1. Stage hypnotists appear to elicit unique or special behaviors from subjects who seem to be in a special state (hypnotic trance).
2. Experimenters have reported that a variety of amazing or special effects can be elicited from subjects who are ostensibly in a hypnotic trance.
3. High response to test suggestions is associated with observable trancelike characteristics.
4. Some highly responsive subjects testify that they experienced a special state of consciousness.
5. Some highly responsive subjects do not "come out of it" immediately - they seem to remain in a trance after the experiment is over.
6. Some highly responsive subjects spontaneously forget the events and spontaneous amnesia is a critical indicant of a special state.
7. Highly responsive subjects show a special type of logic - "trance logic" - which indicates that they are in a special state. (p. 234)

1

As indicated in Chapter II, there has been criticism of the use of task-motivational instructions since they have a demonstrable social pressure element, which may induce subjects to comply without genuinely experiencing suggested effects.

Barber examines each of these points in turn, and the present writer will also discuss them briefly.

Stage hypnosis

Regarding stage hypnosis, Barber points out that the performer invariably selects subjects who are willing and able to respond to his suggestions regardless of whether they are "awake" or in a "hypnotic trance". He claims that the phenomena of stage hypnosis can be explained by this principle of subject selection together with several additional principles such as the unique social psychological characteristics of the stage setting (e.g. the "fun" aspect of participating in the show and strong expectations of unusual performance on the part of both the subjects and the audience) and the utilization of "feats" which seem very amazing but are actually not difficult for normal individuals to perform (e.g. the "human plank" feat).

"Amazing" or Special Effects

Barber (1979) briefly reviews some evidence concerning "amazing" effects elicited in experimental situations such as the production of blisters, the production of analgesia sufficient for surgery, hallucinations, and deafness. Like Wagstaff (1981), who reviews this area at greater length, Barber concludes that the available evidence does not support the notion that "hypnotized" subjects are in a special state which enables them to manifest unusual or unique effects. He considers, for example, the claims of Erickson (1938a, 1938b; reproduced in Rossi, 1980b) who concluded from experimental studies that a condition indistinguishable from actual deafness can be produced by suggestions, provided that the suggestions are given to highly responsive subjects who have been exposed to a hypnotic induction procedure. Erickson (1938a) gave suggestions for total deafness to 30 subjects who were preselected as highly suggestible and who had been exposed to a hypnotic induction procedure. Ten of these 30 subjects were eliminated by tests as showing no form of deafness. Erickson reports that 14 showed various degrees of impairment of hearing and six were found to be apparently totally deaf¹.

¹ In discussing Erickson's (1938a) report, Barber (1979) mis-reports the former author. Erickson reported that in addition to 6 of the 30 subjects being found to be apparently totally deaf, another 14 showed various degrees of impairment of hearing. Barber, however, reports that of the 30 subjects, 24 did not show signs of deafness.

With regard to the six subjects that Erickson found to be apparently totally deaf, he relied on signs such as "failure to show any response to deliberately embarrassing remarks", "failure to raise voice when reading aloud while an irrelevant continuous extraneous noise becomes increasingly disturbing", and failure to react to unexpected sounds. From these and similar data Erickson concluded that "there was produced a condition not distinguishable from neurological deafness by any of the ordinarily competent tests employed" (Rossi, 1980b, p. 99). Barber (1979) claims that Erickson's conclusion is not clearly supported by his data. He points out that failure to react to unexpected sounds does not demonstrate that the sounds were not heard and he refers to a study carried out by Dynes (1932) in which three selected suggestible subjects, who were judged to be in a hypnotic trance and who received suggestions of deafness, did not become noticeably startled when a pistol was fired unexpectedly; however, each subject testified post-experimentally that he had heard the pistol shot. Similarly, failure to respond to a disturbing noise or to an embarrassing remark does not demonstrate that the subject is deaf, since these responses can be inhibited voluntarily.

Barber refers to Erickson's (1938b) supplementary study in which he found that two "hypnotized" subjects who appeared to be deaf did not manifest a hand-withdrawal response that had been conditioned to a sound. Barber takes issue with Erickson's conclusion that the subjects were "unconscious of the sound". He states that many studies have demonstrated that subjects can voluntarily inhibit hand-withdrawal responses that have been conditioned to a sound (Hamel, 1919; Hilgard & Marquis, 1940, pp. 269-270). Barber also refers to more recent studies in which the technique of delayed auditory feedback has been used (Barber & Calverley, 1964b; Kline, Guze & Haggerty, 1954; Kramer & Tucker, 1967; Scheibe, Gray & Keim, 1968; Sutcliffe, 1961). In these studies it was found that "hypnotized" subjects who had received suggestions of deafness were affected by auditory stimuli in essentially the same way as any normal person who hears perfectly well, i.e. when exposed to delayed auditory feedback, the "hypnotic deaf" subject and the person with normal hearing (but not the person who is actually deaf) typically stutter, mispronounce words, and speak more loudly and more slowly.

Observable "Trance-like" Characteristics

Regarding "observable trance-like characteristics", Barber (1979) writes:

Numerous investigators ... have pointed out that subjects who are highly responsive to test suggestions often show signs of trance such as a blank stare, a rigid facial expression, a lack of spontaneity, a limp posture, psychomotor retardation, disinclination to talk, lack of humor, and literal-mindedness. Although these observations, at first glance, seem to support the assumption that a special state (hypnotic trance) underlies high responsiveness to test suggestions, a closer look at the data fails to support the assumption. (pp. 244-245)

Barber suggests that when subjects who are highly responsive to test suggestions manifest trance-like characteristics, the characteristics have been explicitly or implicitly suggested. If a subject is told by the experimenter that he is becoming relaxed, drowsy, sleepy and is entering a hypnotic trance state, these suggestions imply to subjects that they should become passive or lethargic, behave in a trance-like manner, move or respond slowly, and not look actively around the room. Barber argues that since trance-like characteristics have been suggested, they can also be removed by suggestions and he cites the result of an informal study carried out with eight suggestible subjects who, following a hypnotic induction procedure, appeared to be in a hypnotic trance - they manifested lack of spontaneity, psychomotor retardation, and passivity or lethargy, and they responded to test-suggestions for arm heaviness, arm levitation, inability to unclasp their hands, and thirst hallucination. The subjects were then told to become awake and alert, to stop acting as if they were in a hypnotic trance, but to continue to remain responsive to test-suggestions. In response to these instructions, the subjects remained highly responsive to test-suggestions but no longer showed signs of "trance". After examining other strands of evidence related to this topic¹, Barber (1979) concludes:

¹ Barber does not review evidence bearing on Erickson's assertion that hypnotized subjects are peculiarly literal in their responses to questions and requests. This matter receives further attention in the next chapter and the present writer's experimental work bearing on this matter is reported in Chapters V and VI.

In brief, trancelike characteristics on the part of the subject appear to be artifacts that the experimenter can put into the suggestive situation and can also take out of the situation, and they certainly are not necessary (and may be extraneous) for high response to test suggestions. (p. 246)

Subjects' Testimony of Being in a Hypnotic Trance

Regarding subjects' testimony of being in a hypnotic trance, Barber (1979) contends that a close examination fails to support the traditional notion that a state discontinuous with ordinary states of consciousness underlies high responsiveness to test-suggestions for phenomena such as limb rigidity, analgesia, and hallucinations. Barber points out that some subjects manifest a high level of response to test-suggestions when no attempt is made to hypnotize them and, with few exceptions, these highly responsive subjects testify that they are not in a hypnotic trance. A few subjects testify that they must be hypnotized, even though they do not feel that they are hypnotized, because they actually experience those things that are suggested. Barber goes on to argue that subjects who state that they are in a hypnotic trance may be saying no more and no less than that they are ready and willing to respond to test-suggestions. He quotes from Gill and Brenman (1959):

First, we would induce hypnosis in someone previously established as a "good" subject; then we would ask him how he knew he was in hypnosis. He might reply that he felt relaxed. Now we would suggest that the relaxation would disappear but he would remain in hypnosis. Then we would ask again how he knew he was in hypnosis. He might say because his arm "feels numb" - so again, we would suggest the disappearance of this sensation. We continued in this way until finally we obtained the reply, "I know I am in hypnosis because I know I will do what you tell me." This was repeated with several subjects, with the same results. (Gill & Brenman, 1959, p. 36)

Another non-state theorist, Wagstaff (1981), takes a similar position to Barber regarding subjects' testimony of being in a hypnotic trance. Wagstaff points out that if some subjects decide

to label themselves as "hypnotized", one could say this comes about because they actually fall into a unique trance state which is unmistakably hypnotic in quality. However, there are other processes by which a subject could come to label himself as "hypnotized", processes that do not involve the notion of a unique, altered state. Wagstaff refers to Bem's (1965, 1972) contention that an individual may infer things about himself by using the same processes that society uses to infer the inner states of others, i.e. reliance on external cues. Wagstaff writes:

If a subject has followed the instructions in a typical induction procedure, he should generally be seated, feeling relaxed, with his eyes closed. He then has to ask himself, 'Am I hypnotized?' As we shall see, whether he believes he is or not may then depend partly on his preconceptions. If he has a fairly definite conception of hypnosis as a state of dreamy euphoria, unconsciousness, or a trip to Nirvana, he will not have to rely on external cues, and will probably decide that he is not 'hypnotized' as his internal cues unambiguously do not seem to match his expectations (though of course he may still comply to social expectations). On the other hand, if his preconceptions are not definite, if he finds the internal cues ambiguous, he may have to rely on external cues from which to label his state. Thus if the hypnotic subject is confronted with a number of novel internal experiences his only guide as to how to label these may come from the external situational cues of the hypnosis situation. (Wagstaff, 1981, pp. 57-58)

Wagstaff points out that certain novel sensations which accrue from simply keeping the eyes closed and being relaxed might be interpreted by some subjects as evidence of being in a hypnotic state. He refers to a report by Barber, Dalal and Calverley (1968) who found that when questioning subjects about how they judged their level of hypnotic depth, some subjects said they estimated it from the degree they felt relaxed and sleepy and others from changes in body feelings. Like Barber (1979), Wagstaff also argues that subjects may infer that they are "hypnotized" from observing their responsiveness to suggestions. Wagstaff further argues that there is another, somewhat ironical, way in

which subjects may come to label their experiences as "hypnosis" by virtue of the fact that they have been complying. He argues that there is a strong theoretical and empirical basis for the proposition that, in certain circumstances, overtly playing a role can lead to an acceptance of private attitudes appropriate to the role. He contends that cognitive dissonance theory (Festinger, 1957, 1962; Brehm & Cohen, 1962) can account for some subjects, who have responded compliantly to suggestions, coming to believe that they were in a hypnotic state:

Dissonance reduction ... may well be applicable to some subjects and some hypnosis situations, as in the case of a subject who complies with the hypnotist's expectations and spuriously reports that he felt as though he was in a hypnotic trance. However, suppose then that upon deliberation the subject is rather ashamed or embarrassed of this, and is confronted with a dilemma as he cannot really justify how he could have been so gullible or easily intimidated. One way of reducing the dissonance might be to actually believe that he really was in a hypnotic state. If the cues were sufficiently ambiguous this might seem to be the line of least resistance. (Wagstaff, 1981, p.69)

Difficulty or Delay in "Coming out of Hypnotic Trance"

Barber (1979) argues that at first glance the special state (hypnotic trance) paradigm seems to be supported by two sets of interrelated data: on rare occasions, subjects who are highly responsive to test-suggestions do not open their eyes immediately when told to wake up, i.e. they seem to remain in a "hypnotic trance"; secondly, when an experimenter leaves the room without having told the subject to wake up, subjects who are said to be in a hypnotic trance remain sitting passively with their eyes closed for a longer period than simulating subjects who have been asked to act as if they were in a hypnotic trance. Regarding subjects who refuse to "wake up", Barber points out that Williams (1953) and Weitzenhoffer (1957, pp. 226-229) have summarized data that cogently indicate that these few subjects who do not open their eyes when told to wake up, have some special reason or motive for refusing to open their eyes. Thus they either (1) have been given an instruction to carry out post-experimentally that they

do not want to carry out, (2) are deliberately resisting the hypnotist, (3) are testing the hypnotist's ability to control them, (4) are manifesting spite towards the hypnotist, or (5) are attempting to frighten the hypnotist by refusing to "wake up".

Orne and Evans (1966) and Evans and Orne (1971) contend that it is possible to test the hypothesis that a hypnotic induction procedure leads to a qualitative change in the organism in highly susceptible subjects. They reason that if responsive subjects enter a special state in response to a hypnotic induction procedure, and if the hypnotist leaves the room without telling the subject to awaken, then the subject should slowly bring himself out of the special state since "time and effort would have to be expended by the individual to reverse the altered state of consciousness and attention which [state] theorists believe constitutes a significant aspect of hypnosis" (Evans & Orne, 1971, pp. 278-279). In an initial study (Orne & Evans, 1966) the real-simulator methodology was employed. A hypnotic induction procedure was administered to the real and simulating subjects via a tape-recording. During the session, a power failure was fabricated by a switch being thrown in another room, which stopped the tape recorder with a marked slur. The experimenter left the room, ostensibly to repair the fuse that had stopped the tape recorder. The real and simulating subjects were then observed through a one-way mirror to determine how long they would remain sitting quietly with their eyes closed. The experimental procedure proved inadequate in that five of the six simulators continued to simulate hypnosis, keeping their eyes closed, tapping their feet to "hallucinatory" music, and keeping their arms on the chair. Evans and Orne (1971) write:

The reason for the continuation of the simulating behavior throughout this period was most likely that they expected that E would try to trick them in order to detect simulation. They later reported to the nonblind E (who had originally given the simulation instructions) that they actually did suspect deception and that they did not feel the power failure was genuine. (p. 282)

The experimental procedure was modified, so as to eliminate some of the cues that indicated to the simulators in the earlier study that the power failure was, in fact, part of the experiment.

The modifications were designed to portray the power failure as a genuine accident. In this second study (Evans & Orne, 1971) five of the six simulators stopped simulating when the experimenter left the room but resumed simulating as the experimenter's footsteps approached the door 40 minutes later. The "real" subjects (supposedly "deeply hypnotized") showed no immediate behavioural signs of being aware of the power failure nor of the experimenter's departing. Five of these six subjects remained passive for several minutes and looked exactly as they had before the power failure. In accordance with the investigators' hypothesis, it took them some time to "arouse themselves from hypnosis" following the departure of the experimenter. Evans and Orne (1971) argue that the simulators' behaviour in their two studies indicates that subjects believe that the appropriate behaviour of hypnotized individuals would be to remain "in trance" for a considerable period of time after the disappearance of the hypnotist - certainly more than 30-40 minutes. The "real" (i.e. "deeply hypnotized") subjects in their studies, however, took some time to arouse themselves from the presumed trance state but did so within the observation period. Since the "deeply hypnotized" subjects did not arouse themselves immediately when the tape recorder stopped and the experimenter left, Evans and Orne (1971) argue that "if hypnosis is only role enactment, the role is not audience-dependent in the usual sense of the word 'role'" (p. 294). Evans and Orne (1971) conclude that it is difficult to see how the behaviour of the hypnotized subjects in their study can be explained solely in terms of playing the role of a hypnotized individual. They see their data as "more congruent with the view that hypnosis involves some as yet unspecified alterations in the S's state of consciousness" (p. 295).

Barber (1979) disputes the conclusion arrived at by Evans and Orne. He contends that the appropriate comparison is between a group of suggestible subjects who are exposed to a "trance induction procedure" and a group of control subjects who are simply told to relax. He argues that it can be hypothesized from the viewpoint that does not postulate a special state, that control subjects who are simply told to relax will remain sitting quietly

with their eyes closed as long as the subjects who are presumed to be in a hypnotic trance. He refers to a relevant study by Dorcus, Brintnall and Case (1941):

The experimental group was comprised of twenty subjects who had previously demonstrated that they were highly responsive to test suggestions. After these subjects had been exposed to a trance induction procedure, an assistant came into the room and said to the experimenter, "You are wanted on the telephone about an appointment downtown." The experimenter replied to the assistant that he had forgotten an appointment and that he would be gone for the remainder of the day. Both the experimenter and the assistant then left the room hastily. The subject was then kept under observation through a peephole in an adjacent room. Twenty-five subjects in a control group were asked to simply close their eyes and relax and then were told that, after a few minutes of relaxation, they would be given further instructions. During the period of relaxation, the same conversation about the appointment was carried out. After the experimenter left the room, the suggestible subjects, who had been exposed to the trance induction procedure and who were presumably in a hypnotic trance state, remained passive with eyes closed for a mean time of twenty-eight minutes. The control group, which had been simply told to relax, remained passive with eyes closed for an insignificantly shorter average period of twenty-three minutes. Postexperimental interviews showed that the behavior of both the "hypnotic trance" subjects and the "relaxation control" subjects was influenced by the same factors; that is, some subjects in both groups thought they should wait for the experimenter to return, others thought the experiment was over, and others had to leave because they had previous appointments. (Barber, 1979, pp. 250-251)

Barber points out that in the Dorcus et al. experiment, both the "hypnotic trance" subjects and the "relaxation control" subjects remained passive with their eyes closed for about as long as the "real" hypnotic subjects in the Evans and Orne (1971)¹ experiment.

¹ Barber references the second study by Evans and Orne as "Evans (1966)" but that reference applies to a paper read at the American Psychological Association Convention in 1966; the present writer has given the reference as "Evans and Orne (1971)" since a published account of the study is available in the form of a journal article.

Wagstaff (1981) also criticizes Evans and Orne's (1971) conclusions. He contends that a possible reason why some subjects do not respond to hypnotic suggestions is that they may have unrealistic preconceptions about hypnosis. He refers to Kinney and Sachs' (1974) proposal that an important motivational component in hypnotic susceptibility is the "fear of losing control". Wagstaff contends that the high responsiveness of some simulators in the simulation situation reflects their conception of how a "good" hypnotic subject should behave; they clearly manifest in their behaviour the belief that "good" hypnotic subjects respond to most if not all suggestions and, in spite of the hypnotist's assurances, they possibly continue to think that "good" subjects "lose control" and are perhaps oblivious of their surroundings. Accordingly, in faking hypnosis it may not be surprising that simulating subjects act as if they thought a hypnotized subject would remain in a trance for more than 40 minutes. On the other hand, a susceptible subject - who may be less inclined to think in terms of loss of control - may be less likely to think that a hypnotized subject will remain in a trance indefinitely unless awakened by the hypnotist. Thus, the different behaviour of the simulating and "real" subjects might be accounted for in terms that do not need one to postulate some unique trance experience in the "real" subjects.

Spontaneous Post-Hypnotic Amnesia

Barber (1979) considers whether the hypnotic state viewpoint is supported by cases of apparent spontaneous post-hypnotic amnesia. He alludes to various strands of evidence and argues that the hypnotic state viewpoint is not supported by cases of apparent spontaneous amnesia. He argues, for example, that since subjects generally believe that a hypnotic trance state is followed by spontaneous amnesia, they may say that they have forgotten in order to be good subjects and to meet what they believe are the expectations of the hypnotist. Barber argues that even if some instances of apparent spontaneous amnesia are actually spontaneous (non-suggested), they would not clearly support the notion that a special state underlies high responsiveness to test-suggestions, because when amnesia is not suggested, almost all subjects highly responsive to test-suggestions and judged by traditional investigators to be in a hypnotic trance state assert after the session that they remember everything that occurred.

"Trance Logic"

Orne (1959) discusses differences observed in the behaviour of "real" and "faking" subjects following the application of his real-simulator methodology. He reports that the most reliable criterion for distinguishing these two types of subjects is "trance logic", a phenomenon supposedly manifested only by the "real" subjects. Orne describes trance logic as:

the ability of the S to mix freely his perceptions derived from reality with those that stem from his imagination and are perceived as hallucinations. These perceptions are fused in a manner that ignores everyday logic. A good example of this process is the reaction of many Ss in hypnosis who see a hallucination of a person sitting in a chair and describe it as "This is very peculiar, I can see Joe sitting in the chair and I can see the chair through him." This type of reaction, when made spontaneously, was absolutely diagnostic of the "real" S. Unfortunately, it did not occur spontaneously in every S; it was found, however, that "fake" Ss never gave such a response. (p. 295)

Orne describes another situation, originally discussed by Erickson in a personal communication to him, which supposedly demonstrates trance logic. Orne writes:

Throughout the experiments, one of the co-experimenters was in the room with the S and the author, taking notes. At the beginning of the experiment he sat to the side of the S, well within his visual field. Once the S's eyes were closed, the co-experimenter rose very silently and walked behind the S out of the S's visual field. Subsequently, the S was instructed to open his eyes while still in deep trance and a hallucination of the associate sitting in the chair was induced. This hallucination was facilitated by the fact that during the initial part of the experiment, just prior to the S's closing his eyes, the associate was actually sitting in the chair. After the hallucination appeared to be fully accepted by the S, and he appeared to be responding to the hallucination as though it were actually the associate, he was instructed to turn around and look at the associate now behind him with the question, "Who is

that behind you?" Almost invariably the "real" S would look at the associate, then quickly turn back to look at the empty chair, and back at the associate. After looking back and forth between the hallucinated and the "real" associate, the Ss indicated verbally that they were perceiving two images of the same person. When asked about this, they tended to give bland responses such as "mirrors" or a "trick". Though they seemed somewhat confused, they did not become seriously disturbed.

The "fake" group, in most cases, either refused to see anyone behind them, or claimed that they could not recognize the person. Occasionally, they admitted recognizing the associate behind them and then claimed that the hallucination had vanished. (This reaction, while unusual among the real group, is occasionally found, especially if the S did not fully accept the initial hallucination.) Of approximately 30 "faking" Ss, only two acted as if they saw two images of the same individual. The others, when asked during post-experimental inquiry about the reason for their response, gave a very significant answer. They stated that I had instructed them to hallucinate, the associate in the chair and therefore, when I asked who the individual behind them was, they had to deny seeing him, or if they saw him, recognizing him. After all, there was only one such individual and I had already told them that they were supposed to see him sitting in the chair. This logical conclusion determined the response given by simulating Ss; it did not occur to the overwhelming majority of the "real" Ss who saw two images without any difficulty. This finding appears to represent a valid and significant difference. The "real" S responds to a subjectively real image of the associate in the chair. When asked about an objectively real image of the same individual, he is able to perceive this as well. He can respond to perceptions that are subjectively real and determined by the suggested environment, as well as to his actual perceptions of the real world, without attempting to satisfy a possible need to make them logically compatible. The absence of expression of a need for logical consistency seems, at this point, to be one of the major characteristics of hypnosis. (Orne, 1959, p. 296)

Other workers have put Orne's observations to experimental test and the findings have not always borne out Orne's contentions, although to some extent different findings might have been influenced by different procedural practices in the various experiments. Johnson, Maher and Barber (1972) reported that control subjects who were simply asked to imagine various suggested effects displayed "trance logic", as did simulators and subjects exposed to a hypnotic induction procedure. This study was criticized by Hilgard (1972) who in turn was criticized by Johnson (1972). Although sympathetic to viewing hypnosis as an altered state, Sheehan (1977) discusses data, which, in his opinion, run counter to the notion that hypnotic subjects' tolerance of incongruity illustrates a non-suggested attribute of hypnotic behaviour which is unrelated to "setting characteristics or cues from other sources". He writes:

It appears that the elicitation of most incongruity behavior - e.g., double hallucination and even transparency report - is quite compatible with the kinds of communication offered by the hypnotist. Cues for paradoxical response are inherent in the stimulus situation and may be actively processed by hypnotic subjects. The evidence suggests that it is more legitimate to view incongruity behavior as a predictable outcome of such processing rather than as a spontaneously occurring, unsuggested attribute of hypnosis. The hypnotic subject is quite definitely not a victim of mechanical suggestion. (Sheehan, 1977, p. 204)

Wagstaff (1981) argues that differences between simulators and "real" subjects in their preconceptions may be relevant to "trance logic" data. If a simulating subject believes that a "good" hypnotic subject will experience vivid visual hallucinations, then he is unlikely to report a transparent hallucination when simulating hypnosis. Hence a difference between some "real" subjects and simulators with regard to this behaviour might be explicable in terms other than some form of enigmatic logic associated with a presumed trance state.

The above brief consideration of "trance logic" concludes the discussion of the sets of data referred to by Barber (1979) as ostensibly supporting the special state paradigm. Attention

will now be turned to some additional lines of argument and evidence bearing on the state-non-state issue.

Further Lines of Argument and Evidence in the State —
Non-State Debate

Increased "Primary Process Thinking"
following "Trance Induction"

In discussing "trance logic", Orne (1959) comments that the phenomenon appears to be intimately related to primary process thinking or autistic thinking. However, "To avoid the developmental, pathological and theoretical implications of these concepts a new phrase [trance logic] seems preferable to describe the clinically observable phenomenon" (from footnote, p.295). "Primary process thinking" was first described by Freud (1900). According to Rycroft (1972), it is characteristic of unconscious mental activity, displays "condensation" and "displacement" (i.e. images tend to become fused and can readily replace and symbolize one another), uses "mobile energy", ignores the categories of space and time, and is governed by the "pleasure-principle", i.e. reduction of the "unpleasure" of instinctual tension by hallucinatory wish-fulfilment. It is the mode of thinking said to be characteristic of the id and contrasts with "secondary process thinking" which obeys the laws of grammar and formal logic, uses "bound energy", and is governed by the "reality-principle", i.e. reduction of the "unpleasure" of instinctual tension by adaptive behaviour.

If the concept of primary process thinking is regarded as having validity, and if hypnotic induction procedures are regarded as means of fostering a regressive shift to a more primitive state, then the emergence of dream-like, primary process material could be predicted.

Hammer, Walker and Diment (1978) hypothesize that "hypnotic induction changes the state of mind of susceptible subjects and that this change involves a regressive diminution of the ego's realistic appraisal of experience" and "that such regression will tend to involve not only increased suggestibility, but also other consequences, one of which is increased proneness to make spontaneous use of primary process (or dream-like) thinking" (p. 94).

Hammer et al. report an experimental study. Their experimental group comprised 10 undergraduates, five men and five women, who had scored between 10 and 12 on the Harvard Group Scale of Hypnotic Susceptibility, Form A. In the main experimental session, the subjects underwent hypnotic induction "by a combination of relaxation and eye closure" with attempted "deepening" by simple counting. The experimenter explained that he was going to play a piece of poetry entitled "Prayer Before Birth" by Louis MacNiece after which he would talk to the subjects again. After the tape-recording was played, the subjects were dehypnotized. A retrospective account of what was in their minds was obtained, using an audio-recording of the poem to prompt their recollections. The experimenter explained that he wanted as much detail as possible about any thoughts or feelings or reactions the subjects had had while the poem was being played the first time.

Hammer et al. used two control groups. The first control group was drawn from the same population as the experimental group and was matched on age, hypnotic susceptibility, and prior studies of and interest in poetry. Like the experimental group subjects, they underwent an initial individual familiarizing and practice session including exposure to a hypnotic induction procedure^{1,2}. In the main session, these control subjects were not subjected to another hypnotic induction procedure but were seated comfortably and asked to relax. They were told that the poem would be played. When the recording of the poem had been played, they were told that they would remember their experiences, and a retrospective inquiry was conducted as with the experimental group subjects. The second control group was drawn from a large group of subjects who had volunteered for what was ostensibly a relaxation experiment. After being given "a few moments of relaxation" the latter subjects were told in the standard way that a poem would be played. After the poem had been played, they were told that they would remember their experiences and a retrospective inquiry was carried

¹ Hammer et al. do not explain the rationale for including these "familiarizing and practice sessions". They involved an eye-closure induction procedure, after which the subjects were asked to imagine a garden scene. The experimenter then explained that he was going to play a piece of music, "Spring" from Vivaldi's "Four Seasons". The subjects were told that after the music had finished, the experimenter would talk to them again. After the music had been played, the subjects were aroused with instructions to remember the session fully, and an appointment was made for another session, which was the main one.

² For footnote, see p.103.

out as in the case of other subjects. Subsequently these subjects were tested with what Hammer et al. describe as the "Harvard Group Scale" (the HGS: A presumably?) and 10 of them were selected at random from those who scored 10, 11 or 12. These 10 subjects constituted the second control group. Hammer et al. included this second control group since:

When hypnotizable subjects who understand that hypnosis is being studied are not explicitly hypnotized, it is possible that they infer that they are controls, and obligingly, albeit unconsciously, strive to behave in what they take to be an unhypnotized way. The "demands" in the present enigmatic situation are not obvious, but, nevertheless, it was thought necessary to include a second control group of subjects who had no idea that the experiment was concerned with hypnosis. (p.95)

A typist transcribed the 30 tape-recorded "recall reports", and ensured that the protocols were free of any information that would indicate which group they came from. Hammer et al. evaluated their data in two ways. One of the authors (Walker) examined the 10 protocols from the experimental group and five each from the two control groups, presumably being blind as to the source of the protocols. She read through the protocols, making impressionistic judgements about whether the descriptions of the experiences had or had not been given by a hypnotized subject. She correctly identified eight of the 10 experimental records and eight of the controls, a significant "hit" rate. The second approach to examining the data was a systematic content analysis using an adaptation of Perry's (1964) method for analysing dream content. Various criteria of "primary process" were employed, e.g. elaboration of responses, high incidence of perceptual (as opposed to conceptual) components, high incidence of imagery not obviously directly related to the stimulus material. As hypothesized, Hammer et al. found evidence of significantly more "primary process" in the experimental as opposed to control subjects' protocols. They conclude that:

a trance induction procedure, carried out with susceptible subjects, causes a greatly increased occurrence of primary

Footnote 2 from p.102:

Hammer et al. do not state explicitly whether the main session with the experimental and control group subjects was conducted on an individual basis, but presumably it was.

process thinking in response to some sorts of verbal stimuli (in this case, to poetry), and does so without there being any suggestions to that effect. This result is consistent with the view that an induction, when effective, brings about a state of mind different from the normal waking state, and that this state probably has a number of effects, one of which is an increase in primary process thinking. (p.99)

Hammer et al.'s conclusions are open to question. Arguably, the increased incidence of "primary process" manifestations in the experimental group's protocols could have been a simple function of relaxation. Relaxation was an ingredient in the hypnotic induction procedure employed in the main session with the experimental subjects. Hammer et al.'s report does not indicate how much time during the main session was given to subjects in the first control group to relax, but the second control group were given "a few moments of relaxation". It seems possible, then, that the experimental subjects were given longer to relax. Moreover, the hypnotic induction procedure employed with the experimental group subjects presumably included specific instructions and/or suggestions aimed at facilitating relaxation. It seems possible, then, that relaxation, without the induction of some unusual or special state, might have facilitated the "primary process thinking". Indeed, dream-like imagery, fantasies and the like are quite normal experiences in individuals who are feeling relaxed and drowsy. A second possible objection to Hammer et al.'s conclusions is that their results might have arisen from expectations or "demand characteristics". To the extent that subjects judge "hypnosis" to entail unusual experiences and increased imagery, they could well respond, in line with their expectations and the perceived demands of the situation, by producing more "primary-process"-laden material. The application of Orne's real-simulator methodology might have helped to clarify this point.

Suggested Post-Hypnotic Amnesia

Earlier in this chapter spontaneous post-hypnotic amnesia was discussed. Attention will now be turned, briefly, to the topic of suggested post-hypnotic amnesia, a subject that has received a lot of attention from researchers and where the issues are quite complex. Two recent reviews of work in this area are those of Cooper (1979) and Evans (1980).

Post-hypnotic amnesia is of interest because of the ease with which it can be induced in some responsive subjects. The hypnotist suggests that, upon "awakening" from hypnosis, the subject will be unable to recall all or some of his hypnotic experiences,

usually until an appropriate "reversal cue" is given such as, "Now you can remember everything." Even when a subject does recall some of his experiences prior to the cue for reversal, his recollections may be patchy and confused. In a clinical context, a direct suggestion for post-hypnotic amnesia might be couched in permissive, non-specific terms, e.g. "When you wake up from this state of hypnosis you might not remember everything that happened during the session; you will forget anything that you are not yet ready to remember."

Some findings concerned with post-hypnotic amnesia might be explicable if it could be shown that hypnotizable subjects have poorer memories in general. This hypothesis was tested by Evans and Kihlstrom (1975) who found no evidence that highly hypnotizable subjects are characterized by a poorer or less efficient memory style than subjects low on hypnotizability. Indeed, they found that remote news events were recalled significantly more accurately by highly hypnotizable subjects than by subjects low on hypnotizability.

Some theorists question the view that post-hypnotic amnesia is to be explained in terms of an involuntary, automatic process of forgetting. Wagstaff (1977a, 1981) proposes that voluntary compliance may play a large role in reports of apparent post-hypnotic amnesia. Barber, Spanos and Chaves (1974) argue in favour of the view that, when given suggestions to forget everything that has occurred, a subject with positive attitudes, motivations and expectancies regarding the test situation will not let himself think about the events¹.

Researchers sympathetic to a state interpretation of hypnosis (e.g. Cooper, 1979; Evans, 1980) dispute the contention that post-hypnotic amnesia can be explained in terms of voluntary withholding of information or concentrating on other things. Evans

1

It is interesting to note in this context that the post-hypnotic amnesia suggestions contained in the SHSS:C contain two sentences that could encourage subjects not to make a serious effort to recall the events of the test session: "It will prove to cost so much effort to recall that you will prefer not to try. It will be much easier just to forget everything until I tell you that you can remember" (Weitzenhoffer & Hilgard, 1962, p.29). Similarly, the following wording occurs in the HGSHS:A: "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. It will be much easier simply to forget everything until I tell you that you can remember" (Shor & E.C. Orne, 1962, p.11).

(1980), for example, reviews a wide range of studies and lends his support to the notion that post-hypnotic amnesia involves a disruption of retrieval processes triggered by amnesia suggestions. Briefly, he also gives consideration to the possibility that an explanation might be offered in terms of state-dependent learning (Overton, 1968).

Two phenomena associated with post-hypnotic amnesia that have received particular attention in the literature in recent years are "source amnesia" and disrupted retrieval of material following dehypnotization but prior to the giving of an amnesia release signal. Post-hypnotic source amnesia, originally described by Thorn (1960), is said to occur in the following type of situation:

In an experimental session, the hypnotized subject is given a test of general knowledge. He is asked several questions, the answers to which the college-student subjects do not usually know (example: 'An amethyst is a blue or purple gem stone. What color does it turn when exposed to heat?'). He is then told the correct answers to this and other difficult questions. Finally, just prior to hypnosis being terminated, a post-hypnotic amnesia suggestion for the content of the session is given in the usual fashion. After being tested for his memory of the content of the hypnosis session, the same questions are asked again, for example: 'An amethyst is a blue or purple gem stone. What color does it turn when it is exposed to heat?' A subject with source amnesia will quickly answer, correctly, 'yellow'. When he is asked how he knows the answer, he will typically look rather puzzled, and he is unable to specify how he knows. He may even rationalize his inability to specify how he acquired the information ('My girlfriend must have told me', or 'I guess I read it somewhere', or 'I must have learned it in a geology course.'). (Evans, 1980, p.87)

Evans (1980) reports that while source amnesia occurs in about one out of three subjects, simulating subjects tested by an experimenter blind to whether they are "real" or simulating, inevitably reply, when asked the colour of a heated amethyst, with no hesitation, "I don't know." Evans therefore argues that the behaviour of the simulators indicates that the predominant cues in the

situation signify that everything should be forgotten by the hypnotized subjects and hence the occurrence of source amnesia in "real" subjects is "counter-expectational". Wagstaff (1981) comments:

According to some investigators source amnesia is a very important index of amnesia as simulators do not show it. Unfortunately, if the data for source amnesia are examined more closely, it is difficult to see how any firm conclusions can be drawn as to their validity. In a study by Evans reported in Sarbin and Coe (1972) ten of thirty-seven 'deeply hypnotized' individuals showed source amnesia, whereas all of the fourteen simulators showed complete amnesia, i.e. they remembered neither the answers nor the source. All this seems to indicate is that the simulators played better at being amnesic than some of the 'real' subjects, which is just another example of the 'over-play' phenomenon ... However, no matter how this particular simulating study is interpreted the most significant finding ... is that source amnesia is not actually limited to hypnotic subjects, as Evans has also reported that a few 'waking' subjects treated otherwise identically to hypnotic subjects also exhibit spontaneous source amnesia (Cooper, 1966). Cooper (1966) remarks that this finding 'suggests that the item is not entirely free from subtle cues of E or expectations of Ss' (p.181). (Wagstaff, 1981, pp. 122-123)

Evans and Kihlstrom (1973) and Kihlstrom and Evans (1979) have presented evidence that partially amnesic hypnotic subjects display disrupted retrieval when trying to recall the events of a preceding hypnosis session. They calculated the rank-order correlation (ρ) between the order in which subjects recalled any items (prior to the giving of a cue to cancel the amnesia) and the order in which those recalled items had been administered during the preceding hypnotic session. Their results have been replicated by other workers using similar and different procedures (Bodorik, Haddad & Spanos, 1978; Schwartz, 1978; Spanos & Bodorik, 1977; St.Jean & Coe, 1978). Evans (1980) reports that disrupted retrieval is lawfully related to hypnotic responsiveness - subjects who show statistically insignificant ρ values during the HGSHS:A amnesia test have significantly higher total hypnosis

scores, recall fewer items during the amnesia test, and recall more items on both the HGSHS:A and SHSS:C after the reversal cue ("Now you can remember everything") than those with ordered (statistically significant) rho scores. Evans (1980) also reports that if amnesia is not suggested during the administration of the HGSHS:A, hypnotizable subjects recall in the same almost perfect temporal sequence as do low hypnotizable subjects. Moreover, when amnesia is lifted, hypnotizable subjects no longer recall in a random sequence.

Evans (1980) argues that the notion that post-hypnotic amnesia involves a disruption of retrieval processes gains strength from the fact that similar accounts have been applied to a variety of memory failures, including ordinary forgetting (Tulving & Thomson, 1973), infantile amnesia (Schachtel, 1947), state-dependent learning produced by alcohol, barbiturates, and other drugs (Overton, 1968), amnesia induced by electro-convulsive shock (Miller & Marlin, 1979), and Korsakoff's syndrome (Talland, 1965). Evans (1980) contends that the major puzzle remaining for an understanding of post-hypnotic amnesia would seem to be the ease with which it can be lifted by an appropriate suggestion.

The assertion that suggestions for post-hypnotic amnesia lead to disruption of the retrieval of information has been questioned by Wagstaff (1977b). In an experimental study, Wagstaff found that "waking" subjects given a simple instruction to "pretend" that they were amnesic showed a disorganized manner of recall similar to that manifested by Evans and Kihlstrom's (1973) hypnotically susceptible subjects. In another study, Wagstaff (1977a) obtained evidence supportive of the notion that simple compliance can account for post-hypnotic amnesia. Two groups of 27 subjects were exposed to a taped hypnotic induction procedure and test items, including a suggestion for post-hypnotic amnesia which would eventually be cancelled by the hypnotist's saying, "Now you can remember everything." However, before being instructed to write down their recollections, subjects in one group were told:

It has been shown experimentally that some subjects who have been given the particular induction scale that has just been administered to you do not really achieve any form of trance state; in fact, any 'odd' experiences that some have such

as feeling very relaxed or drowsy are commonly reported by people who have simply been told to relax and keep their eyes closed for 10 minutes. Upon further questioning of these subjects it has been revealed that some of them had not really been hypnotized, but had been what is called 'role-playing'. Role-playing is not used in any derogatory sense; it just reflects the subjects' determined attempt to try to experience the hypnotic state. However, the subject is always aware that he or she has not achieved a real trance state. Now, will you please raise your hand if you feel you were not really hypnotized but were just role-playing. (Wagstaff, 1977a, p.226)

The subjects in this group were then instructed: "Please write down now in your own words everything that has happened since you began looking at the target", and after they had finished writing down their responses the amnesia release signal was given: "Now you can remember everything. Anything else now?" The procedure for the other group of subjects was the same except that the statement about role-playing was given after the instructions for recall and the amnesia release signal had been administered. Wagstaff adds that "in order to control for temporal factors, an interval of 1 min was allowed between the end of the administration of the other items of the hypnosis scale and the beginning of the amnesia recall instruction" (p.226).

Excluding the amnesia item, the two groups of subjects performed at a comparable level on the hypnotic test items administered¹. None of the subjects in the first group described above manifested any additional recall of test items following the amnesia release signal, whereas 10 subjects in the second group did, the difference being statistically significant². A comparison between the overall number of items recalled by each group, including those recalled after the amnesia release signal, indicated that there was no statistically significant difference². Wagstaff contends that the results of his experiment appear to demonstrate that the

¹ This analysis was based on results from all of the subjects.

² Some subjects in both groups failed to respond to any of the scale items and their results were excluded from these analyses.

traditional way of estimating post-hypnotic amnesia may be significantly biased by compliance. He recognizes, however, that:

It could conceivably be argued that the role-playing statement given to [the first group] after the hypnosis session was sufficient to serve the amnesia 'release' purpose without the use of the usual signal 'now you can remember everything'. However, one of the most characteristic features of the concept of post-hypnotic amnesia is the specificity of immediate recovery to the utterance of a few defined key words. If this remarkable identifying feature is discarded, and a host of other undefined cues are introduced as possible release signals, then its unique status is surely diminished. (p.227)

To the present writer, this latter argument of Wagstaff's is not entirely convincing. The statement about role-playing given to subjects might well have inculcated negative and sceptical attitudes about hypnosis and, in the case of the first group of subjects discussed above, it might have acted as a counter-suggestion, nullifying the effect of the preceding suggestion for post-hypnotic amnesia. In the case of the second group of subjects, of course, the amnesia release suggestion had already been given when the subjects received the statement about role-playing, so it was too late for the latter statement to undermine the subjects' post-hypnotic amnesia.

It is probably true to say that, despite the doubts of sceptics like Wagstaff (1977a, 1981), most contemporary hypnosis researchers and clinicians who employ hypnotic techniques believe that, with many subjects, post-hypnotic amnesia occurs as a subjectively convincing experience and is not simply a matter of subjects deliberately withholding information or voluntarily employing tactics such as distraction to avoid thinking about the "forgotten" material.

McConkey, Sheehan and Cross (1980) and McConkey and Sheehan (1981) investigated the effects of having subjects view a videotape recording of a preceding hypnosis session prior to the giving

of a reversal cue to cancel post-hypnotic amnesia¹. Some of the amnesic subjects in the two studies commented on their being able to recall the behavioural events being displayed on the video-tape but not being able to recall the private experiences that accompanied those events during hypnosis. This distinction between the availability of memories of behaviour versus experiences was spontaneously mentioned by 37.5 per cent of the amnesic subjects in the study by McConkey, Sheehan and Cross (1980) and by 31.3 per cent of the amnesic subjects in McConkey and Sheehan's (1981) study. Discussing these studies, Sheehan and McConkey (1982) state that no simulating subject² and only one non-amnesic subject reported this distinction and the latter subject made it clear that it happened on only one item. Simulating amnesic subjects viewing the recording of their (simulated) hypnotic performance generally reported that they could not remember any of the events that they were viewing. In line with the arguments of Wagstaff (1981), one could speculate that the "real" hypnotic subjects were pretending to experience post-hypnotic amnesia and that the different reactions of the "real" and simulating subjects to the video-tape playback of their hypnosis sessions reflected their different preconceptions about hypnosis, which in the case of the simulators caused them to over-play the role of a subject experiencing post-hypnotic amnesia.

Sheehan and McConkey (1982) report that questioning of subjects during the end of the recall phase of the EAT session indicated that amnesic subjects differed in the nature of their memories of the EAT session itself. While some subjects could fully recall the events of the EAT session, others indicated that they could not: their amnesia had expanded, as it were, to include the EAT session as a whole even though suggestions had not been given to forget that period. Sheehan and McConkey state that no simulating or non-amnesic subjects reported being unable to remember

¹ In a journal article (Sheehan, McConkey & Cross, 1978) and in a recent book (Sheehan & McConkey, 1982), descriptions are given of the use of video-tape playback of hypnosis sessions in order to elicit subjects' recollections of their prior "hypnotic" experiences. This procedure, labelled by its authors the experiential analysis technique (EAT), is conducted, in its standard form, by an inquirer other than the hypnotist so as to minimize bias.

² Simulating subjects were included in the McConkey and Sheehan (1981) study.

the events of the EAT session itself. To the present writer, this finding does not seem to be readily explicable in terms of the hypothesis that post-hypnotic amnesia entails conscious withholding of information or deliberate attempts not to recall. If the "real" subjects who reported being amnesic for the events of the EAT session were simply pretending to be amnesic for those events or were wilfully engaging in mental activity aimed at blocking recall, why did none of the simulating subjects (who, according to Wagstaff's [1981] reasoning, might be disposed to over-play the role of a good hypnotic subject) fake amnesia for those events?

Some psychoanalytically-oriented authors (e.g. Schilder & Kauders, 1927) have suggested that post-hypnotic amnesia can be accounted for in terms of repression. Kihlstrom (1977) discusses this hypothesis and points out that according to Schilder and Kauders, the motive for amnesia lies in the subject's "transference relationship" with the hypnotist:

Obviously, the hypnotized is ashamed of his infantile-masochistic adjustment and denies the hypnosis in order to conceal the adjustment. Very frequently, therefore, we find hypnotized persons indignantly denying that they have been hypnotized. (Schilder & Kauders, 1927, p.60)

Kihlstrom (1977) claims that the hypnotic subject is typically aware of his loss of memories, whereas repression is usually construed as an unconscious process. Moreover, Kihlstrom argues that the motive to repress does not always seem to be present in amnesic subjects. He contends that while patients hypnotized in clinical settings may well experience strong transference reactions or give expression to unacceptable thoughts or impulses, the experience of hypnosis is quite different for normal subjects participating in laboratory research. In the latter situation, the hypnotist is looked upon more as a coach or guide than as a powerful authority figure. Kihlstrom (1977) notes that "Even without the powerful transference relationship as a primary motivating source, amnesia occurs in about one third of laboratory subjects" (p.292). Kihlstrom reviews a number of experimental studies and concludes that there is at present no evidence for a repression-like process operating specifically in post-hypnotic amnesia.

Responses to Post-Hypnotic Suggestions

The apparent inability of some subjects to recall the events of a hypnosis session after they have been "awakened" is one form of "post-hypnotic" response. Attention will now be briefly directed to other types of suggested post-hypnotic behaviour. If such behaviour is judged to be involuntary or compulsive, its occurrence might be seen as supportive of a state interpretation of hypnosis. Thus, it might be argued that susceptible subjects respond to hypnotic induction procedures by entering an altered state in which they are peculiarly susceptible to suggestions pertaining to future behaviour and experiences. It could also be argued that some sort of altered state must persist beyond the dehypnotization ritual since otherwise subjects would not be sensitive to cues for the enactment of post-hypnotic behaviour. However, this persisting alteration might be seen as nothing more than a dormant action tendency rather than an "altered state of consciousness". Some relevant experimental work will be reviewed briefly here¹.

Fisher (1954) reports a study involving 13 subjects who "were capable of attaining either a medium or deep hypnotic state" (p.503). While "under hypnosis" the subjects were given a post-hypnotic suggestion that after they awoke, whenever they heard the word "psychology" they would scratch their right ears. After they were "dehypnotized", all 13 subjects were observed to respond positively to the cue for the post-hypnotic act. Attempts were then made to create and sustain the impression that the experiment was completed and during this period most of the subjects failed to respond to the cue word "psychology". The experimenter then tried to indicate to subjects that the experiment was still in progress, and 11 of the 13 subjects again scratched their ears in response to the cue word. Orne, Sheehan and Evans (1968) recognize that the data from Fisher's study could be seen as supporting a role-playing rather than an altered state view of the nature of hypnosis. They argue that the latter position "would predict

1

There are reports in the hypnosis literature, e.g. Erickson and Erickson (1941), that subjects re-enter a trance state when carrying out post-hypnotic suggestions. This assertion receives attention in the next chapter.

that posthypnotic behavior is not wholly dependent upon the context in which the suggestion is tested and may occur outside the experimental context" (p.190). Arguing from their state-oriented viewpoint, Orne et al. write:

There are several possible explanations for the failure of subjects to continue responding in Fisher's study ... In our view ... the most plausible explanation arises from analysis of the suggestion that Fisher used. Taken literally, the suggestion to respond each time the word "psychology" is used asks the subject to respond indefinitely. The hypnotist ordinarily has no motive to give such a suggestion in an experimental context. Therefore, subjects could have inferred quite legitimately that the experimenter actually meant: "As long as the experiment is in progress, each time you hear the word 'psychology' you will reach up and scratch your right ear." If such a restriction to the experimental context was implicit in Fisher's suggestion, it is premature to conclude from his study that a posthypnotic response can be elicited only in that context. (p.190)

In a study of their own, Orne et al. used the real-simulator methodology with 17 subjects who had been assessed as high on hypnotic susceptibility and 14 subjects who had been assessed as low on hypnotic susceptibility. The latter subjects were asked to simulate hypnosis. Following a hypnotic induction procedure and "routine tests of hypnosis" (not specified by Orne et al.), each subject was given a post-hypnotic suggestion that during the next 48 hours whenever he heard the word "experiment" his right hand would rise up to touch his forehead. Before "awakening" the subject, the experimenter (who was blind to whether the subject was "real" or simulating) suggested amnesia for the events of the hypnosis session. Before leaving, each subject was asked to "check with the secretary on the way out about the time scheduled for tomorrow's session" (p.192). When the secretary met the subject, she used the word "experiment" twice and then a third time the next day. No simulating subject gave the suggested post-hypnotic response on both days when the secretary used the word "experiment", but five "real" subjects did so.

Orne (1970) concludes from the above study that "the posthypnotic suggestion appears to set up a temporary compulsion for the subject to respond independently of whether the hypnotist is present or even aware of the response" (p.217), and Bowers (1976) has suggested that hypnotic subjects in this experiment were "responding unconsciously to the previously delivered post-hypnotic suggestions" (p.20). Wagstaff (1981), on the other hand, suggests that compliance might provide another explanation of the results. He argues that since the simulators had been asked to simulate by a first experimenter, they might well have assumed that their duty was over once they had left the presence of the second experimenter (who gave the post-hypnotic suggestion). A compliant hypnotic subject (i.e. a subject who was aware of having been given the post-hypnotic suggestion and who carried out the suggested act wilfully), however, would be in the difficult situation of having to be on the look-out for anyone who might "let on" to either the first experimenter or the second experimenter, and the secretary might be a person who could do that. Wagstaff considers an additional possibility, viz. that some of the subjects might have actually felt a genuine compulsion to touch their foreheads. He writes:

However, the problem is that as the hypnotic subjects were hypnotically susceptible by other criteria, but the simulators were not, we do not know whether any differences between the groups were the result of the hypnotic induction procedure or the different characteristics of the groups which were evident before the experiment; it is possible that the two groups might have responded differently to waking suggestions for compulsive behaviour. The only conclusion that can really be drawn is that some subjects may have responded because of compliance, some others may have felt a genuine compulsion, but there is no evidence to suggest that hypnotic induction was either necessary or responsible for the behaviour.¹ (Wagstaff, 1981, p.109)

Bowers (1966) reports a study aimed at distinguishing between the effects of "hypnotic trance" and "demand characteristic variables".

¹ The present writer finds that he is quite "suggestible" with regard to scratching behaviour - in reading of the above experiment, he tends to develop an itch somewhere and feel the need to scratch. However, he does not feel that he is in a special state or hypnotic trance at such times.

A group of responsive hypnotic subjects were seen individually and subjected to an induction procedure and then read suggestions to the effect that they would always begin sentences on a task, soon to be presented, with the words "they" or "he", that they would be unaware of that fact, and that upon awakening they would neither remember nor be reminded of any of these suggestions. The subjects were then "awakened" and introduced to a second experimenter who administered a task requiring subjects to make up sentences. A similar group of subjects, also seen individually, were treated in the same way except that prior to the reading of the above suggestions, they were "awakened" and read the following instructions:

In a moment ... I am going to read you exactly the same instructions hypnotized subjects are read ... and later on I want you to pretend as though you had been hypnotized when you were read the instructions, and act just like you think the subject who had been hypnotized would act under the circumstances. Do you understand? Fine. Here are the instructions. (Bowers, 1966, p.44)

The second experimenter was ignorant of the group to which any particular subject belonged. After subjects completed the task, the second experimenter left and the first experimenter re-entered the room and acted as if the experiment were over. He asked subjects if they could talk to another person who was purportedly doing pilot research in an experiment concerned with verbal behaviour. The first experimenter asked the subjects to be completely honest with the latter person, who was in fact a confederate whose purpose was to ascertain whether subjects recalled using "he" and "they" in starting sentences during the preceding task and, if so, whether they used the words involuntarily or voluntarily. All of the 13 simulating subjects indicated that they could remember using "he" and "they" whereas eight of the 14 hypnotic subjects did not. Whereas all of the simulating subjects indicated that their use of "he" and "they" was voluntary, the reverse was true for 12 of the 14 hypnotic subjects. Concluding his report, Bowers (1966) writes:

The ... termination of the experiment, together with a directive to be honest despite previous suggestions altered the situation for the simulating subjects so that it became all right for them to "confess". The fact that an identical alteration in the demand characteristics did not similarly affect the hypnotic subjects is, of course, the critical finding of this investigation. The effects of receiving suggestions under hypnosis evidently take precedence over subsequent, countermanding alterations in the demand characteristics. It is reasonable to conclude that hypnotic behavior is not wholly reducible to acting in accordance with demand characteristics, and that hypnosis seems in part to be an altered state within which suggestions have a peculiarly potent effect. (p.50)

Wagstaff (1981) argues that the results of the above study are susceptible to an explanation in terms of compliance:

The simulators had a contract with the experimenters to pretend as long as the experiment was in progress, there was no reason why they should continue to simulate in front of the graduate student¹ when the formal experiment had ended. On the other hand, the 'real' subjects contract was not finished when the formal experiment was over. Not only did the experimenters obviously know the graduate student (one experimenter actually introduced the subjects to the student) but the student also asked some rather suspicious questions such as 'At the time you were actually doing the experiment did you realise you were starting all your sentences with "he" and "they"?' (p. 46). If the hypnotic subjects had admitted that they were aware this would commit a severe social impropriety if it ever got back to the other experimenters. (Wagstaff, 1981, p.123)

Concluding his discussion of the Bowers (1966) study, Wagstaff (1981) notes that "To begin every sentence one utters with 'he' or 'they', to be unaware one is doing it, and to be 'wide awake' at the time, seems a remarkable feat, but without more definite evidence compliance surely provides a possible alternative explanation" (p.124).

¹ I.e. the individual who was purportedly doing pilot research in an experiment concerned with verbal behaviour.

Increased Suggestibility following "Hypnotic Induction"

Research findings indicate that the application of hypnotic induction procedures tends to increase subjects' responsiveness to suggestions (Barber & Glass, 1962; Hilgard & Tart, 1966; Hull, 1933; Weitzenhoffer & Sjoberg, 1961). One interpretation of this finding might be that hypnotic induction procedures bring about, in responsive subjects, a special state of consciousness (hypnotic trance) that renders individuals hypersuggestible. Alternative lines of explanation are possible, though, which do not employ the notion of a rather special state of consciousness. For one thing, increased suggestibility following a hypnotic induction procedure could be a function of subjects' expectations. To the extent that subjects believe that hypersuggestibility results from being in a hypnotic trance, they may be less responsive to suggestions if they have not been taken through an induction procedure. Hypnotic induction procedures themselves contain suggestions and successful response to such suggestions may facilitate responsiveness to subsequent suggestions—not through the development of a special, unique, or fundamentally different state of consciousness, but through simple changes in subjects' attitudes, beliefs, and motivation. For example, one can take the case of a subject who is exposed to a hand levitation induction procedure. The hypnotist asks the subject to focus his attention on a spot on the back of one or other of his (the subject's) hands and gives suggestions to the effect that the hand will get light and will lift by itself towards the subject's cheek or chin, whereupon the subject will enter a "hypnotic trance". The subject might not realize that this effect can be experienced quite easily by many people. When his hand starts to levitate, without his feeling that he is lifting it deliberately, he may infer that he is entering a "trance" and may credit the hypnotist with the ability to bring about this condition. Believing that he is entering an altered state, the subject may interpret certain changes in internal sensations, which actually result from his sitting still and relaxing, as further evidence of the development of "trance". When further suggestions are given to him, the subject may be less inclined to entertain negative, doubting ideas and hence be more likely to respond positively.

THE VALIDITY OF THE HYPNOTIC STATE CONCEPT

Much of the debate between state and non-state theorists revolves around the assumption of some state theorists that the "hypnotic state" has enigmatic or unique properties that are not continuous with the normal, waking state. Thus, Bowers (1966) asserts that most investigators interested in hypnosis believe that there is a hypnotic state "which fundamentally differs from the waking state" (p.42). Evans and Orne (1971) infer from their study of the "disappearing hypnotist"¹ that it is hard to see how the behaviour of their hypnotized subjects can be explained solely as playing the role of a hypnotized subject and that their data "are more congruent with the view that hypnosis involves some as yet unspecified alterations in the S's state of consciousness" (p.295). Erickson (1954) describes hypnosis as "a unique, complex form of unusual but normal behavior which can probably be induced in every normal person under suitable conditions and also in persons suffering from many types of abnormality" (Rossi, 1980c, p.21).

Irrespective of whether hypnotic induction procedures bring about unique or fundamental changes in responsive individuals, it could be argued that in terms of everyday language usage it is legitimate to apply the term "altered state" to the condition of a responsive hypnotic subject. Among the definitions of "state" given in Chambers's Twentieth Century Dictionary (Geddie, 1964) are "condition" and "circumstances at any time". By definition, then, an altered state means an altered condition or altered circumstances, which is precisely what many subjects experience during hypnosis sessions. Thus, for most individuals, it is an unusual situation to sit or lie down in a relaxed position and listen to another individual giving suggestions for effects such as hand levitation, hallucinations and age regression. If subjects experience suggested effects as occurring automatically (involuntarily), this is also likely to be somewhat novel, particularly in the case of first-time subjects. Since the term "hypnosis" is customarily applied to the procedures of the hypnotist and to the experiences and effects elicited in the subject, it could be seen as reasonable to describe the subject's condition as "hypnotic". Such use

1

This study is discussed earlier in this chapter (pp. 94-97).

of the terms "hypnotic state" and "altered state" need not denote a far-reaching, unique, or fundamental deviation from the normal or basal state. Of course, such usage of "hypnotic state" and "altered state" is descriptive rather than explanatory¹.

The term "trance" is perhaps more questionable as a general description of the condition of a responsive subject in a hypnosis setting since it carries the implication of a more radical or far-reaching change of state, which may or may not be the case. In terms of everyday language usage, there is nothing remarkable in describing someone as being in a "state of relaxation". One would not, however, normally describe a relaxed person as being in a "relaxation trance". The word "trance" clearly carries connotations of the unusual, strange or even pathological. This is not surprising when one considers the etymology of the word, which is discussed by Sarbin and Coe (1972) as follows:

It is not inconsequential for our analysis that the earlier forms of the word trance ("traunce", "trauns", "trans"), were used to convey the meaning of a passage from life to death (probably from the Latin transire; trans = across + ire = to go). At first a metaphor to denote an intermediate way station on the mystifying transit from the earthly to the spiritual world, "trance" was borrowed to index another intermediate condition - that between the mundane condition of waking and the perplexing condition of sleep. In like manner, the term was employed to represent the total or partial immobility that sometimes characterizes persons who suspend all actions under conditions of dread or of doubt and uncertainty. Poets have employed "trance" both as a noun

1

Although the present writer accepts that the terms "hypnotic state" and "altered state" can be justified on logical and semantic grounds as descriptions of the condition of responsive subjects in a hypnosis setting, he generally avoids these expressions since they can easily invite sterile, circular reasoning in which a description is inadvertently turned into an explanation. For example, a researcher or clinician might describe a subject who responds to suggestions for hallucinations and age regression as being in a "deep hypnotic state" and assume that the subject responds to these suggestions because he is in a "deep hypnotic state". Clearly, if the subject's responsiveness to suggestions is to be explained in terms of his being in a hypnotic state, it would be helpful to have some independent criteria of this presumed condition.

and as a verb to denote the empirical observation of immobility while at the same time providing an element of mystery, probably generalized from the awe associated with earlier uses of the word that indicated the threshold of death. (p.107)

Despite disagreements between hypnosis researchers regarding the question of a special altered state in "hypnotized" individuals, there are areas of considerable agreement. Spanos and Barber (1974) argue that many major contemporary investigators in the field of hypnosis seem to agree that subjects' willingness to co-operate in carrying out the aims of suggestions is an important, although not sufficient condition, for a high level of hypnotic responsiveness, and that subjects respond overtly and experientially to suggestions when they become involved in imaginings that are consistent with the aims of the suggestions. Spanos and Barber support these assertions by reference to empirical studies carried out by investigators of both state and non-state orientation. However, Spanos and Barber argue that it is not always clear from the writings of state theorists whether the construct "hypnotic state" or "trance state" is used as a synonym for the construct "involved suggestion-related imagining", as an antecedent condition that must exist before involved imagining can occur, or as a superordinate construct that includes involved imagining together with other unspecified processes.

Wagstaff (1982) argues that while writers such as Spanos and Barber (1974) have well illustrated the convergence of theories of hypnosis on the core concept of imaginative involvement, methodological differences between state and non-state investigators seem to be far from reconciled and there appears to be a marked inconsistency between what investigators imply when they are trying to integrate their viewpoint with others and what they state as a viewpoint in isolation, as, for example, in the discussion of an experiment. Wagstaff writes:

It seems everyone in the area of hypnosis claims to be making some contribution to the dumping of the Svengali-type myths often perpetrated by the popular press. However, if the term 'trance' is only used as a metaphor, and if everyone is aware of the limits of hypnotic performance, as Hilgard (1975) claims, then why do so many proponents of the 'state'

concept continue to fill the literature with elaborate experimental studies purporting to demonstrate that hypnotic phenomena possess some unique characteristic which differentiates them from 'everyday' phenomena? The allegiance of many proponents of the state concept to the importance of concepts such as trance logic, source amnesia and even catalepsy in the maintenance of the unique status of hypnosis, seems to belie any straightforward attempt to assign the hypnotic 'trance' no more than a metaphorical existence ... and to integrate hypnotic with other psychological phenomena. Furthermore, the academic literature still abounds with attempts to show the 'superhuman' characteristics of hypnotic phenomena such as dramatic improvements in learning (Krauss, Katzell, and Krauss, 1974), the ability to do 10,000 random dot stereograms (Walker, Garratt and Wallace, 1976), and other feats of which even motivated un hypnotized controls are assumed to be incapable. (p.6)

Thus, despite some degree of agreement between hypnosis researchers on the nature of the phenomena under investigation, Wagstaff, for one, recognizes continuing disparities with regard to the notion of a hypnotic state.

If responsive subjects enter a special altered state after exposure to hypnotic induction procedures, how could this be demonstrated? As indicated earlier in this chapter (pp.101-104), Hammer et al. (1978) have presented evidence purporting to demonstrate an unsuggested effect of hypnotic induction - increased "primary process thinking". The late Milton H. Erickson also described some apparently unsuggested consequences of hypnotic induction and the present writer has attempted to replicate some of Erickson's findings in this area (see Chapters V and VI). Attention will now be turned to Erickson's views on the nature of hypnosis.

CHAPTER IV

ERICKSON'S CONCEPTUALIZATION OF HYPNOSIS

BIOGRAPHICAL AND GENERAL INFORMATION

Milton H. Erickson, who died in March 1980 aged 78, is widely regarded as having been an innovative and creative figure in the fields of hypnosis and psychotherapy. Biographical information about Erickson is available from a number of sources (e.g. Haley, 1967, 1973; Zeig, 1980, 1982). Haley (1973) gives the following information about Erickson's professional background:

He attended the University of Wisconsin and received his medical degree at the Colorado General Hospital, simultaneously receiving his master's degree in psychology. After completing special training at the Colorado Psychopathic Hospital, he became a junior psychiatrist at Rhode Island State Hospital. In 1930 he joined the staff of the Worcester (Massachusetts) State Hospital and became chief psychiatrist of the Research Service. Four years later he went to Eloise, Michigan, as director of psychiatric research and training at Wayne County General Hospital and Infirmary. He was also associate professor of psychiatry at the Wayne State University College of Medicine and professor in the graduate school. Concurrently, he was briefly a visiting professor of clinical psychology at Michigan State University, in East Lansing. In 1948 he settled in Phoenix, Arizona, largely for his health, and entered private practice. (p.11)

Erickson was the founding president of the American Society of Clinical Hypnosis and founding editor of that society's professional journal, the American Journal of Clinical Hypnosis.

Erickson married twice and had eight children. Throughout his life he was dogged by ill-health, including two bouts of poliomyelitis. From 1967 he was confined to a wheelchair.

As well as authoring and co-authoring scores of papers on hypnosis and its application to therapy, Erickson co-authored several books:

Time Distortion in Hypnosis (Cooper & Erickson, 1959¹)

The Practical Application of Medical and Dental Hypnosis

(Erickson, Hershman & Secter, 1961)

Hypnotic Realities: The Induction of Clinical Hypnosis and

Forms of Indirect Suggestion (Erickson, Rossi & Rossi, 1976)

Hypnotherapy: An Exploratory Casebook (Erickson & Rossi, 1979)

Experiencing Hypnosis: Therapeutic Approaches to Altered

States (Erickson & Rossi, 1981)

Erickson's papers on hypnosis (some previously unpublished) have been brought together in a convenient four-volume compilation edited by E.L. Rossi (Rossi, 1980^{a,b,c,d}). Unfortunately, the compilation is marred by various printing errors and omissions but nevertheless it makes Erickson's papers more available to the researcher and clinician.

A number of other books based on Erickson's work are available (e.g. Bandler & Grinder, 1975; Zeig, 1980, 1982) and since Erickson's work will no doubt continue to arouse interest, particularly among clinicians, further publications based on his approaches may be expected.

Erickson's greatest claim to fame derives from his clinical work - his apparent ability to effect radical improvements in the condition of patients of widely differing backgrounds and with problems spanning the spectrum from the pain of terminal cancer to depression and phobias. It seems that Erickson never identified with any particular school of psychotherapy. His case reports indicate that he was often highly unorthodox in his style of treatment. Commenting on Erickson's clinical work, Orne (personal communication, 1982) writes:

... I have at times described him as a walking primary process. He had a uniquely effective way of reaching people's unconscious directly and sometimes remarkably effectively. It would be quite wrong to assume that this was due to his reputation. When I worked with him, he was literally unknown in Phoenix. He survived virtually because there were a few psychiatrists who knew him and who didn't hate him. Indeed, when I referred patients to him, there were actual attempts to discourage

¹ The first edition of this book appeared in 1954. The 1959 edition contains an additional section, written by Erickson and his wife, on time condensation.

those patients from seeing him. In one case, the patient's father was called, and it was only on the basis of my assurance and putting him in touch with some senior colleagues who were willing to vouch for Erickson (these were few indeed) that it was possible to keep the therapeutic relationship intact. Incidentally, despite these problems, he did very well with the patient.

Despite his respect for Erickson as a clinician, Orne (personal communication, 1982) expresses misgivings about aspects of Erickson's work (discussed in a later section of this chapter, p.192) and regrets that Erickson has been made into a cult hero by several of his colleagues. In a similar vein, Hilgard (personal communication, 1982) states that "The present cult of Ericksonians is very distasteful to me because among the enthusiasts there is scarcely one of any critical scientific attitude."

ERICKSON AS A STATE THEORIST

Although Erickson never advanced a formal, systematically elaborated theory of hypnosis, throughout his copious and at times rambling writings he made numerous statements about the nature of hypnosis and an attempt will be made in this chapter to analyse his views on the subject.

Some General Descriptions of Hypnosis

Volume III of The Collected Papers of Milton H. Erickson on Hypnosis (Rossi, 1980c) reproduces three general articles on hypnosis written by Erickson (Erickson, 1934, 1941, 1954) and a transcript of a panel discussion on hypnosis originally published in 1959. These papers indicate that Erickson was happy with the notion of a hypnotic state.

In the first of these papers, entitled A Brief Survey of Hypnotism, Erickson (1934) writes:

What hypnosis actually is can be explained as yet only in descriptive terms. Thus it may be defined as an artificially enhanced state of suggestibility resembling sleep wherein there appears to be a normal, time-limited, and stimulus-limited dissociation of the "conscious" from the "subconscious" elements of the psyche. This dissociation is manifested

by a quiescence of the "consciousness" simulating normal sleep and a delegation of the subjective control of the individual functions, ordinarily conscious, to the "subconsciousness". But any understanding of hypnosis beyond the descriptive phase is purely speculative. (Rossi, 1980c, p.8)

In this curious description, Erickson appears to regard "conscious" and "subconscious" elements of the psyche as parallel systems, with the "subconsciousness" having the ability to act in the place of the "conscious" elements. He adopts a similar position in the third general article, entitled Hypnotism, which was published in the Encyclopaedia Britannica in 1954. Here Erickson describes hypnosis as:

a special psychological state with certain physiological attributes, resembling sleep only superficially, and characterized by a functioning of the individual at a level of awareness other than the ordinary state, a level of awareness termed, for convenience in conceptualization, unconscious or subconscious awareness. (Rossi, 1980c, p.21)

To describe the state of awareness of a hypnotized subject as "unconscious" or "subconscious" carries the unfortunate connotation that the individual is functioning like an automaton, which is clearly not a view that Erickson espoused, since he goes on to say that the subject:

is not, as is commonly believed, without willpower or under the will of the hypnotist. Instead, the relationship between the hypnotist and subject is one of interpersonal co-operation, based upon mutually acceptable and reasonable considerations. (Rossi, 1980c, p.21)

Comments by Erickson in the paper The Basis of Hypnosis: Panel Discussion on Hypnosis (Erickson, 1959a) throw further light on his understanding of hypnosis as a state. He describes hypnosis as "essentially a state of receptiveness to ideas and the appraisal of their inherent values and significance" (Rossi, 1980c, p.29) and he claims that in hypnosis the "unconscious mind" is utilized, this latter concept referring to the "back of the mind, the reservoir of learning" (Rossi, 1980c, p.27). It can be seen that Erickson's use of the term "unconscious mind" has little affinity with the psychoanalytic notion of the unconscious.

In his papers A Brief Survey of Hypnotism and Hypnosis: A General Review, Erickson (1934, 1941) claims that subjects cannot be hypnotized against their will or without their knowledge. In other publications (e.g. Erickson, 1959b, 1964b; reproduced in Rossi, 1980a), he describes how he hypnotized resistant and even hostile subjects. Erickson and Kubie (1941; reproduced in Rossi, 1980c) describe a case in which a depressed young woman was hypnotized indirectly and given therapy without having been informed that she was to be hypnotized! These reports seem to conflict with Erickson's (1934, 1941) claim that individuals cannot be hypnotized surreptitiously. One might speculate that in the two general articles referred to (Erickson, 1934, 1941), he was concerned to portray the topic of hypnosis in a favourable light and hence denied that hypnosis could be induced in unwilling subjects. In his article Hypnotism, Erickson (1954) modifies his position and claims that while hypnosis always requires co-operation on the part of the subject, "sometimes this co-operativeness is well concealed behind a superficial attitude of unwillingness, with a consequent distortion of the true situation" (Rossi, 1980c, p.25). Since Erickson does not stipulate any independent way of judging whether unco-operativeness is anything more than a veneer, there appears to be no satisfactory way of testing his assertion that unco-operative subjects cannot be "hypnotized".

In his paper Hypnotism, Erickson (1954) writes:

Regression, or a return to earlier and simpler patterns of behavior, characterizes all trances and can be utilized and enhanced to a remarkable degree. In the ordinary trance there tends to occur a significant literalness of a childlike character in the subject's understandings, the handwriting and other motor activities are childlike, and emotional attitudes reflect those of an earlier age level. (Rossi, 1980c, p.24)

Unfortunately, Erickson appears to be confounding two different meanings of the word "regression" as it has been employed in the field of hypnosis. In the psychoanalytic sense (cf. Gill & Brenman, 1959) the term refers to a shift towards a more primitive mode of mental functioning characterized by increased primary process thinking. The term "age regression", on the other hand, refers to the situation in which a subject is re-oriented to an earlier time, remote or recent. In the case of, say, a middle-

aged individual who is age regressed by two weeks, one would not normally expect to observe child-like handwriting and motor activities.

Discussion of Erickson's assertions about "literalness" will be deferred until a later section of this chapter when the topic will be considered at some length.

In the paper The Basis of Hypnosis: Panel Discussion on Hypnosis, Erickson (1959a) asserts:

One hundred percent of normal people are hypnotizable. It does not necessarily follow that 100 percent are hypnotizable by any one individual ... When you hypnotize patients you are asking them to pay attention to ideas or to any parts of reality pertinent to the situation. The patients then narrow their attention down to the task at hand and give their attention to you. (Rossi, 1980c, p.29)

Unfortunately, Erickson fails to specify precisely what criteria he would use to judge whether a subject was hypnotized.

In all four of the general articles mentioned in this section (Erickson, 1934, 1941, 1954, 1959a), Erickson refers to catalepsy or increased muscle tonicity as a common hypnotic manifestation. Although he recognized that this phenomenon could be suggested, he also believed it to be a frequent spontaneous or unsuggested manifestation of the hypnotic state. Catalepsy will be discussed further in a later section of this chapter.

Erickson's Views on "Deep Hypnosis"

If hypnosis involves a special altered state, manifestations of this state may be more evident in subjects who are said to be deeply or profoundly hypnotized. Accordingly, attention will now be turned to a paper by Erickson entitled Deep Hypnosis and its Induction first published in Le Cron (1952) and reproduced in Rossi (1980a).

Description of Deep Hypnosis

Under the heading "Description of deep hypnosis", Erickson writes:

Any description of a deep trance must necessarily vary in minor details from one subject to another. There can be no absolute listing of hypnotic phenomena as belonging to

any one level of hypnosis. Some subjects will develop phenomena in the light trance usually associated with the deep trance, and others in a deep trance will show some of the behavior commonly regarded as characteristic of the light trance. Some subjects who in light trances show behavior usually typical of the deep trance may show a loss of that same behavior when deep hypnosis actually develops. For example, subjects who easily develop amnesias in the light trance may just as easily fail to develop amnesia in the deep trance. The reason for such apparent anomalies lies in the entirely different psychological orientation of the deeply hypnotized persons as contrasted to their orientation in lighter stages of hypnosis. At the lighter levels there is an admixture of conscious understandings and expectations and a certain amount of conscious participation. In the deeper stages functioning is more properly at an unconscious level of awareness.

(Rossi, 1980a, pp.144-145)

While claiming that amnesia and other hypnotic phenomena are not necessarily indicative of any particular depth of hypnosis, Erickson (1952) fails to specify what criteria he uses to judge hypnotic depth. It is possible that he inferred the presence of "deep hypnosis" when subjects exhibited a clustering of phenomena such as negative hallucinations, age regression, and post-hypnotic amnesia. However, if "deep hypnosis" or "deep trance" is defined in this way, it is essentially a shorthand way of saying that the subject concerned manifested the phenomena listed and, in the absence of independent criteria of a markedly altered state, it would be entirely circular to attribute the appearance of these phenomena to the subject's being in a deep trance.

Erickson (1952) describes deep hypnosis as "the level of hypnosis that permits subjects to function adequately and directly at an unconscious level of awareness without interference by the conscious mind" (Rossi, 1980a, p.146). The present writer is unaware of any justification for contending that there is no interaction between a subject's normal waking attitudes, personality style, etc. (manifestations of what, in Erickson's terms, might be described as the "conscious mind") and his or her behaviour while "deeply hypnotized". The present writer is also unsure of what Erickson means when he states that subjects function "adequately and directly at an unconscious level of awareness".

Two Types of "Deep Trance"

Erickson (1952) refers to two types of deep trance: somnambulistic and stuporous. He describes the former as:

that type of trance in which a subject is seemingly awake and functioning adequately, freely, and well in the total hypnotic situation, in a manner similar to that of a non-hypnotized person operating at the waking level. Well-trained subjects are not those laboriously taught to behave in a certain way, but rather those trained to rely completely upon their own unconscious patterns of response and behavior. (Rossi, 1980a, p.146)

As an illustrative example, Erickson cites the case of one of his subjects who, while in a "profound somnambulistic trance", conducted a lecture and demonstration of hypnosis, unaided by Erickson, before a group of psychiatrists and psychologists. Erickson states that although many of the audience had had experience with hypnosis, none detected that the subject was in a trance. Erickson also refers to another subject, who, as an experiment in "autohypnosis", conducted a staff meeting and presented a case history without her trance state being detected. Erickson adds that "once apprised of the situation, the audience could readily recognize the tremendous differences between ordinary conscious behavior and trance behavior, and repetitions of this procedure were detected" (Rossi, 1980a, p. 147). Unfortunately, Erickson does not specify what these differences were between the subject's "conscious behavior" and "trance behavior".

In A Teaching Seminar with Milton H. Erickson (Zeig, 1980), Erickson describes cases in which subjects allegedly remained hypnotized for lengthy periods of time and yet were able to go about their activities unimpaired. For example, he states:

... I hypnotized two dental assistants in L.A. I noticed they didn't come out of a trance when I told them to, but they appeared to be out of the trance to everybody else. So I knew they had some reason for staying in a trance.

Two weeks later I lectured at the same place. The two dental assistants were there. So I had a talk with them privately and asked them, "Why have you nurses been in a trance for two whole weeks?" They said, "We are doing an

experiment. We wanted to know if we could work as well in a trance state as we did in a waking state. And if you think that two weeks of doing that is enough to prove a point, we will wake up now." I told them any hypnotic subject can work as well in a trance state as he can in a waking state, and probably do it much better because there are fewer distractions. (Zeig, 1980, p.227)

The critical reader may wonder whether the dental assistants were in any sort of altered state at all. Barber (1979) has commented on Erickson's assertions in this area:

It appears that when Erickson judges one of his subjects to be in a hypnotic trance, he does not mean that the subject is not awake or that the subject is in a trance in the traditional sense of the term. What then does the term "hypnotic trance" mean in Erickson's work? A close reading of his papers provides the following answer: Whenever Erickson states that a subject was in a hypnotic trance, he almost always states on the same page that the subject was highly responsive to test suggestions. In fact, it appears that quite often Erickson first observes that the subject is very responsive to test suggestions and then infers that, since he is responsive to test suggestions, he must be in a hypnotic trance. The term "hypnotic trance", as used by Erickson, appears to refer to high responsiveness to test suggestions.

When pushed to specify what he means by the term "hypnotic trance" (or "hypnosis" or "hypnotized"), Erickson states that he is referring to "a state of intensified attention and receptiveness and an increased responsiveness to an idea or to a set of ideas" (1958, p.117) and to a person who "tends to want to understand or to receive or to respond to the stimuli which are given to him or which he can derive from his situation" (1962, p.240). (Barber, 1979, p.257)

Barber contends that Erickson may be misusing the term "hypnotic trance" to refer to an awake subject who has positive attitudes, motivations, and expectations towards the situation and who is ready and willing to think with and to imagine those things that are suggested.

The second type of "deep trance" discussed by Erickson (1952) is perhaps more akin to the popular and dictionary understandings of "trance". Erickson states that the stuporous trance is characterized by psychological and physiological retardation and a lack of spontaneous behaviour and initiative. Erickson reports that in his experience the stuporous trance is difficult to obtain in many subjects, "apparently because of their objection to losing their awareness of themselves as persons" (Rossi, 1980a, p. 147).

In a panel discussion transcribed and reported in Estabrooks (1962), Erickson answers questions about the "plenary trance", which appears to be the same as the "stuporous trance" as described by Erickson (1952). Erickson states that he has induced a plenary trance by simply suggesting to a person that he go into a deeper, more profound trance, and feel himself becoming more and more stuporous. Erickson states that it takes not less than half an hour and preferably an hour of very careful work to induce a plenary trance and perhaps half an hour to get the subject out of it. He claims that if a shock reaction is to be avoided, a subject should be brought out of the plenary trance very slowly. In his 1952 paper, Erickson states that use of the stuporous trance by him "has been limited primarily to the study of physiological behavior and to its therapeutic application in certain types of profoundly neurotic patients" (Rossi, 1980a, p.147). However, during the panel discussion reported in Estabrooks (1962), Erickson expresses the view that the plenary trance "is of no use whatsoever in therapy, but decidedly useful in physiology and research in psychology" (Estabrooks, 1962, p.257).

Hypnosis as a Trance State: Erickson's Later Views

Erickson died in early 1980. In order to gauge some of his later views on the nature of hypnosis, attention will now be turned to some statements bearing on this matter contained in Hypnotherapy: An Exploratory Casebook (Erickson & Rossi, 1979).

In their book, the authors write of "therapeutic trance", which they describe as "a period during which patients are able to break out of their limited frameworks and belief systems so they can experience other patterns of functioning within themselves" (p.2).

For didactic purposes, they conceptualize the "dynamics of trance induction and suggestion" as a five-stage process, which they represent as follows (p.4):

- | | | | |
|----|---|-----|---|
| 1. | Fixation of
Attention | via | Utilizing the patient's beliefs
and behavior for focusing
attention on inner realities. |
| | ↓ | | |
| 2. | Depotentiating
Habitual Frameworks
and Belief Systems | via | Distraction, shock, surprise,
doubt, confusion, dissociation,
or any other process that
interrupts the patient's habitual
frameworks. |
| | ↓ | | |
| 3. | Unconscious
Search | via | Implications, questions, puns,
and other indirect forms of
hypnotic suggestion. |
| | ↓ | | |
| 4. | Unconscious
Process | via | Activation of personal
associations and mental mechanisms
by all the above. |
| | ↓ | | |
| 5. | Hypnotic
Response | via | An expression of behavioral
potentials that are experienced
as taking place autonomously. |

Regarding fixation of attention, Erickson and Rossi contend that anything that fascinates and holds or absorbs a person's attention could be described as hypnotic. They use the term "common everyday trance" for periods in everyday life when people are so absorbed or preoccupied with one matter or another that they momentarily lose track of their outer environment. Regarding hypnotic responses, Erickson and Rossi make the following assertions:

Classical hypnotic phenomena such as catalepsy, anesthesia, amnesia, hallucinations, age regression, and time distortion are all spontaneous trance phenomena that were a source of amazement and bewilderment to early investigators. It was when they later attempted to induce trance and study trance phenomena systematically that these investigators found that they could "suggest" the various hypnotic phenomena. Once they found it possible to do this, they began to use suggestibility itself as a criterion of the validity and depth of trance experience. (p.8)

A non-state theorist might object that the concept of "trance" is redundant in making sense of phenomena such as catalepsy, hallucinations, age regression, and time distortion. As indicated in Chapter II, Wilson and Barber (1982) found that a group of highly hypnotizable women reported considerable involvement with fantasy in their day to day lives, and often

experienced their imaginings with hallucinatory intensity in all or most sense modalities.

Erickson and Rossi (1979) are somewhat vague and inconsistent in what they mean by "trance". At one point they state that "therapeutic trance is actually only a variation of the common everyday trance or reverie that everyone is familiar with" (pp.10-11) but a little later they state that:

In [the] first stage of learning to experience an altered state, many uncontrolled things happen, including spontaneous age regression, paresthesias, anesthetics, illusions of body distortion, psychosomatic responses, time distortion, and so on. Once patients learn to stabilize these unwanted side reactions, they can then allow their unconscious minds to function freely in interacting with the therapist's suggestions without some of the limitations of their usual frames of reference.

(p.12)

Erickson and Rossi's reference to patients' unconscious minds functioning freely in interacting with the therapist's suggestions accords with some of Erickson's earlier descriptions of hypnosis, emphasizing functioning at a "subconscious" or "unconscious" level.

Erickson and Rossi (1979, p.11) list the following "common indicators of trance experience", which they claim individuals manifest in varying combinations and in different degrees:

Autonomous Ideation and Inner Experience	Loss or Retardation of Reflexes Blinking Respiration
Balanced Tonicity (Catalepsy)	Swallowing Startle reflex
Body Immobility	
Body Reorientation After Trance	Objective and Impersonal Ideation
Changed Voice Quality	Psychosomatic Responses
Comfort, Relaxation	Pupillary Changes
Economy of Movement	Response Attentiveness
Expectancy	Sensory, Muscular & Body Changes (Paresthesias)
Eye Changes and Closure	Slowing Pulse
Facial Features Smooth and Relaxed	Spontaneous Hypnotic Phenomena Amnesia Anesthesia Body Illusions Catalepsy Regression Time Distortion etc.
Feeling Distanced or Dissociated	
Feeling Good After Trance	
Literalism	Time Lag in Motor and Conceptual Behavior

Two of these alleged indicators of trance experience - balanced tonicity (catalepsy) and literalism (or literalness) - receive attention in the next section of this chapter. Arguably, most of the listed "indicators" occur in conditions other than those customarily labelled "hypnosis".

UNSUGGESTED EFFECTS FOLLOWING THE ADMINISTRATION
OF HYPNOTIC INDUCTION PROCEDURES

Preliminary Comments

If hypnotic induction procedures bring about, in responsive subjects, a rather special altered state, one might ask whether there are any reliable unsuggested effects of this state. The existence of reliable unsuggested effects could lend strong support to a state interpretation of hypnosis. However, before such effects could be adduced as markers or indicators of a special altered state, one would have to exclude the possibility that they arise from indirect

suggestion, cues in the experimental situation, or subjects' knowledge and expectations about hypnosis. One would also have to try to exclude the possibility that the unsuggested effects simply arise from immobility of the body, relaxation, hyperventilation and other processes by no means unique to the hypnotic situation. (As indicated in Chapter III, the study by Hammer et al. [1978], which purported to demonstrate an unsuggested effect of the presumed hypnotic state, was flawed by the authors' failure to exclude the possibility that their hypnotic subjects' increased "primary process thinking" resulted from relaxation, demand characteristics, or expectations about hypnosis.)

Hilgard (1965) presents data from subjects who, following testing with either Form I or Form II of the Stanford Profile Scales of Hypnotic Susceptibility (Hilgard, Lauer & Morgan, 1963; Weitzenhoffer & Hilgard, 1963), were asked to tell about aspects of their experience that were not directly suggested. The subjects' replies are summarized by Hilgard in a table, which is reproduced below:

TABLE B
SUBJECTIVE REPORTS BY SUBJECTS VARYING IN
MEASURED SUSCEPTIBILITY BASED ON AN INQUIRY
FOLLOWING ATTEMPTED HYPNOSIS

Inquiry	<u>Affirmative replies to inquiry</u>			
	High (N = 48)	Medium (N = 49)	Low (N = 45)	Non- Susceptible (N = 17)
	percent	percent	percent	percent
Were you able to tell when you were hypnotized?	65	60	47	31
Disinclination to speak?	89	79	68	31
Disinclination to move?	87	77	64	50
Disinclination to think?	55	48	32	12
Feeling of compulsion?	48	52	20	6
Changes in size or appearance of parts of your body?	46	40	26	0
Feeling of floating?	43	42	25	12
Feeling of blacking out?	28	19	7	6
Feeling of dizziness?	19	31	14	0
Feeling of spinning?	7	17	0	6
One or more of prior four feelings?	60	60	39	25
Any similarity to sleep?	80	77	68	50

SOURCE: Previously unpublished data, based on replies to the final inquiry, Stanford Profile Scales of Hypnotic Susceptibility, Forms I or II (whichever came first). The high subjects scored 14 or more out of a possible 27 points, the middle subjects 8 to 13, and the low subjects 0 to 7. The low subjects all had scored at least 4 points on the Stanford Hypnotic Susceptibility Scale, Form A, so that they were somewhat responsive to hypnotic suggestions of the motor type; the most insusceptible subjects came from a group ordinarily not tested on the profile scales, with scores of 0 to 3 on Form A. For form of inquiry, see Hilgard, Lauer, and Morgan (1963), pp. 49,64.

(From Hilgard, 1965, p.12)

In addition to the tabular summary reproduced above, Hilgard (p.13) provides some quotations from comments made by subjects following a "yes" answer to some of the questions in the inquiry. A sample of these quotations is reproduced below:

"Hypnosis is just one thing going on, like a thread ... focusing on a single thread of one's existence"

"I was very much aware of the split in my consciousness. One part of me was analytic and listening to you. The other part was feeling the things that the analytic part decided I would have."

"My head sunk into my body like a black sponge."

"I felt I was being squeezed in a closed space - like a tube perhaps - but it wasn't unpleasant."

Hilgard (1965) concludes that "hypnosis represents to many subjects a somewhat unusual state of awareness, with many contents not summarized under 'hypersuggestibility' " (p.14). While it may be true that not all of the experiences of responsive hypnotic subjects can be summarized under "hypersuggestibility", one might question how special, unique or unusual is the state of awareness indicated by such data. Odd sensations and feelings can come about as a result of prolonged immobility of the body, with or without a hypnotic induction procedure. Subjects attending for hypnosis sessions, particularly inexperienced subjects, are sometimes excited or apprehensive. If, as a consequence, they hyperventilate, they may well experience symptoms such as dizziness, feelings of unreality, paraesthesiae (abnormal sensations, e.g. tingling feelings in the fingers), cold extremities, and panicky feelings. While some subjects experience hypnosis sessions as exciting or frightening, a more common response is probably one of relaxation. Arguably, the disinclination to speak, move and think reported by Hilgard's subjects could have arisen from relaxation rather than from a fundamentally altered state of consciousness.

Regarding feelings of compulsion to do the hypnotist's bidding, Hilgard (1965) writes:

This is by no means universal. Many highly susceptible subjects do not feel coerced by the hypnotist's suggestions; they feel, somehow, that they want to do what he suggests.

As one of them put it: "I didn't feel that I had to, but I felt I might as well do it." Thus only about half the high and medium susceptibles report this feeling of compulsion; the percentage reporting drops off rapidly as susceptibility decreases. (pp. 11-12)

The fact that some subjects felt compelled to carry out suggestions could be seen as supportive of the view that they responded to the hypnotic induction procedure by entering an altered state. On the other hand, one might speculate that susceptibility to feelings of compulsion after receiving suggestions is a characteristic of some individuals who prove to be "good" hypnotic subjects.

An interesting feature of the data in Hilgard's table (reproduced above) is that the more susceptible subjects (those who were more responsive to the suggestions contained in the Stanford Profile Scales of Hypnotic Susceptibility) tended to report more subjective effects such as a disinclination to speak and move. This finding is consistent with the view that hypnotic induction procedures facilitate an altered state in responsive subjects, a state characterized by both hypersuggestibility and subjective effects that are not explicitly suggested. One could hypothesize that subjects who undergo a more profound alteration of state will be more responsive to suggestions and will tend to experience more unsuggested effects, whereas subjects who are less markedly in the altered state will exhibit less enhancement of their suggestibility and will report fewer unsuggested effects. However, the association between responsiveness to suggestions and the reporting of unsuggested effects depicted in Hilgard's table may be susceptible to explanation along lines that do not require the concept of a special hypnotic state. Barber, Spanos and Chaves (1974) contend that changes in body feelings may indirectly affect a subject's responsiveness to test-suggestions:

When the subject finds that he is experiencing changes in body feelings as he receives suggestions, his expectancy that he can be affected by suggestions may increase, and his heightened expectancy may enhance his responsiveness to subsequent test suggestions. (pp. 37-38)

Attention will now be turned to some apparently unsuggested effects described by Erickson. Two of these alleged effects (literalness of response to questions and requests, and the unusual behaviour of "somnambulistic" hypnotic subjects who were asked where

they would place hypothetical pictures of persons or objects present) will be discussed at some length since (1) according to Erickson they can be elicited fairly reliably in "hypnotized" subjects, (2) they appear to be "counter-expectational", i.e. they do not appear to be effects that one would readily predict on the basis of general knowledge of hypnosis, and (3) they have hitherto been largely neglected in the experimental hypnosis literature.

Literalness

At various points in his writings, Erickson described hypnotized subjects as being peculiarly literal in response to questions and requests. A short section of Volume III of The Collected Papers of Milton H. Erickson on Hypnosis (Rossi, 1980c) is concerned explicitly with literalness. The two papers in that section comprise a previously unpublished manuscript (circa 1940s) entitled Literalness: An Experimental Study (Rossi, 1980c, pp. 92-99) and a short piece of reproduced dialogue between Erickson and Rossi in 1973 entitled Literalness and the Use of Trance in Neurosis (Rossi, 1980c, pp. 100-101).

In Literalness: An Experimental Study, Erickson explains that an experimental inquiry extending over a period of more than 25 years and conducted with hundreds of subjects elicited remarkably different results from waking and from hypnotized subjects. He states that innumerable persons were asked in the ordinary waking state questions such as: "Do you mind telling me your name?", "Do you mind standing up?" and "Do you mind reading this?" (with the subject's being handed a card bearing a typed sentence such as, "This is a nice day"). Erickson reports that the usual response - whether from a friend, acquaintance, or even a total stranger - was an acquiescence in the implication of the question. Thus, the subject would actually say his name, stand up, read the card, or whatever. In exceptional cases a subject might reply with, "Why should I?" or an obvious rejection, e.g. "I don't want to", or an ignoring of the request, usually with a questioning or doubting facial expression. Hypnotized subjects, on the other hand, almost invariably gave "a simple verbal affirmative reply"¹ without any movement to respond to the implication of the inquiry. Erickson states that this was

¹ By "a simple verbal affirmative reply", Erickson presumably means that subjects said "No", or used equivalent words, meaning that they did not mind saying their names, standing up, or whatever.

particualrly true with somnambulistic subjects, somewhat less so with medium subjects, and slightly less so with subjects in a light trance. Erickson comments that, "On rare occasions the reply would be complete inaction, explained upon request by the statement that they were comfortable as they were or that there was no need to do so" (Rossi, 1980c, p. 92).

Erickson reports that in all about 4,000 subjects were employed, of whom approximately 1,800 were in a hypnotic state. He explains that the greater number of non-hypnotic subjects resulted from the fact that many subjects were employed who never became hypnotic subjects. Erickson says that it must be borne in mind that the two groups, non-hypnotic and hypnotic, are not mutually exclusive, since many subjects were used for both hypnotic and non-hypnotic experimentation. However, he claims that:

behavioral differences between waking subjects and hypnotic subjects were found to be directly in accord with the existing state of awareness at the actual time of the experiment, whether hypnotic or waking. Previous experience with hypnosis had no bearing on the results. Subjects showing the typical waking response would subsequently manifest the typical hypnotic response, then again the waking response, and then again the hypnotic. The exceptions were those who were sophisticated in hypnotic behavior. Thus, a physician used first as a hypnotic subject gave the characteristic response and later the usual waking response. Shortly after the waking test he exclaimed in a startled fashion, "Doesn't that beat all? I was caught by the very test I use myself to see if my patient is in a trance." (Rossi, 1980c, p. 94)

Erickson reports that subjects ranged in age from 4 to 80 years but age was not found to be a factor affecting the results. The sex distribution was essentially equal and no sex differences were found. Subjects were drawn from various national groups, one thing in common being that they understood English, some less well than others, although Erickson states that this did not affect the results. He reports that the educational levels of subjects ranged from "grade school" to doctoral degrees. Some psychiatric patients and inmates of penal institutions were included in the subject pool.

Erickson states that the experiment was not always carried out by himself - sometimes it would be done at his request by a colleague who did not know the purpose. Unfortunately, Erickson fails to specify the percentage of cases in which he was not the experimenter.

Erickson classifies the experimental results as follows:

TABLE C
WAKING STATE

1. Acquiescence by executing the implied request	95%
2. Challenge (Why should I?; Is it necessary? etc)	3
3. Rejection (by ignoring or a direct negation of the implied action)	2

HYPNOTIC STATE

Light Trance:

1. An utterance of "no" or a negative shaking of the head	80
2. The question of "Do you want me to?" or a comparable inquiry	12
3. Answer of "I don't want to" or its equivalent	3
4. Hesitant, sluggish, inadequate effort to acquiesce to implied question	3
5. Slow, uncertain, but actual acquiescence	2

Medium Trance:

1. An utterance of "no" or a negative shaking of the head	90
2. The question of "Do you want me to?" or a comparable inquiry	1
3. Answer of "I don't want to" or its equivalent	2
4. Hesitant, sluggish, inadequate effort to acquiesce to implied question	1
5. "Can't."	1

Deep Trance:

1. An utterance of "no" or a negative shaking of the head	97
2. The question of "Do you want me to?" or its equivalent	2
3. No response	1

(From Rossi, 1980c, p. 97)

Erickson fails to specify the criteria he used in this study to designate subjects as being in light, medium and deep trances.

Regarding the presumed mechanisms involved in literalness, Erickson has relatively little to say. In his 1954 article entitled Hypnotism (reviewed earlier in this chapter) he states that "In the ordinary trance there tends to occur a significant literalness of a childlike character in the subject's understandings" (Rossi, 1980c, p. 24). However, in his article Literalness: An Experimental Study considered above, he writes: "The age distribution ranged from four to 80 years, and age was not found to be a factor", which presumably means that in the "waking state", young children, like adults, tend to give non-literal responses to questions such as, "Do you mind telling me your name?" (As will be seen in Chapters V and VI, the present writer put questions, which could have been answered in a literal fashion, to primary school children but received normal, non-literal replies.)

The following quotation from Literalness and the Use of Trance in Neurosis (the second paper in the section on literalness in Rossi [1980c]) illustrates something of Erickson's apparent understanding of literalness:

E: The conscious mind already has its own set of ideas about the neurosis. It has its fixed, rigid perceptions that constitute a neurotic set. It's very difficult to get people at the conscious level to accept an alteration of their general thinking about themselves. You use the trance state so that you can get around the self-protection which the neurosis provides on an unrecognized level. The neurotic is self-protective of the neurosis.

R: How does trance get around that self-protective aspect of neurosis?

E: The literalness of the trance state causes the patient to have a new pattern of listening. He listens to the words in the trance state rather than to the ideas.

R: The therapeutic words that the therapist says?

E: Yes. The patient gets those individual words and can hear the therapist say, for example, "you ... don't ... want ... to ... smoke." In the ordinary waking state he only hears, "You ... don't." He feels that is condemnatory, as if he is being attacked. So he becomes defensive and is unable to hear the rest of the sentence. (Rossi, 1980c, p. 100)

By implication it would seem that Erickson is arguing that in the case of a hypnotized subject who responds to a question such as, "Do you mind telling me your name?" with "No", the literal response comes about because the subject is more attentive to the actual words of the question, which, taken literally, invite a "Yes" or "No" answer. However, Erickson fails to explain how, in the "trance state", this "new pattern of listening" arises and supplants the normal set to answer questions non-literally.

Other authors have made passing reference to literalness in discussing hypnotic behaviour. White (1941) states that:

the subject's manner differs from the ordinary: he seems literal and humorless, he shows no surprise and makes no apology for bizarre behavior, he appears entirely un-self-conscious, and very often he acts abstracted, inattentive, almost as if he were insulated against his surroundings. (p. 481)

White does not elaborate on what he means by "literal", so it is not clear whether he is using the term to embrace the unusual behaviour described by Erickson.

Hilgard (1977a) comments on a hypnotized subject's literal verbal response:

The following conversation ensued: "Do you remember what happened when you were hypnotized and what the hypnotized part of you reported?" "Yes." (This very literal response is characteristic of this subject when hypnotized. If a question can be answered "yes" or "no", it commonly gets no more extensive answer without further probing.) (p. 187)

To the present writer, it seems that this subject's response of "Yes" to the rather lengthy question he was asked might be seen as a fairly reasonable response and not as surprising as the type of responses reported by Erickson. Hilgard (personal communication,

1982) commented on the literalness displayed by the subject referred to in the above quotation:

I did report some literalness on the part of the highly hypnotizable subject who participated in the first experiment in which I stumbled across the hidden observer. He was a very highly hypnotizable subject, but probably had read what Erickson said about hypnosis which could have modified his own behavior. While I have seen such literalness in others, I have often found also that when the hypnotist made a slip of speech, the hypnotized subject correctly interpreted the hypnotist's intent. This is the opposite of literalness.

Comments

Erickson does not discuss the possibility that he and his colleagues might have cued literal responses in their subjects by the way they asked questions. For example, in asking a question such as, "Do you mind telling me your name?", emphasis on the word "mind" could change the meaning of the question from the listener's point of view, inducing him or her to give a literal response. This possibility warrants serious consideration since hypnotists often adopt a different style of speaking when addressing subjects in a hypnosis setting, and there is reason to believe that Erickson adopted a different manner of speaking when addressing subjects in hypnosis settings. In a conversation reported in A Teaching Seminar with Milton H. Erickson (Zeig, 1980), Zeig says to Erickson:

"You're very slow in your speech, which is very different from your voice tempo when you were telling an anecdote. You are much more measured in the way you are speaking when you are doing the induction." (p. 315)

Admittedly, at the time of the above conversation, Erickson was in his late seventies and hence his voice would have been different from when he was younger. Nevertheless, it seems probable that in his earlier years he also adopted a different style of speaking when dealing with subjects in a hypnosis setting.

If the general public tend to see literalness as an aspect of hypnotized persons' behaviour, this could conceivably account for the literalness exhibited by the hypnotic subjects in Erickson's

study discussed above. However, in Chapter VI the present writer reports findings suggesting that literalness is not generally seen as an attribute of hypnotized persons.

If responsive subjects exhibit literalness after being exposed to hypnotic induction procedures, could an explanation be sought in terms of relaxation, drowsiness or lethargy? A deeply relaxed, drowsy or lethargic subject might elect to answer questions in the briefest possible way rather than have to make the effort to give a fuller reply. For example, in response to the question, "Do you mind telling me about your childhood?", which potentially invites a lengthy answer, a relaxed, drowsy or lethargic subject might defer having to do much talking by simply saying "No"; if he were particularly reluctant to do more talking, the answer "Yes" might be given (meaning, "Yes, I do mind telling you about my childhood"). This hypothesis would lead one to expect literal responses from relaxed, drowsy or lethargic subjects even if the setting were not labelled "hypnosis".

If responsive subjects exposed to hypnotic induction procedures do exhibit literalness and if this phenomenon does not arise from demand characteristics in the experimental setting, subjects' expectations, relaxation, drowsiness or lethargy, its occurrence would lend support to the view that hypnosis involves a rather special altered state. For this reason, the present writer has investigated Erickson's assertion about literalness but he has been unable to confirm the latter's findings. This work is reported in Chapters V and VI.

Unusual Behaviour Exhibited by "Somnambulistic"

Hypnotic Subjects in a Task Involving

Hypothetical Pictures

Overview

In a rambling but interesting paper entitled Further Experimental Investigation of Hypnosis: Hypnotic and Nonhypnotic Realities, Erickson (1967; reproduced in Rossi, 1980a) describes how, when "hypnotized", so-called somnambulistic subjects (subjects who are able to open their eyes, talk, and move around and yet who remain markedly responsive to suggestions) behave in a strikingly

different manner from un hypnotized subjects in a simple task. Erickson's main finding will be outlined and then his study will be discussed in some detail.

Subjects were asked , if they had a three by four foot picture of a person or object present in the room, where would they place the picture. Unhypnotized subjects took into account available wall space in making their choices, but subjects in a "somnambulistic trance" selected a position above and behind the person or object referred to, irrespective of whether the chosen space was a window, the corner of a room, or was in some other way unsuitable by normal criteria.

A full explanation of the unusual picture placement choices exhibited by "somnambulistic" hypnotic subjects is not advanced in Erickson's paper. However, he relates that several hundred naive subjects indicated to him that they experienced limitations to their visual perception following "a trance induction resulting in somnambulism with the eyes open" (Rossi, 1980a, p. 31)¹. As an example, Erickson cites the case of a subject who had never seen hypnosis demonstrated and in whom he claims he induced a "somnambulistic trance" within half a minute:

As you can see, you are sitting at my immediate left and facing me. Is there someone sitting to my right?

[A nurse was sitting at my immediate right, facing toward me and toward her.]

I don't know.

Why?

I haven't looked that far.

Can you see my right arm? [Resting it across the arm of the chair in which the nurse was sitting]

Yes.

Do you see anything else?

No.

Why not?

I haven't looked any farther.

Is there anything to see if you look farther?

¹ Erickson does not indicate whether he believes that all subjects in a "somnambulistic trance" experience this apparently unsuggested limitation to their visual perception.

I don't know, I haven't looked.

Just review these questions I have been asking you and the answers you have given me and tell me what you think of the questions and the answers.

[After a pause] I know I'm not in a trance because you didn't put me in one. You ask odd questions, and my answers are just as odd. I really don't understand.

A little later, the conversation proceeded as follows:

Can you look around, and what do you see?

I see you, the chair I'm sitting in, and the floor the chair is on.

Can you see anything else?

No, that's as far as I can see. Do you want me to see farther?

Do you see farther?

No, I just see so far.

Would you say that your behavior is that of someone who is not hypnotized?

Well, it's very odd behavior when I think about it, but I know you didn't hypnotize me.

What about your seeing just "so far?"¹

Well, I look at you and my vision just stops. I can't explain it. It has never stopped before.

What do you see beside me or behind me, and what do you think of your answer?

I don't see anything beside you or behind you because I don't see that far, and I think that is a very queer answer. I don't understand it. (Rossi, 1980a, pp. 32-34)

On a subsequent occasion the subject was asked whether she would like to volunteer for hypnosis again. She said, "I certainly would like to, but would it be possible for me to know that I am being hypnotized?" Erickson writes:

¹ In the interests of accuracy of quotation, this has been reproduced as it appears in Rossi, 1980a, p. 33. The question mark should presumably be outside the quotation marks.

She was told that this was possible. As she sat expectantly in the chair, she became aware slowly of changes occurring within her. Her first statement was, "I still see everybody in the audience, but the walls have disappeared and everything is getting quieter. The audience is getting smaller. I don't know how I am doing this, but very slowly everything except you and me and your voice and my voice is leaving. Now here we are sitting on these chairs, with these chairs on the floor ... we're all alone. In some way I know that this really isn't so, but this is the way I am experiencing everything. There is my hand up in the air. I know it's my hand, but I am not holding it there; I am just letting it be there. It is something like being in a very real dream - swimming, socializing, driving a car, skating, skiing, and enjoying it all - with no knowledge about being sound asleep in bed. That is the best explanation I can give." (Rossi, 1980a, pp. 36-37)

In considering the above report, one might wonder whether the subject's behaviour and experience were affected by cues in the experimental situation (demand characteristics) or by her preconceptions about the behaviour and experience of hypnotized persons. If Erickson's findings can be confirmed by other investigators working with different subjects, and if the findings are not attributable to demand characteristics or subjects' preconceptions, they could be seen as strongly supportive of an altered state conceptualization of hypnosis.

If "somnambulistic" hypnotic subjects spontaneously negatively hallucinate aspects of their surroundings¹, this goes some way towards explaining the unusual picture placement choices reported by Erickson. For example, take the case of a "somnambulistic" hypnotic subject who is asked where he would place a hypothetical picture of a person who happens to be standing by a window. If the subject negatively hallucinates the background to the person

¹ As indicated earlier in this chapter (pp. 130-131), Erickson has claimed that it is possible for individuals to remain in a "trance state" for lengthy periods and yet go about their business in an outwardly normal fashion. If "somnambulistic" hypnotic subjects tend to experience a spontaneous linear stoppage of their vision, it is hard to see how they could carry on daily activities without being impaired or even endangered by their perceptual limitations!

(the window), his choosing that region as a place to hang the hypothetical picture would not be so anomalous as would be the case if he could see the window. What remains puzzling, though, is Erickson's reported finding that "somnambulistic" hypnotic subjects so consistently chose positions above and behind the target objects.

Details of Subjects

According to Erickson (1967), his investigations of subjects' responses in the hypothetical picture positioning task spanned many years and involved over 2,000 subjects, including over 750 who were judged to have the capacity to develop "somnambulistic hypnotic states". Erickson does not provide a detailed breakdown of subjects' age, occupational status, sex¹, etc., but he indicates that they were drawn from a variety of backgrounds and selected in different ways. He comments that classification of the subjects employed was difficult because of the long period of years during which the experiment was in development. He writes:

Undergraduate students used as either hypnotic-state subjects or waking-state subjects might not be retested until they were graduate students. Medical students might become interns, interns sometimes became residents, and residents sometimes became staff members before their contributions were completed. Student social service workers often became graduates and staff members. The only constant subjects were those at the noncollege level or were members of the medical staff of the hospital and the actually psychotic patients who were used but not included in the total results. These latter totalled 25, and despite their psychotic state, which was manifested in both the waking and the trance states, they were constant in their experimental performance. Their results agreed with those obtained from well-adjusted, highly educated subjects. (Rossi, 1980a, pp. 52-53)

Erickson indicates that he also used some of his private practice patients as subjects and the results from them were in harmony with the results obtained from volunteer student subjects.

¹ Erickson reports that about 60 per cent of subjects were female and 40 per cent male.

Erickson reports that four college populations contributed a large number of subjects. For example, he claims that one three-hour lecture-demonstration to over 500 students yielded 137 "somnambules" who were trained en masse but used as experimental subjects separately by Erickson and his assistants over the next few weekends. In passing, one might note that the proportion of "somnambules" in this group of students is quite high. If one assumes that the audience at the lecture-demonstration amounted to exactly 500 individuals, the percentage of "somnambules" would be 27; if the audience was as large as 600, the percentage of "somnambules" would be 23, still a high proportion. The SHSS:C norms for Stanford University undergraduates (reproduced on p.14 of this thesis) indicate that only 6 per cent of subjects scored in the range 11 - 12 on the SHSS:C, with a further 18 per cent scoring in the range 8 - 10. Although the term "somnambule" does not have a precise statistical meaning in relation to SHSS:C scores, the expression is normally reserved for highly responsive hypnotic subjects who might be expected to pass most of the items on a scale such as the SHSS:C. It is possible, then, that Erickson was rather liberal in applying the term "somnambule" to subjects selected at the lecture-demonstration; alternatively, it is possible that he was unusually effective as a hypnotist and was able to elicit "somnambulistic" manifestations in a larger number of subjects than would a less gifted hypnotist. A third possibility, of course, is that his reporting of his experimental work was inaccurate.

Erickson does not give a full and clear account of the procedures employed to secure "somnambulistic hypnotic trances". He explains that:

training for deep hypnosis was the use of traditional ritualistic verbalizations of hypnotic-induction techniques continued for several hours at a time and often repeated for several days to be sure that the subjects were in a "deep hypnotic trance". (Rossi, 1980a, p. 49)

In stating that the training procedure might be repeated for several days, Erickson presumably means that the subjects attended for daily sessions, not that they were with him continuously. He explains that "an exceedingly frequent suggestion" was: "I want you to sleep as deeply and soundly as a log." In parenthesis

Erickson explains: "When the author now wishes somnambulistic trances, much briefer, more effortless methods are employed" (Rossi, 1980a, p. 49).

Erickson writes:

The criteria for a "deep trance" were: complete posthypnotic amnesia for trance experiences; ready ideomotor activity such as automatic writing; and ideosensory activity such as visual and auditory hallucinations. Sometimes an effective hypnotic anaesthesia of the hands and arms as tested by sudden sharp electrical shocks was employed. Usually the subjects were asked to recall some long-forgotten memory, and this would be discussed with them posthypnotically as a test of their posthypnotic amnesia, and an effort would be made to verify the validity of the recollection. Additionally innumerable minor tests of startle responses would be made to determine any deliberate retention of environmental contact instead of "sleeping completely soundly, restfully, as soundly asleep as if you were in a deep profound sleep in the middle of the night when awfully tired." (Rossi, 1980a, p. 49)

In the above passage, Erickson is presumably using the term "deep hypnosis" synonymously with "somnambulistic state" or "somnambulistic trance". He states that hypnotic subjects were used in the experimentation only when "deep somnambulistic trances" were developed. The use of the term "deep" to qualify "somnambulistic trances" implies the existence of not so deep somnambulistic trances but Erickson does not elaborate on this point. He states that subjects in a "light trance" found it difficult to maintain a trance state if they opened their eyes and performed a task in relation to external reality. Subjects in a "medium trance" were disinclined to co-operate, again because opening their eyes and dealing with external objects would disturb them and tend to awaken them.

Experimental Procedure

As indicated on p. 147, the basic experimental procedure entailed asking "somnambulistic" hypnotic subjects and un hypnotized subjects where they would place a hypothetical picture of a person or object present in the room. Erickson explains that the format

of the experiment was exceedingly simple and entailed the asking of the question:

While we are waiting (thus indicating vaguely some delayed or delaying circumstance appropriate to the situation and definitely implying that the real purposes to be accomplished were something else) where in this room if you had a three-by-four foot picture of ----- (specifying one at a time each of these four items: person actually present, a small snapshot of someone known to the subject, an actual bowl of fruit, and an actual snapshot of a picture of a bowl of fruit), where in this room would you hang it? Consider carefully, and when you have made up your mind, specify exactly.

The question was read from a typed card. This card constituted a hint that an experiment was in progress, but the question did not seem to warrant fully that conclusion. Instead it seemed to indicate that the question was seriously intended. (Rossi, 1980a, p. 47)

The present writer is not convinced that prefacing the questions with "While we are waiting ..." would necessarily lead subjects to believe "that the real purposes to be accomplished were something else". The present writer would also question Erickson's assumption that the use of a typed card did not seem to warrant fully the conclusion that a formal experiment was in progress. Fortunately, there do not seem to be any strong grounds for assuming that the experimental results would have been invalid if subjects had appreciated that a serious experiment was in progress.

Erickson further describes the procedure as follows:

In presenting the question, the reality object to be mentioned was previously always positioned carefully. For example the person present in reality might be sitting in a chair beside a window or might be leaning against the window in some casual position; this person might be squatting in front of a bookcase apparently searching for a book on the bottom shelf, or sitting or standing at a desk in the middle of the room or in front of a blackboard placed diagonally across a corner of the room, or in any other casual position. As for the snapshots, these were held in a slotted wooden base and were simply positioned in a similar casual

fashion, such as on top of a bookcase, on the chalk tray at the bottom of the blackboard, on the arm of a chair next to a window, on the top of a desk in the middle of the room, or on a small stand in a corner of the room. The bowl of fruit was similarly placed in various positions. The subject and the experimenter always walked to a position about three feet to the side of the reality object, which would be indicated by a hand gesture. (Rossi, 1980a, pp. 47-48)

The last sentence in the above quotation is somewhat confusing since if both the experimenter and the subject walked to a position about three feet to the side of the reality object, they would have been competing for space! Moreover, in the case of, say, a snapshot, a position "about three feet to the side" of the photograph would mean that both the experimenter and the subject would be looking at the side of the photograph. It seems evident from what Erickson (1967) states elsewhere in his paper that during these experiments the subject was more or less standing in front of the object or person about which he or she was being asked.

Erickson explains that after reading the card of instruction to the subject, the experimenter fixated his gaze completely upon the card and awaited the subject's reply. If further instructions were asked for, the experimenter merely re-read the instruction card and waited patiently. (The rationale of having the question read from a card and having the experimenter fix his gaze on the card while awaiting the subject's reply, was presumably to standardize the experimental procedure and minimize the possibility of the subject's response being influenced inadvertently by the experimenter.)

Erickson reports that steps were taken to reduce intercommunication between subjects. One measure was the suggestion of post-hypnotic amnesia for all hypnotic work. Erickson claims that for waking state subjects, intercommunication was minimal and had no effect upon the experimental findings. He explains that "when extensive work was done in a single location with many subjects, there would be performed other and much more interesting attention-compelling tasks which were undertaken to ensure that discussion would be on work not connected with this experiment" (Rossi, 1980a, p. 67).

Erickson reports that some subjects, less than 50, sought to discover what work was being done with them and questioned various persons whom they thought possibly might know. These subjects "were discarded for both waking and hypnotic experimentation" (Rossi, 1980a, p. 69). The critical reader might wonder whether Erickson underestimated the number of subjects who were interested in what work was being done with them and who made inquiries to find out.

In some cases - Erickson does not state the number - the questions about picture positionings were put to subjects by individuals other than Erickson. Some of these assistant experimenters were not known to Erickson but their participation was monitored by others who knew what should be done. Sometimes the people doing the monitoring were themselves monitored. Erickson states that some assistant experimenters knew that an experiment was being conducted whereas others did not. Some assistant experimenters thought that the actual experiment was no more than a preliminary "passing of time" in preparation for some "actual experiment".

Results

Erickson states that the results obtained in the formal experiment were consistent in character: "All 750 somnambulistic subjects¹ gave cursory attention to the walls of the room and then hung the suppositious picture in a relationship to the object itself, with a disregard of the existing realities" (Rossi, 1980a, p. 73). Waking (non-hypnotic) subjects, on the other hand, were uninfluenced by the positions of the reality objects and made their choices in terms of available wall space. The point of vantage for the viewer, lighting, and other aesthetic considerations also influenced the choices of some of the non-hypnotic subjects. Erickson reports that when the test procedure was carried out in a room such as a library where all the walls were covered from floor to ceiling with bookshelves, waking state subjects rejected the task as absurd whereas somnambulistic hypnotic subjects indicated an area above and to the rear of the target object as suitable for hanging the hypothetical picture.

¹ Elsewhere in his paper, Erickson states that the number of somnambulistic hypnotic subjects exceeded 750.

Erickson reports that subjects who were first tested in the waking state gave the characteristic responses for that state but when subsequently tested in the same room in the somnambulistic hypnotic state, they gave the characteristic response of that state. Similarly, subjects first tested in the somnambulistic hypnotic state gave the characteristic response of that state and when re-tested in the waking state they gave the characteristic waking state response.

Erickson states that there was a marked tendency for the somnambulistic hypnotic subjects to hallucinate the hypothetical pictures in the positions they had selected, and he reports that even as long as three years later a hypnotized somnambulistic subject might be taken into the room that he had previously entered only once to carry out the experiment and "see" the picture he had been asked about in the experiment. On the other hand, in the waking state the subject "could enter the same room ... and sense it as a first-time experience with no recollection of somnambulistic values" (Rossi, 1980a, p. 74).

Erickson reports that in the case of some individuals who had participated as hypnotic subjects, hypnotic suggestions were given to elicit recollections of their participation. Such subjects disclosed bewilderment at the peculiar picture positionings they had selected. Erickson states that they could not explain their behaviour and that if they endeavoured seriously to understand, they were decidedly likely to develop a spontaneous trance in which they would reaffirm the "rightness" of the selected picture position.

Erickson relates that some subjects were excluded from the data pool by virtue of being over-conscientious in one or other or both states of awareness (hypnotic and non-hypnotic). In the "waking state" they manifested much uncertainty and changed their minds repeatedly for different reasons. Erickson reports that 13 of these subjects were trained to develop somnambulistic trances but even then their personality attributes interfered and there was no ready simple compliance with the task:

For example, when asked where the picture of the person present should be placed (standing beside a desk in the middle of the room), they would view him from various points of

view, would perhaps ask him to change his position, or even move the desk in order to view him differently. Then they would reconsider the problem in relationship to his immediate spatial surroundings, or in relationship to the spatial relations of the desk beside which he had originally been standing, and then perhaps they would position the picture on the wall to which the desk had been pushed. (Rossi, 1980a, pp. 66-67)

Despite the difficulties these subjects caused, Erickson notes that "in the trance state they very definitely tried to position the suppositional pictures in relation to the spatial relationships of the object rather than in relationship to reality wall space, even though they did not abide by the experiment as formulated" (Rossi, 1980a, p. 67).

In discussing the experimental results, Erickson comments on an important methodological issue:

Of great importance was the fact that without using words the experimenter could influence the behavior of the somnambulistic subjects very easily and usually unintentionally. An unbelieving, incredulous expression on the experimenter's face, a glance at an actually suitable place, would suffice to cause the somnambulistic subjects to accept the unspoken but actual communication, however unintentional it might be. (Rossi, 1980a, p. 74)

Erickson relates that some other experimenters obtained different results from those he obtained. These experimenters were then blindfolded and placed under the guidance of someone unacquainted with the experiment who was asked to report on what the subjects did when presented with the test question by the blindfolded experimenter. The same subjects and a different room were used, or sometimes the same room was used if that could be done unbeknown to the blindfolded experimenter. The results obtained were then in accord with those of less communicative experimenters.

Comments

The findings reported by Erickson (1967) are of direct relevance to the state—non-state issue and yet the present writer has not come across any published accounts of attempts to replicate Erickson's results. In 1983 the present writer wrote to Professor E.R. Hilgard

at Stanford University, California, inquiring whether the latter was aware of any attempts at replication of Erickson's findings in this area. In his reply, Professor Hilgard indicated that he was unaware of any study apart from one by Kenneth S. Bowers who had referred to a failure to replicate Erickson's observations in a recent review of The Collected Papers of Milton H. Erickson on Hypnosis. Professor Hilgard kindly sent on a copy of Bowers' review (which had not yet been published). The present writer wrote to Professor Bowers, asking for details of the publication in which the review was to appear, but received no reply. Accordingly, the review cannot be referenced in the bibliography of the present thesis.

In his review, Bowers discusses Erickson's (1967) paper and comments:

I was bemused by Erickson's investigation and his claims for it, so I tried to replicate it. I followed Erickson's procedures as closely as I could with five extremely high hypnotizable Ss who had already taken part in several laboratory sessions of hypnosis. Even when deeply hypnotized, not one of them showed any evidence of ignoring the external realities in specifying where the "suppositious" portrait should be hung.

Even without my completely unsuccessful attempt to replicate it, Erickson's report is simply not credible. Complex psychological phenomena virtually never provide such unequivocal data as he reports, and the revelation that all 750 somnambulists ignored realistic considerations, and that none of the even more numerous waking subjects did so, should awaken our profound skepticism. What is more, Erickson's assurances that the results were uninfluenced by any biasing factor is not evidence, it is his say-so - offered with the same confident insouciance that characterizes his pronouncements about whether and when a patient is in a trance.

The present writer's attempts to replicate Erickson's (1967) findings are discussed in the next two chapters. Nearly all of the data reported there were obtained before the present writer was sent a copy of Bowers' book review. It will be seen that although the present writer's results are largely negative, one responsive subject exhibited unusual picture placement choices

after exposure to hypnotic induction procedures but made "reasonable" choices when a hypnotic induction procedure was not employed.

Some Other Alleged Unsuggested Effects

Attention will now be turned briefly to three other alleged unsuggested effects, one of which was described by Erickson's wife rather than by Erickson himself.

Catalepsy

Erickson often expressed the view that catalepsy is an unsuggested manifestation of the hypnotic state. For example, in his 1941 paper Hypnosis: A General Review, he states:

As a result of the hypnosis, there develops in the subjects an increase in muscular tonus so that there seems to be the same condition as exists in the stuporous catatonic patient manifesting *flexibilitas cerea*. Thus, the subject's hand, raised up in the air by the hypnotist, is held in that position apparently without fatigue until the hypnotist either puts it down or instructs the subject to lower it. (Rossi, 1980c, p. 16)

Before accepting that such catalepsy is a spontaneous, unsuggested manifestation of a presumed hypnotic state (a state having physiological as well as psychological attributes), one might ask whether the phenomenon is suggested implicitly by the experimenter's lifting of the subject's hand. One might also ask whether the subject had previously witnessed any demonstrations of catalepsy in other subjects. Regarding this latter aspect, Orne (1959) found that subjects who were led to believe that unilateral catalepsy of the dominant hand was a typical feature of hypnosis, tended to display that item of behaviour when they were exposed to a hypnotic induction procedure.

In his article Hypnotism, Erickson (1954) reiterates his belief in catalepsy as a spontaneous or unsuggested manifestation of the hypnotic state, although he states that the phenomenon can be "properly tested only indirectly since direct tests often serve to effect a suggesting of it" (Rossi, 1980c, p. 23).

Erickson and Rossi (1981) include a section on "Catalepsy in Hypnotic Induction and Therapy" in their book, Experiencing Hypnosis: Therapeutic Approaches to Altered States. They use the term "catalepsy" in a broad sense to refer to "suspension of voluntary movement" and "well-balanced muscle tonicity". They give examples of everyday behaviour that they subsume under the term catalepsy. For example:

When writing a letter, one pauses for a moment to think. During that moment one is oblivious to the pen in one's hand, which is maintained comfortably poised in an immobile, cataleptic position. In fact, the entire body is usually immobile in a cataleptic pose during that moment when consciousness is focused and receptive to one's inner thoughts. (p. 40)

Erickson and Rossi claim that in a situation such as the above, when an individual is "cataleptically posed in immobile suspension":

an appropriate suggestion can be received and acted upon in a seemingly automatic manner. This momentary gap in awareness is essentially a momentary trance. The heightened receptivity during that moment is essentially what we mean by the term hypnotic. (p. 41)

Erickson and Rossi describe ways of facilitating catalepsy. For example, they claim that the condition can usually be achieved indirectly by handing the subject an article such as a book and then withdrawing it with a distracting remark when the subject reaches to take it, whereupon the latter's arm will remain momentarily suspended as if still awaiting the book. In this situation they claim that "the patient's mind is also suspended and open; this momentary gap in awareness can be filled by any appropriate suggestion offered by the therapist at that precise moment" (Erickson & Rossi, 1981, p. 42).

Since catalepsy, as understood by Erickson and Rossi (1981), can be witnessed in everyday situations as well as in formal hypnosis settings, the phenomenon does not appear to be a hallmark of a special altered state that is fundamentally different from the normal waking state. Catalepsy thus differs from the supposedly unsuggested effects discussed earlier in this chapter (literalness and the unusual behaviour of "somnambulistic" hypnotic subjects in the picture placement task), since according to Erickson the

latter phenomena are rare or do not occur in "waking state" subjects but can be readily observed in subjects who, by other criteria, are judged to be hypnotized.

Sensory and Motor Changes Accompanying "Hypnotic Deafness"

In a paper concerned with suggested deafness (discussed briefly in Chapter III of this thesis, pp. 88-89), Erickson (1938a; reproduced in Rossi, 1980b) reports eliciting total deafness in six hypnotic subjects and various degrees of hearing impairment in another 14. Of interest in the present context is his report that in subjects experiencing hypnotic deafness there were sometimes other, apparently unsuggested effects. Thus, he reports that one subject who appeared to be totally deaf also experienced a distressing decrease in vision. Another subject manifested a general anaesthesia, most marked in his arms and legs. Erickson states that several other subjects manifested sensory losses in association with the deafness, but to a lesser degree. He reports that suggestions lessening the associated sensory disturbances had the effect of decreasing the degree of deafness. Erickson comments:

The associated sensory and motor disturbances developing spontaneously, either in association with the deafness or the hypnosis itself, may be regarded as significant confirmatory evidence that hypnotic states do alter psychological and physiological functioning. (Rossi, 1980b, p. 99)

In Erickson's study, suggestions for deafness were given to 30 subjects who were selected as being capable of "profound trances". These subjects were drawn from an initial group of over 100 college students who had been trained as hypnotic subjects. Prior to being tested for deafness, the 30 selected subjects underwent training "until it was possible to secure the stuporous trance and the somnambulistic state within 10 minutes" (Rossi, 1980b, p. 83). Erickson does not provide full details of his procedures. Given this and the lengthy training that the selected subjects underwent, one wonders what expectations might have been engendered and whether there were any cues in the experimental situation which could have facilitated the apparently unsuggested effects.

Seeing "Invisible Glass" when "Hypnotized"

In a short paper entitled Observations Concerning Alterations in Hypnosis of Visual Perceptions, Erickson's wife, Elizabeth M. Erickson (1962; reproduced in Rossi, 1980b) discusses a study by Rowland (1939) in which hypnotic subjects appeared to be willing to respond to the hypnotist's wishes and engage in dangerous acts. Three out of four "hypnotized" subjects reached for a live rattlesnake lying in a box in front of them. The front of the box was made of "invisible glass", so in fact the subjects were protected. In a second experiment, two "hypnotized" subjects responded to instructions and threw acid at the experimenter's face. In fact, the experimenter's face was protected by a pane of "invisible glass". In her article, E.M. Erickson describes encountering a shop window made of "invisible glass" at a store in New York¹. She reports that from the sidewalk there was a perfect illusion of no glass barrier at all but when standing very close and giving attention, she could see a few flecks of dust on the glass and realized that if they had been floating in midair they would not be stationary, as they were. E.M. Erickson reports that she thought of Rowland's experiment and wondered whether subjects "in a state of hypnotic concentration and emotional calm, might be more likely to see a few specks of dust, and this alone might be enough to cause them to infer the presence of a barrier and to have confidence in that inference" (Rossi, 1980b, p. 68). She states that two days later she looked at the window again and on impulse decided to develop "an autohypnotic state". She reports:

I did not expect to observe any difference whatsoever. I do not believe my visual acuity is increased in any way by hypnosis. I took my time and developed a good deep trance state. To my utter amazement the "invisible glass" became as visible as an ordinary window pane. I could not believe it. I thought I had made some kind of mistake. So I stood there for 15 to 20 minutes, experimenting in every way I could think of. I went in and out of a hypnotic state, focussing my eyes successively on the glass itself, the objects

¹ In her article, E.M. Erickson does not make it clear that she was the subject of this experience; however, in a subsequent article (E.M. Erickson, 1966; reproduced in Rossi, 1980b) she makes it clear that she was the subject in the previous account.

in the window, and the interior of the store. In every case, when I was in a hypnotic trance the glass became immediately visible. When I was awake, it was not.

(Rossi, 1980b, pp. 68-69)

E.M. Erickson reports that objects near the glass seemed to be equally clear in both the waking and hypnotic states, but in the latter there was a very slight blurring of the objects at the back of the store. She reports that she repeated her observations some months later in the company of a companion who had had much experience in the study of "hypnotic perception". She reports that in the waking state changes in focusing to include the area of the window itself, the area immediately behind the window, the interior of the store, and the back of the store did not affect for him the invisibility of the glass nor the illusion that the area was empty of any barrier. His waking experience was entirely similar to hers.

E.M. Erickson speculates that a possible explanation of her experience "might lie in spontaneous vascular and other changes in the eye during the trance state, such as those observed by Strosberg and Vics, described in 'Physiologic changes in the eye during hypnosis' (American Journal of Clinical Hypnosis, 1962, 4, 264-267)" (Rossi, 1980b, p. 69). The present writer is unaware of any definitive evidence suggesting that there are consistent ocular differences between waking state subjects and subjects who are said to be hypnotized. Commenting on the Strosberg and Vics (1962) study, Sarbin and Slagle (1979) point out that the authors failed to give any measure of hypnosis, failed to employ control subjects, and failed to examine the effects of other types of instructions or of instructions to perform tasks during the "hypnotic state". Also, no statistical tests were reported.

In a second article, E.M. Erickson (1966; reproduced in Rossi, 1980b) reports a further experience of being able to see "invisible glass", this time outside a jewellery store in Chicago. She states that she attempted to analyse her experiences further, without entertaining expectations of or belief in any improvement in visual acuity. She reports:

I noted again that minute specks of dust, stationary of course, were clearly visible on the glass when one focussed on them. There were also what appeared to be very slight reflections at the extreme edges of the glass where it joined the wall, and also a very small streak which was probably cleaning compound incompletely wiped off. These items of experience were equally visible in the trance state and in the waking state when one looked for them, but the perception of them differed. In the trance state they were separate items of experience; in the waking state they were very unimportant details in the entire overall experience.

(Rossi, 1980b, p. 71)

E.M. Erickson speculates that in a trance state the subject looks at the window as one experience and looks through it as a second experience. She argues that, in the waking state, long experience in looking through a window with a disregard of dust specks, streakings, and flaws, induces the observer not to see the glass. Such "conditioning", enhanced by the flawlessness and almost perfect lack of reflections with "invisible glass", leads to its not being seen.

In her two brief articles on this topic, E.M. Erickson does not specify on what basis she knew that she had managed to enter a trance when she was conducting her experiments with "invisible glass".

A possibility not considered by E.M. Erickson, admittedly rather speculative, is that there might have been an hallucinatory element in her perception of the glass when she believed herself to be "hypnotized". Her first article indicates that her experiment was inspired by the possibility that there might be some difference in the ability to perceive "invisible glass" when a subject is in a "trance". Conceivably, then, through hallucinatory mechanisms, the experimenter/subject might have confirmed her own tentative hypothesis.

DO SUBJECTS ENTER A TRANCE STATE WHEN
EXECUTING POST-HYPNOTIC SUGGESTIONS?

Overview

A paper by Erickson and Erickson (1941; reproduced in Rossi, 1980a) entitled Concerning the Nature and Character of Post-hypnotic Behavior is of interest with regard to the question whether hypnosis involves a rather special altered state. Erickson and Erickson contend that when a subject carries out a post-hypnotic suggestion he or she develops a spontaneous hypnotic trance and if the subject's attempt to execute the post-hypnotic suggestion is suitably interrupted, the trance state can be perpetuated, permitting the elicitation of classic hypnotic phenomena.

Erickson and Erickson recognize that other writers (e.g. Bramwell, 1921; Schilder & Kauders, 1927) have made reference to the assertion that the execution of post-hypnotic suggestions may be accompanied by a renewed hypnotic state. However, Erickson and Erickson claim that this aspect of hypnotic subjects' behaviour has suffered neglect and they are critical of investigators such as Hull (1933) who, in his book Hypnosis and Suggestibility, "devotes an entire chapter ... to post-hypnotic phenomena, but limits the chapter to studies of amnesia for directly suggested activities and of the durability of posthypnotic commands, with no reference to that mental state or condition of which the retention and execution of suggestions constitute only a partial reflection" (Rossi, 1980a, p. 384).

Before going on to a more detailed discussion of their assertions, it should be noted that Erickson and Erickson use the term "posthypnotic act" to refer to behaviour "performed by the hypnotic subject after awakening from a trance, in response to suggestions given during the trance state, with the execution of the act marked by an absence of any demonstrable conscious awareness in the subject of the underlying cause and motive for his act" (Rossi, 1980a, p. 388).

Manifestations of the Alleged Spontaneous

Post-Hypnotic Trance

Erickson and Erickson claim that the post-hypnotic trance occurs as readily in naive as in highly trained subjects. They claim that manifestations of the trance differ essentially in no way from those of an "ordinary induced trance" and that the trance is usually single in appearance, develops at the moment of initiation of the post-hypnotic act, and usually persists for only a moment or two. However, on occasion the trance might be multiple in appearance or might appear in a prolonged form and persist throughout the greater part or even the entire duration of the post-hypnotic performance, or there might be an irregular succession of relatively short and long spontaneous trances, apparently in relation to difficulties encountered in the course of executing the post-hypnotic act. Erickson and Erickson state that:

The specific hypnotic manifestations which develop in relation to the performance of the posthypnotic act form an essentially constant pattern; although the duration of the separate items of behavior varies greatly both in accord with the purpose served and with the individual subject. They occur rapidly in direct relation to the giving of the specified cue for the posthypnotic act, with a tendency toward the following sequence: A slight pause in the subject's immediate activity, a facial expression of distraction and detachment, a peculiar glassiness of the eyes with a dilation of the pupils and a failure to focus, a condition of catalepsy, a fixity and narrowing of attention, and intentness of purpose, a marked loss of contact with the general environment, and an unresponsiveness to any external stimulus until the posthypnotic act is either in progress or has been completed, depending upon the actual duration of the trance state itself and the demands of the posthypnotic task. Even after the trance state has ceased, these manifestations, somewhat modified, continue as residual effects upon the subject, and result in the intent, rigid, and almost compulsive nature of his behavior and his state of absorption and general unresponsiveness until he has reoriented himself to the immediate situation. (Rossi, 1980a, pp. 389-390)

Since Erickson and Erickson claim that some of the manifestations, albeit modified, continue after the trance state has ceased, it is not clear from their description what criteria they use to infer the existence of the trance at any given point.

Erickson and Erickson go on to state that "to a slight degree, the disappearance of the trance state, or to a much greater degree the completion of the posthypnotic performance, is marked by a brief interval of confusion and disorientation from which the subject quickly recovers by renewed and close attention to the immediate situation" (Rossi, 1980a, p. 390). They state that this confusion and disorientation can be particularly marked if any significant change in the general situation occurred while the subject was absorbed in the post-hypnotic performance.

Erickson and Erickson state that there is usually evidence of an amnesia, either partial or complete, for both the post-hypnotic act and what they term "the concurrent events arising out of the immediate situation". They state that in cases where the subject does have a recollection of the course of events, investigation will disclose the memories to be hazy, faulty, and frequently more deductions than memories. They state that occasionally, however, "despite a poor recollection of, or a complete amnesia for, the attendant circumstances, a subject may recall clearly the entire posthypnotic performance, but will regard it merely as an isolated, unaccountable, circumscribed impulsion, or more often a compulsion having no connection with the immediate or general situation" (Rossi, 1980a, p. 390)

Erickson and Erickson devote several paragraphs to discussing apparent exceptions to "the rule of spontaneous posthypnotic trances". Unfortunately, they do not discuss this topic very clearly. The first situation they mention is where subjects fail to develop amnesia for post-hypnotic suggestions and carry out the post-hypnotic act in an essentially voluntary fashion, "at a level of conscious awareness". However, they contend that frequently subjects in this situation experience a sense of being compelled to perform the specified task despite their apparently complete understanding of the situation. They state that occasionally subjects responding to the compulsion and executing the post-hypnotic act develop a spontaneous trance which is similar to that which develops in the ordinary post-hypnotic situation, with the exception that the amnesia it evokes may be more limited. They claim that:

the subjects may remember the posthypnotic suggestions, the period of waiting, and the feeling of compulsion, but have a complete amnesia for their actual performance. Or they may develop an amnesia for the posthypnotic instructions but remember experiencing a compulsion to perform an apparently irrational act. However, in some instances the spontaneous trance serves as a defense mechanism against the compulsive feelings rather than as an essential or integral part of the atypical posttrance performance. (Rossi, 1980a, p. 396)

The second situation constituting an apparent exception to the "rule" is where it has not been made clear to subjects that the post-hypnotic suggestions concern the act itself and not the process of making provision for such an act. Erickson and Erickson claim that close observation of subjects in this situation will disclose that a spontaneous trance invariably accompanies the process of making ready for the act, "provided that this understanding of their task occurs definitely after subjects have awakened from the trance in which the suggestion was given and not while they are going through a slow process of awakening, in which case the situation would become similar to that of the failure to develop amnesia" (Rossi, 1980a, p. 396).

The third situation constituting an apparent exception to the "rule" is where there is unwillingness on the part of subjects to perform the post-hypnotic act except as a deliberate act of choice on their part. Erickson and Erickson claim that when such subjects are brought out of hypnosis they go through a process of making ready for the suggested task, this process of making ready being accompanied by a spontaneous trance.

The fourth situation constituting an apparent exception to the "rule" is where an initial post-hypnotic amnesia breaks down, permitting recollection of the post-hypnotic suggestions.

Demonstration and Testing of the Alleged Spontaneous Post-Hypnotic Trance

Erickson and Erickson contend that the post-hypnotic trance can be demonstrated by an appropriate intervention when a subject attempts to execute a post-hypnotic suggestion. They write:

The demonstration of the trance state may follow one or two courses, depending upon the presence or the absence of hypnotic rapport between the demonstrator and the subject. If there is a state of rapport, the interference may be directed either to the subject or to his performance, and the trance manifestations are the positive responsive type, characteristic of the relationship between hypnotist and subject. In the absence of rapport effective interference must be directed primarily to the act itself and the trance manifestations are of the negative, unresponsive type, characteristic of the hypnotized subject's unresponsiveness to, and detachment from, that which is not included in the hypnotic situation. (Rossi, 1980a, p. 391)

Erickson and Erickson claim that the interference most effective in demonstrating the trance is that offered by the hypnotist or by some person who was in rapport with the subject when the post-hypnotic suggestion was given. The Ericksons claim that the interference is best introduced at the exact moment of initiation of the post-hypnotic response. They give as examples the deliberate removal of an object which the subject was instructed to examine, the manipulation of the subject so as to effect "catalepsy" in one or both arms, or the use of statements such as, "Wait a moment, just a moment", "Don't let anything change now", and "I will be waiting as soon as you have done it" - remarks implying that an additional assignment may be made. They claim that the effect of such interference is usually a complete arrest of subjects' responses followed by an apparent waiting for further instructions, with the subjects exhibiting an appearance and mannerisms suggestive of a state identical with that of the "deep trance" as ordinarily induced. They claim that the customary phenomena of the "deep hypnotic trance" can be elicited from subjects at this point and that if the subjects are allowed to return to the performance of the post-hypnotic task, a spontaneous awakening ensues in due course, permitting an immediate and direct contrast of "waking" and "hypnotic" behaviour as well as a demonstration of an amnesia for the post-hypnotic act, the interference, and the events of the trance state. Erickson and Erickson contend that if no use is made of the "peculiar state of responsiveness" established by the interference, the subjects tend to return to the post-hypnotic

task and the sequence of their behaviour is then essentially as if there had been no interference, although there is a marked tendency for the spontaneous trance state to persist until the post-hypnotic task has been completed, particularly if the interference has rendered the task more difficult. Erickson and Erickson state that occasionally, instead of being arrested in their behaviour, subjects may proceed uninterruptedly with their post-hypnotic task and, upon its completion, appear to be awaiting further instructions whereupon the phenomena of the "deep trance" can be elicited. However, "if this is done, it becomes necessary to awaken the subjects at the finish" (Rossi, 1980a, p. 392). Erickson and Erickson do not state what would happen if the hypnotist failed to "awaken" such a subject.

Erickson and Erickson state that "In those instances in which the interference is not given at the proper moment, while it usually has the effect of intensifying and prolonging greatly the duration of the spontaneous trance, the subjects may respond to it by bewilderment and confusion succeeded by a laborious compulsive performance of the posthypnotic act and an overcoming of the interference" (Rossi, 1980a, p. 393).

According to Erickson and Erickson, subjects sometimes respond to an interference by behaving as if there had not been one. They give the example of a subject who, in response to an established post-hypnotic cue, glanced across the room at an easily visible book lying on a table and proceeded to rise from his chair for the purpose of securing the book and placing it in a bookcase in accordance with previously given post-hypnotic instructions. As the subject shifted his position in his chair preparatory to rising, an assistant described by Erickson and Erickson as not being in rapport with the subject, quickly removed and concealed the book while the subject's gaze was directed elsewhere. Despite this interference, the subject performed the task by apparently hallucinating the book and gave no evidence of any realization that something unusual had happened.

Erickson and Erickson contend that the wording of a post-hypnotic suggestion may determine whether in the spontaneous trance there is a continuation of "general behavior patterns" belonging to the trance state in which the post-hypnotic suggestion was given. They argue that if a post-hypnotic suggestion is worded

so as to carry an implication of a change in the situation, that may militate against the evocation of "original trance behavior". On the other hand, if the suggestion is worded so as to carry immediate as well as remote implications, that will usually serve to effect a continuance of the original trance behaviour. Erickson and Erickson report that during experimental work it was found that beginning a post-hypnotic suggestion with, "As I jingle my keys, you will invariably ---" often served to effect a continuation in the spontaneous trance of the behaviour patterns belonging to the original trance, while "Tomorrow, or whenever I jingle my keys, you will invariably ---", would fail in the same subject to elicit the behaviour patterns of the original trance, since the latter wording implied possible changes in the situation. Erickson and Erickson add, however, that extensive work has shown that the behaviour of subjects in carrying over the patterns of response belonging to the "original trance" is "highly individualistic". Some subjects almost invariably do so, others seldom or never, some almost wholly, and some only in "selected relationships". Erickson and Erickson caution extreme care in wording suggestions and advise that it should never be assumed that a subject's understanding of instructions is identical with that of the hypnotist.

Regarding the question of continuation in the spontaneous post-hypnotic trance of behaviour exhibited during the original trance, Erickson and Erickson report the following finding, which they say was made by chance and subsequently repeated with other subjects (they fail to indicate how many):

During a single hypnotic trance the hypnotist gave a large number of unrelated posthypnotic suggestions, each of which was to be performed later as a separate task and in response to separate cues. Also, during the course of that trance the subject's state of rapport with two observers was made to vary from time to time by suggestions independent of the posthypnotic suggestions. Subsequently, upon the execution of the posthypnotic suggestions the spontaneous trance states that developed showed remarkable variations, in that the subject, while always in rapport with the hypnotist, variously manifested rapport with one or the other or both or neither of the two observers. Although this was not understood at the time, subsequent checking of the record disclosed that the state of rapport manifested in each spontaneous

posthypnotic trance state constituted an accurate reflection of the exact state of rapport existing at the time of the giving of the particular posthypnotic suggestion. (Rossi, 1980a, p. 398)

It would have been helpful if Erickson and Erickson had given further details of the above experiment, specifying, for example, how it was decided whether the subject was or was not in rapport with the people present.

Erickson and Erickson do not discuss the possibility that the patterns of rapport exhibited by the subject in the "hypnotic" and "post-hypnotic" periods arose from cues in the experimental situation or from the subject's understandings and expectations regarding hypnotic behaviour.

The Validity of Erickson and Erickson's Assertions

Regarding Post-Hypnotic Behaviour

Problems of Criteria and Alternative Explanation

In their rambling paper, Erickson and Erickson (1941) fail to specify exactly what criteria they use to infer the existence of a spontaneous post-hypnotic trance state. They indicate that subjects in this presumed state manifest features such as an expression of distraction, a peculiar glassiness of the eyes, and a marked loss of contact with the general environment. However, they also claim that such manifestations, somewhat modified, continue as residual effects after the trance state has ceased "and result in the intent, rigid, and almost compulsive nature of [the subject's] behavior and his state of absorption and general unresponsiveness until he has reoriented himself to the immediate situation" (Rossi, 1980a, p. 390).

Individuals who respond positively to suggestions for post-hypnotic amnesia and who execute post-hypnotic suggestions are, by definition, highly suggestible in the hypnotic sense. If such individuals exhibit high responsiveness to suggestions following the interruption of a post-hypnotic act, their behaviour might be seen as reflective of their high "baseline suggestibility" rather than a result of their entering a "spontaneous post-hypnotic trance". Surprisingly, Erickson and Erickson (1941) do not consider this possibility, although elsewhere Erickson has described how he elicited "deep trance"

phenomena very quickly in subjects without employing the lengthy procedures characteristic of traditional hypnotic induction techniques. For example, Erickson (1964c; reproduced in Rossi, 1980a) describes occasions on which he used a "Surprise Technique" to elicit hypnotic phenomena. One of these accounts is as follows:

... the author, before an audience of visiting physicians, the state hospital staff, medical students, and registered and student nurses, had asked a student nurse to volunteer as a subject. She had demurred, stating she would like to but that she was too self-conscious to come up in front of so large an audience. To this the author replied, "So you would like to [true], you are too self-conscious to come up in front of the audience [nobody realised the implication of those italicized words, and the statement was also true], but that is all right, all I want you to do is, Just look at that picture right there on the wall, and I don't know whose it is nor in what room it is [pointing and looking intently at the bare auditorium wall]." Slowly the girl turned her head in the fashion of a deeply hypnotized subject, looked at the auditorium wall, and answered, "That's Lily's picture, and it's hanging right over the television set in her living room." I asked the nurse to come and sit beside me and to tell me about Lily. She came down the aisle, and after a few remarks I asked her to close her eyes and to help me with some work I had to do. After demonstrating various other phenomena, including a discussion of the Surprise Technique, I aroused her. (Rossi, 1980a, p. 351)

If the above report can be believed¹, one must admire Erickson's ability to select so responsive a subject without going through the lengthy screening procedures customarily used in hypnosis research to select highly hypnotizable subjects.

If the above subject had participated in an experiment involving a post-hypnotic suggestion, it seems possible that she would have displayed high responsiveness to suggestions following the interruption of a post-hypnotic act. Given her high "baseline suggestibility", it would be unnecessary to posit the existence of

¹ As will be seen later in this chapter, there are grounds for questioning the accuracy of Erickson's case reports.

a spontaneous post-hypnotic trance state to explain her responsiveness to suggestions during the "post-hypnotic" period.

Barber's Studies of Post-Hypnotic Behaviour

Two of Barber's early papers (Barber, 1958, 1962) discuss post-hypnotic behaviour and Erickson and Erickson's (1941) contention that a spontaneous trance state develops as an integral part of the performance of a suggested post-hypnotic act. Barber (1962) points out that earlier investigators (Forel, 1907; Gurney, 1887; Moll, 1958, pp. 143-151; Schilder & Kauders, 1956, p.120) noted that many "good" hypnotic subjects ("somnambulists") seem to re-enter "trance" when the post-hypnotic cue is presented or when the post-hypnotic act is performed. Barber points out that these investigators also noted that some "somnambulists" carry out post-hypnotic suggestions without showing signs of "fresh hypnosis". Barber (1962) notes that more recent investigators have also found that "good" hypnotic subjects may or may not show signs of "renewed trance" when executing post-hypnotic tasks: Estabrooks (1943, p.71) observed that "some subjects act in a dazed condition while carrying out such [post-hypnotic] orders but this is easily corrected by the suggestion that they will be wide awake and perfectly normal during the whole procedure." Stokvis¹ (1955) found that "good" hypnotic subjects showed wide variations in the "kind of consciousness" in which they performed post-hypnotic acts, and hypothesized that these variations depended upon the subjects' conceptions of how they were supposed to execute them. Wolberg (1948a, p.63) has observed that some subjects act "dazed" when performing a post-hypnotic task, especially when the task differs markedly from the activity they are engaged in when the post-hypnotic cue is administered. However, Wolberg has also noted that when the suggested post-hypnotic act is harmonious with ongoing behaviour and with the subject's personality characteristics, "good" hypnotic subjects execute the act without showing signs of trance.

1

This author's name is mis-printed as "Stovkis" in Barber's (1962) article.

Barber (1958, 1962) presents evidence supportive of Wolberg's observations. Ten "somnambulistic" hypnotic subjects¹, seen individually, were given the suggestion that they would see a (hallucinatory) cat enter the room when a post-hypnotic signal (the experimenter's tying his shoe) was given. Barber (1962) writes:

The subjects were awakened, and the signal was presented when the subject was speaking. Seven subjects stopped speaking, looked away for a period of seconds, and appeared to enter "trance"²; they then looked again towards the experimenter and either continued with their original statements or asked, "Pardon me, what was I saying?" Each of these subjects stated in postexperimental interviews that he had seen the (hallucinatory) cat. In another hypnotic session, the same subjects were given the posthypnotic suggestion to scratch their heads at a signal. The subjects were awakened, and the signal was presented when the subject was speaking. All subjects continued speaking without interruption as they performed the scratching response; no subject showed observable signs of trance. (p.329)

Erickson and Erickson (1941) contend that if the execution of a post-hypnotic act is interrupted at an opportune moment, the "spontaneous post-hypnotic trance" associated with the act can be perpetuated, permitting the elicitation of the classic phenomena traditionally subsumed under the term "deep hypnosis". It seems to follow from the Ericksons' argument that if a subject is dehypnotized and tested before or after the execution of a post-hypnotic act (i.e. at a time when the subject is not in a "spontaneous post-hypnotic trance"), he or she should not show the same degree of hypersuggestibility as would occur during the presumed post-hypnotic trance associated with the execution of the post-hypnotic act. Barber (1958) presents experimental findings that appear to contradict this contention. Ten

¹ Barber (1958) uses the term "somnambulistic" in inverted commas to refer to "subjects who 'experience' many or all of the hypnotic phenomena - analgesia, age-regression, negative and positive hallucinations, amnesia, etc. - in experiment after experiment" (from footnote, p.11).

² In his 1958 paper, Barber uses the word "trance" in inverted commas to refer to "a selective and relative inattention to internal and external stimulation" (p.10). Used in this way, "trance" does not seem to refer to a markedly altered state of consciousness. In his subsequent work, Barber has more thoroughly marked out his theoretical position as a "non-state" one.

"somnambulistic" subjects were given a post-hypnotic suggestion. Post-hypnotic amnesia was also suggested. The subjects were instructed to "wake up". Before giving the signal for the post-hypnotic act, the experimenter said to each subject, "Notice how your left foot is stuck on the floor. You can't move it at all." Barber reports that all of the subjects responded to this suggestion. Similarly, when the subjects were carrying out the post-hypnotic act and the experimenter said, "Notice how your right arm is rising up and up", all of the subjects manifested this response. When the experimenter told the subjects again, immediately after the post-hypnotic act, that their left feet were stuck, six of the subjects responded to the suggestion. When the experimenter asked the six subjects who responded to the suggestion, "Why can't you move your leg now?" a typical answer was, "I guess I associate you with hypnosis and I don't have to be hypnotized to do what you say." When he asked the four subjects who did not follow the suggestion, "Why were you able to move your leg?" a typical answer was, "The suggestion just didn't take. I really don't know why." With regard to the subjects who were unable to move their left feet, the experimenter attempted indirectly to show them that the subject-hypnotist relationship was over: he asked them to join him for a cup of coffee in a cafeteria. While there he said, "Notice how you can't move your left foot." None of the subjects responded to the suggestion at that point and when questioned again, their statements indicated that they no longer conceived the interpersonal relationship as being that of subject and hypnotist. This experiment has affinities with the study by Fisher (1954), which was discussed in the last chapter (pp. 113-114).

Barber (1962) discusses the contention of Erickson and Erickson (1941) and other observers, including Freud (1953, p.288), that a post-hypnotic act is marked by an absence of any demonstrable conscious awareness in the subject of the underlying cause and motive for the act¹. Barber reviews experimental studies that, in his judgement, appear to indicate that (1) if amnesia has not been suggested, subjects execute post-hypnotic suggestions with awareness of the underlying cause and motive; and (2) if amnesia

1

For footnote, see p.177.

has been suggested, subjects who seem to be unaware of the cause and motive underlying their post-hypnotic behaviour indicate directly or indirectly in post-experimental interviews that they were aware that they were responding to a suggestion which they had received "under hypnosis". Among the strands of evidence adduced in support of these conclusions, Barber refers to an experiment reported in his earlier paper concerned with post-hypnotic behaviour (Barber, 1958) in which 10 highly responsive subjects were given a post-hypnotic suggestion to stand up and walk around the room when the hypnotist lit a cigarette. Seven of the subjects received a suggestion for post-hypnotic amnesia and three subjects did not receive this suggestion. Barber reports that both amnesic and non-amnesic subjects executed the post-hypnotic suggestion in essentially the same way, the only difference noted between the two groups being that the non-amnesic subjects stated why they were executing the post-hypnotic act, e.g. "I guess I'm trying to think of an excuse to get up but I just feel too uncomfortable sitting here. I think I'll feel better if I do what you said." Barber states that the subjects who had received suggestions for

Footnote from p.176:

In their paper, Erickson and Erickson (1941) define a post-hypnotic act as one marked by an absence of any demonstrable conscious awareness in the subject of the underlying cause and motive for his behaviour. Strictly speaking, this is different from arguing, on empirical grounds, that a post-hypnotic act is marked by an absence of any demonstrable conscious awareness of the underlying cause and motive - a contention that Barber (1962) ascribes to Erickson and Erickson (1941). Understood very literally, Erickson and Erickson's (1941) definition of a post-hypnotic act does not lend itself to empirical testing since if a subject were shown to have had conscious awareness of the underlying cause and motive for the act, in terms of the Ericksons' definition, that act would not be a genuine "post-hypnotic act". Despite this logical difficulty, it seems reasonable to infer that the Ericksons were essentially describing what they assumed to be the case rather than trying to place their assertions outside the realm of empirical science. This interpretation is supported by the fact that the Ericksons do not limit their discussion of post-hypnotic behaviour solely to cases where subjects seem to display complete and persisting amnesia for post-hypnotic suggestions.

post-hypnotic amnesia did not at first attribute the post-hypnotic act to a post-hypnotic suggestion but when, during a post-experimental interview, they were told, "Now you can remember"¹ their comments appeared to indicate that they might have been aware, when performing the post-hypnotic act, that they were executing a post-hypnotic suggestion². In his 1958 paper, Barber gives examples of these subjects' comments during the post-experimental interview after the amnesia suggestion had been cancelled:

"I made the association between the cigarette and getting up. I didn't figure out why the cigarette should make me get up"; "I knew you were lighting a cigarette and you had told me to stand up but if you had asked me why I was standing up I would have said my legs were stiff. As I look back I'm certain - if you had asked me why I was standing up - I would have suddenly realized what was happening";

"To a certain extent I was aware that I could sit down when you put out the cigarette." (Barber, 1958, p.12)

To the present writer it seems that if these comments are taken at face value, they indicate that the subjects were not fully aware of the reason for their behaviour when they executed the post-hypnotic act.

Barber (1962) comments on Erickson and Erickson's (1941) contention that after a post-hypnotic suggestion has been executed, "there is usually evidence of an amnesia, either partial or complete, for both the posthypnotic act and the concurrent events arising out of the immediate situation" (Rossi, 1980a, p.390). Barber points out that earlier workers found that "very good" hypnotic subjects ("somnambulists") at times carried out suggested post-hypnotic acts without subsequent loss of memory for their performance. Barber refers to his earlier paper (Barber, 1958) and writes:

1

In his 1958 paper, Barber reports slightly different wording: "You can remember everything now ... tell me all about it" (p.12).

2

Barber (1962) does not go as far as to assert that all subjects who seem to be amnesic for post-hypnotic suggestions actually remember the suggestions, since he states that the data he adduces "appear to indicate that when executing a posthypnotic suggestion 'good' hypnotic subjects ... may or may not show unawareness of the causes and motives for their behavior" (p.331).

... "good" hypnotic subjects, who had been told to forget that they had been given posthypnotic suggestions to scratch their heads or to stand up, remembered having executed these acts when the experimenter asked them why they had scratched or stood up. These "somnambulistic" subjects also remembered having performed the acts 2 weeks later when the experimenter questioned them again. (Barber, 1962, p.331)

Comments

The experimental findings and observations reported by Barber (1958, 1962) seriously question Erickson and Erickson's (1941) assertions about post-hypnotic behaviour. However, even without Barber's data, Erickson and Erickson's assertions are open to criticism in that the authors fail to specify exactly what criteria they use to infer the existence of a spontaneous post-hypnotic trance state and they fail to consider alternative explanations of their data. Regarding the latter aspect, one might ask whether there is any rigorous way of testing their assertion that post-hypnotic acts are associated with a rather special state of consciousness (a spontaneous post-hypnotic trance).

As indicated earlier in this chapter, Erickson claimed that subjects who, by other criteria, are judged to be "hypnotized", are peculiarly literal in response to questions such as, "Do you mind telling me your name?" Erickson also asserted that "somnambulistic" hypnotic subjects exhibit unusual behaviour when asked to select hypothetical pictures of persons or objects present in the room. If these phenomena can be replicated and if they can be shown not to arise from cues in the experimental situation or from subjects' knowledge or expectations regarding hypnosis, they could be seen as evidence that hypnosis entails a rather special altered state¹. If these unsuggested effects could be elicited reliably from subjects interrupted in the execution of post-hypnotic acts, such a finding would lend support to Erickson and Erickson's (1941) assertion that the execution of post-hypnotic acts is associated with a renewed trance state.

¹ If literalness is exhibited by subjects exposed to hypnotic induction procedures, a cautious investigator might also wish to consider the possibility that the phenomenon arises from relaxation, drowsiness or lethargy rather than from something more uniquely "hypnotic".

ERICKSON'S UNDERSTANDING OF THE RELATION
BETWEEN SUGGESTION AND "TRANCE"

Erickson appeared to believe that automatic response to a suggestion is accompanied by the development of a trance state. His views about this matter are illustrated in a paper concerned with hypnotic induction procedures (Erickson, 1959b; reproduced in Rossi, 1980a) where he describes a technique "based upon an immediate, direct elicitation of meaningful, unconsciously executed behavior which is separate and apart from consciously directed activity, except that of interested attention" (Rossi, 1980a, p.184). He explains that a casual explanation is given to the subject of the concepts of the conscious and unconscious or sub-conscious mind. A casual but "carefully instructive" explanation is also given of ideomotor activity with a citing of examples, including hand levitation. The subject is asked to sit quietly, rest his hands palm down on his thighs and to listen carefully to a question that will be asked. It is explained that the question can only be answered by the subject's "unconscious mind", not by his conscious mind. It is added that the subject could offer a conscious reply, but such a reply would only be a conscious statement and not an actual reply to the question. It is explained to the subject that the answer will be an ideomotor response of one or the other hand upwards, that of the left signifying an answer of "No" and that of the right signifying a "Yes" response to the question put to the "unconscious mind". The question is, "Does your unconscious mind think that you can go into a trance?" Further elaboration is offered, including, "Neither you nor I know what your unconscious mind thinks, but as you see one or other of your hands lifting, you will know." Should there be much delay, additional suggestions can be given to facilitate a hand levitation. Erickson claims that "Regardless of which hand levitates, a trance state supervenes simultaneously, frequently of the somnambulistic type", and he states that "Usually it is advisable to utilize, rather than to test, the trance immediately since the subjects tend to arouse promptly" (Rossi, 1980a, p.185).

In another paper, Erickson (1964b; reproduced in Rossi, 1980a) describes a similar procedure, but in addition to hand levitation, other possible ideomotor signals are mentioned: a nod or shake of the head for "Yes" or "No" or an upward movement

of the index finger of one hand for "Yes" or an upward movement of the other index finger for "No". In this paper, the question is a little different: "Does your unconscious mind think it will raise your hand or your finger or move your head?" The subject is told, "Just wait patiently, wonderingly, and let the answer happen." Erickson writes:

What the patient does not know and has no way of realizing is that he is being communicated with on two levels, that he is in a double or triple bind. He cannot deny that his unconscious mind can think. He is inescapably bound by that word "think". Any ideomotor or nonvolitional movement, whether positive or negative, is a direct communication from his unconscious mind (but his thinking does not extend to that realization). If slowly his head shakes "no", my gentle lifting of either his "yes" or "no" hand will result in catalepsy. This cataleptic response is also hypnotic; it is one of the phenomena of hypnosis. I can then ask him to be more comfortable, and if his eyes are open, I add, "perhaps by closing your eyes, taking a deep breath, and feeling pleased that your unconscious mind is free to communicate to me as it wishes."

Thus without his awareness and before he has time to analyze the fact, he is communicating at the level of the unconscious mind, thereby literally going into a trance despite his previous conscious conviction that he would inevitably defeat his own wishes to be hypnotized. (Rossi, 1980a, pp.307-308)

It can be seen from the above quotation that while Erickson believed that an involuntary or automatic response entails going into a "trance", he is not using the latter term merely tautologically (i.e. as another way of saying that a subject exhibited an involuntary or automatic response) since he states that another alleged manifestation of "trance" - catalepsy - can be manifested and, by implication, other effects as well¹.

¹ Arguably, the exhibition of catalepsy by a subject in this situation would not be a very convincing item of evidence regarding the assertion that he or she was in a special altered state, since the hypnotist's "gentle lifting" of the subject's hand might constitute a non-verbal suggestion for catalepsy.

If a subject in the situation described above manifested an "ideomotor" response and then exhibited a peculiar literalness of response to questions and requests or chose unusual positions for hypothetical pictures of persons or objects present in the manner that Erickson described as typical of "somnambulistic" hypnotic subjects, these manifestations would tend to support his contention that automatic response to a suggestion entails entry into a rather special state (trance). (Of course, a cautious experimenter would try to exclude the possibility that these unusual behaviours resulted from "non-hypnotic" factors, such as cues in the experimental situation or the subject's expectations.)

THE CREDIBILITY OF ERICKSON'S ASSERTIONS ABOUT HYPNOSIS

Unreliable Case Reports

Although the main focus of the present work is the nature of hypnosis rather than the clinical use of hypnotic techniques, some reference will be made here to Erickson's clinical reports since the judged accuracy of these may be a pointer regarding the accuracy of other aspects of his work - his experimental reports and his various assertions about the nature of hypnosis.

Taken at face value, Erickson's clinical reports indicate that he was a singularly ingenious, effective and unorthodox therapist. Nearly all of his published case reports pertain to therapeutic successes, but the present writer is unaware of any published breakdown indicating what percentage of his cases resulted in little or no improvement. Another difficulty in assessing his clinical work is that Erickson's case reports, like some of his reports of experimental work, often give only sparse details of the procedures he used.

Two cases that raise serious doubts about the accuracy of Erickson's reporting of his clinical work will be discussed. The first of these concerns Erickson's unorthodox manner of helping to rehabilitate a stroke victim. An account of this case (described as an unpublished manuscript, circa 1965) entitled Provocation as a Means of Motivating Recovery from a Cerebrovascular Accident appears in Rossi (1980d, pp.321-327). The report concerns a man in his fifties, described as an energetic, hard-working German

who had suffered a cerebrovascular accident that had paralysed him, rendering him a completely helpless bed patient, capable of understanding but unable to read or talk. Erickson obtained a history of the man's difficulties from the patient's wife, in the patient's presence. Erickson's style of questioning the wife was deliberately intended to provoke the patient, who, when Erickson signalled the end of the interview, leaned his head back and stiffened his neck and back, presumably because he wanted to get on with the treatment. Erickson told the man's wife to bring her husband back the next day. Erickson summoned two of his sons and instructed them to pick up the patient, carry him outside and load him gently but firmly into the car. Erickson told the man's wife to say nothing, to disregard anything that her husband tried to communicate to her, and not to be disturbed by anything that occurred.

When Erickson saw the patient the next day he said: "Well, Karl, I see that you are still mad, but the important thing is that you are here. The rest of the session I will spend merely explaining various things to you, not doing anything, just making clear to you what kind of a job we have to do, how we will have to start at it, and how you are going to take orders and obey them without question whether you like them or not." In the course of further explanation, Erickson indicated that hypnosis would be utilized only to the extent considered useful for various therapeutic purposes decided by him. Erickson reports that the interview was terminated by the peremptory measure of his stating, in a most dictatorial fashion, "Now, get up out of that chair. Stagger your way to the office door and get out of here and get to your car and give your wife's tired arms and back a little rest on the way. Get going!" Erickson reports that the patient's startled look was replaced by a flash of anger, followed by an expression of intense effort as he proceeded, grabbing a chair, then a bookcase, to haul himself to the door already opened by Erickson. When the patient's wife rushed to her husband's assistance, she was firmly cautioned to give him only enough help to keep him from falling. Clumsily jerking and twisting, using his wife only to balance himself, the patient made his way to the outside steps, where Erickson's sons picked him up and set him at the bottom of the stairs to make his own way to the car.

When he reached the car, Erickson's sons picked him up and placed him in the car while Erickson advised the patient's wife to go for a scenic drive so that her husband could rest enough to help her get him out of the car. She was told that if her husband grunted to get her attention, she was to tell him, "The doctor says I am to tell you to shut up, so shut up."

The next day the patient's wife reported to Erickson that her husband was improving. He had got to the breakfast table alone and had got to the front door alone. Erickson reports that as the patient dragged, jerked, and stumbled with a minimum of help to his seat in Erickson's office, he was told to close his eyes, lower his head towards his chest, relax as much as he could, and listen to the clock ticking on the desk and spend the next 15, 20, 30, 40, 50 or 60 minutes "going asleep in a hypnotic sleep". The patient was told to take the whole hour if he wanted to but that Erickson knew he could do it in 15 minutes. Erickson indicated that he would know when the patient was in a trance. Erickson reports that "Within 15 minutes the tension of [the patient's] facial muscles had altered ..., his swallowing reflex had disappeared, his respiratory rhythm had greatly changed, and he presented an acceptable appearance of a deep trance" (Rossi, 1980d, p.325). With the patient in the presumed trance state¹, Erickson told him that he (Erickson) reserved the privilege of using invective whenever he pleased, but that the patient's cure was in his (the patient's) hands. He was instructed to walk more and more each day.

Erickson reports that within three months the patient was walking well. One day he walked 15 miles in the desert areas around the city² and visited Erickson to tell him about it in speech that was very clear. Erickson contends that the patient "reversed the anger he had had, and used it up in directing his energy into walking and all the other aspects of his rehabilitation" (Rossi, 1980d, p.326).

¹ After indicating that the patient "presented an acceptable appearance of a deep trance", Erickson explains: "He was told, 'Now listen to me. If you are deep asleep, just nod your head gently up and down.' Five minutes later he was still perseveratively nodding his head gently in affirmation. This was taken to signify a deep trance, and the noisy dropping of a heavy paperweight on the floor did not elicit a startle reflex or any alteration in his respiratory rhythm" (Rossi, 1980d, p.325).

² The city is not specified in Erickson's article in Rossi (1980d) but in the report of the case given in Haley (1973) it is identified as Phoenix. (Erickson was based in Phoenix, Arizona, from 1948.)

In another account of this case (Haley, 1973, pp.310-313), Erickson gives a rather different description of what happened. According to this account, after being given some information about the patient by the latter's wife, Erickson sat down in front of the patient and said, "So you're a Prussian German. The stupid, God damn Nazis! How incredibly stupid, conceited, ignorant, and animal-like Prussian Germans are. They thought they owned the world, they destroyed their own country! What kind of epithets can you apply to those horrible animals. They're really not fit to live! The world would be better off if they were used for fertilizer." Erickson reports that he went on, "You've been lying around on charity, being fed, dressed, cared for, bathed, toenails clipped. Who are you to merit anything? You aren't even the equal of a mentally retarded criminal Jew!" Erickson continued this invective and eventually said, "Well, I haven't had much opportunity or time to think of all the insults you so richly merit. You're going to come back tomorrow. I'll have plenty of time the rest of today to think of all the things I want to say to you. And you're going to come back, aren't you!" Erickson reports that the patient came back with an explosive "No!" whereupon Erickson said, "So, for a year you haven't talked. Now all I had to do was call you a dirty Nazi pig, and you start talking. You're going to come back here tomorrow and get the real description of yourself!" Erickson reports that the patient said, "No, no, no!" and managed to get to his feet, knocked his wife to one side, and staggered out of the office. When Erickson saw the patient the next day he allegedly said to him, "You know, it was worth going through that hell yesterday to be able to walk out of this office. To be able to say at least one word. Now the problem is, how do I get you to talk and to walk and to enjoy life and to read books. I prefer not to be as drastic again. But you didn't believe in yourself at all. I was sufficiently unpleasant to give you no recourse except to protest. I hope now we can be friends. Let's get started on your restoration to at least some normal activity."

It can be seen that in the account given in Haley (1973), Erickson starts his interaction with the patient with a stream of invective, no mention of which is made in the account in Rossi (1980d). In the account given in Rossi (1980d), the reader is

told that at the end of the first interview, Erickson summoned two of his sons and instructed them to pick up the patient, carry him outside, and load him into the car. In the account given in Haley (1973), the patient walks out of the room!

It seems highly probable that the two accounts refer to the same case, despite the differences between them. One can speculate about the reasons for the disparities. In the account given in Rossi (1980d), one reads that a family friend of the patient and his wife had studied an article by Erickson on the re-education of someone with brain damage (Erickson, 1963)¹ and had urged the couple to consult Erickson regarding the possibility of hypnotic treatment for the patient. Since the account in Rossi (1980d) is said to be based on an unpublished manuscript from around 1965, it seems probable that Erickson saw the patient some time between 1963 and 1965 and wrote an account of the case shortly thereafter. Haley's (1973) book does not indicate at what point Erickson related the case to Haley, and presumably this could have been any time up until shortly before the book was printed. A possible explanation of the disparities between the two accounts, then, is that when relating the case to Haley (either verbally or in writing), Erickson's recollections were faulty and perhaps influenced by a penchant for dramatic story-telling.

Another suspect case report, related by Erickson during a five-day seminar conducted at his home in the summer of 1979, is contained in A Teaching Seminar with Milton H. Erickson² (Zeig, 1980). Erickson indicates that in October 1956 he was invited to address a national meeting of psychiatrists on the subject of hypnosis at Boston State Hospital. When Erickson arrived at the hospital, a Dr. L. Alex³, described as the "chairman of

¹It is not clear what this reference, given on p.322 in Rossi (1980d), pertains to. In the section in Rossi (1980d) concerned with "Hypnotherapeutic Approaches in Rehabilitation" (pp.281-327), there are two papers by Erickson from 1963. The present writer has included references for both of these (Erickson, 1963a,b) in the bibliography of this thesis.

²Pp. 148-153.

³From a discussion of this case given in Zeig (1982, pp.215-227), it is apparent that Erickson had contracted the name Alexander to Alex.

the program committee", asked him if he would demonstrate hypnosis as well as lecture on the topic. Alex(ander) suggested that Erickson should choose his demonstration subject from members of the audience but Erickson said that that would not be entirely satisfactory, so Alex(ander) suggested that Erickson walk around the wards and find a subject whom he would judge as satisfactory. Erickson reports that he went around the wards until he saw two nurses talking. He watched one of them, noting all of her behaviour, and, when she had finished her conversation, he introduced himself and explained that he was to lecture on hypnosis. The nurse said that she did not know anything about hypnosis, and he secured her agreement to act as a demonstration subject. Erickson relates that when he told Alex(ander) that this particular nurse was going to be the subject, Alex(ander) objected, stating that the nurse had been in psychoanalytic treatment for two years and was suicidal. Alex(ander) allegedly told Erickson that the nurse had already given away her personal jewelry and other property and had already sent in a letter of resignation. According to Erickson's account, other staff also pleaded with him not to use this nurse as a subject but he pointed out that he had accepted her promise, giving his in return, and that if he went back on his promise and did not use her as a subject, being depressed, she might consider that the final rejection and commit suicide that evening.

Erickson reports that he gave his lecture and employed some members of the audience to demonstrate various hypnotic phenomena. He then called on the nurse, asking her to stand up and walk slowly up to the stage. He told her to, "Continue on directly in front of me. Now don't walk too fast or too slowly but go a little bit deeper into a trance with each step you take" (Zeig, 1980, p.150). Erickson reports that when she arrived on the stage in front of him, "she was already in a very, very deep hypnotic trance." Erickson allegedly induced the subject to hallucinate visiting certain places with him, including the Boston Arboretum and Boston Beach. Regarding the latter, Erickson states:

I spoke about the Boston Beach being there long before the Puritans settled Massachusetts. How the Indians had enjoyed it. How the early colonials had enjoyed the beach. How it was a place of pleasure today and had been in the past for countless generations - how it would be a place of pleasure and happiness far into the future.

I had her look at the ocean and see the ocean very quiet, and then there were storm waves on it, then huge storm waves on it, and then I had her watch the ocean quiet down. I had her watch the tide come in and go out. Then I suggested we go back to the Boston State Hospital. (Zeig, 1980, p.151)

The above and other things that Erickson said to the subject were, according to his description of the case, veiled therapeutic suggestions. Erickson explains:

Now then I went to the arboretum and had her hallucinate the arboretum, what was I talking about? Patterns of life: life today; life in the future; blossoms; fruit; seeds; the different pattern of each leaf for each plant. We went to the zoo and I was again discussing life with her - youthful life, mature life, the wonders of life - migration patterns. And then we went to the seashore where countless generations in the past had found pleasure, where countless generations in the future would find pleasure, and where the current generation was finding pleasure. And the mysteries of the ocean: the migration of whales; sea turtles, like the migration of birds, something that man can't understand, but fascinating.

I named all the things worthwhile living for. And nobody knew I was doing psychotherapy except me. They heard all the things I said, but they just thought I was demonstrating time distortion, hallucinations - visual and auditory. They thought I was demonstrating hypnotic phenomena. They never realized I was intentionally doing psychotherapy. (Zeig, 1980, pp.152-153)

Erickson reports that the next day the nurse did not show up at the hospital and her friends were alarmed. Eventually the police were called but her body could not be found anywhere and Alex(ander) and Erickson were blamed for her suicide. Erickson relates that the next year he again lectured in Boston and still got a lot of blame for the woman's suicide, as did Alex(ander). However, 16 years later - in July 1972 - he received a long distance call from Florida from the nurse who had been involved in the demonstration. Erickson alleges that she told him that after she left the hospital the night of the demonstration she went to a naval recruiting station

and demanded immediate induction into the Nursing Corps of the Navy and served two enlistments before being discharged in Florida; she got a job in a hospital, met and married a retired air force officer and had five children, and was presently working in a hospital.

In Ericksonian Approaches to Hypnosis and Psychotherapy (Zeig, 1982) the case is discussed by Alexander and by Mrs. Jan Kropenick, the nurse who was involved in Erickson's demonstration at Boston State Hospital in 1956. According to Alexander, during the morning of the day when Erickson was to use the nurse as a demonstration subject, he (Alexander) and the nurse were setting up some electrical equipment when Erickson walked in and asked whether he could spend a few moments with the nurse. He took her to a library next door to the lecture hall. Shortly after she returned to Alexander she explained that she could only work with her left hand because a severe pain had developed in her right arm and she could not move it freely. Regarding the demonstration later that day, Alexander writes:

After an excellent lecture on the general subject of hypnosis, he [Erickson] presented a patient of his who happened to live in Boston, whom he age regressed to age two. It was a very effective demonstration. At the completion of his demonstration, Dr. Erickson announced, "Will the other person who is already in a trance please come forward to the podium." Ms. Pond [Pond was Mrs. Kropenick's maiden name] rose and then, in a somnambulistic manner, without turning her head to the right or left or moving her arms, walked straight to the stage. Dr. Erickson welcomed her, handed her a writing block and a pen, and said, "Will you please sign your name." The patient struggled to bring her right arm up but could not. Dr. Erickson then told her, "It is perfectly all right to use your left hand." Since I was sitting in the first row, I could not help noticing that her face lit up blissfully as he spoke these words, and with an ecstatic smile, she lifted her left hand, took the pen, and signed her name. He then told her, "No pain lasts forever; after the rain comes the sunshine." Immediately Ms. Pond lifted her right arm without any apparent discomfort and waved it about with a serene and smiling facial expression. Dr. Erickson then thanked her, and she went back to her seat. (Zeig, 1982, p.221)

In discussing the case, Alexander indicates that his understanding was that Erickson's removal of the nurse's pain in her arm generalized to relieve her depression as well. Alexander reports that during the evening following the demonstration, the nurse said to him, "I believe Dr. Erickson saved my life - I had planned to commit suicide tonight since I did not want to do it before the course was over, but nothing is farther from my mind now!" (Zeig, 1982, p.221). Alexander states that to the great surprise of the hospital staff who knew her intimately, the nurse's recovery remained a sustained one and that one and a half years later she accepted a nursing position elsewhere.

The account by Jan Kropenick (formerly Janice Pond) given in Zeig (1982) differs somewhat from that given by Alexander, but both of their accounts differ considerably from that given by Erickson in Zeig (1980). For example, in contrast to Erickson, neither Kropenick nor Alexander mention Erickson's having had Janice Pond hallucinate visits to places such as Boston Beach. According to Erickson's account, the nurse (Janice Pond) went missing after the 1956 meeting, causing speculation that she had committed suicide. The accounts by Alexander and Kropenick in Zeig (1982) contradict this assertion. Zeig (1982) comments:

There are two possible reasons for the discrepancy between their report [i.e. the reports of Alexander and Kropenick] and Erickson's. First, Erickson may have confused cases and mixed facts from two separate cases into his report. Second, Erickson was concerned mostly with the effect of his communication on the students at the seminar, i.e., he was interested in having personal and professional impact on his students. Therefore, he may not have been concerned that the case report was completely accurate. In fact, Erickson commonly changed details of his teaching stories to fit the needs of the group. However, at his teaching seminars, Erickson would follow most of his case reports by displaying a picture, letter, or gift from the patient to "prove" that the case report was factual and not just made up for teaching purposes. (p.216)

Orne (personal communication, 1982) comments:

... [Erickson's] case reports are far from accurate. That is not conscious lying, but rather that he did not observe his own behavior very effectively. He often ascribed the

reason for cures to factors which were quite unlikely to have been responsible, and I learned very rapidly that I would have to observe what he did rather than listen to his description if I hoped to understand his approach. Erickson never had failures because he could always redefine his goals to make them fit the results. That is not meant perjoratively but rather descriptively. He simply had to assume that in the end the patient was helped by him. While this narcissistic need interfered with his observations, it also made him a profound therapeutic optimist, and therefore he at times was able to help people who others appropriately felt could not be treated. Erickson had the needed stubbornness and conviction that he would in fact help them that sometimes made the crucial difference.

Erickson's Judgement of Subjects' Responses
to Hypnotic Induction Procedures

Erickson's writings convey the impression that their author was very adept at recognizing the presence and degree of "hypnotic trance" in subjects. His writings also depict him as having been a very effective hypnotist - someone who could elicit "deep trance" or "somnambulistic" manifestations in a relatively large proportion of subjects. However, there are grounds for believing that Erickson's judgement regarding these matters was not always correct.

In a review of Advanced Techniques of Hypnosis and Therapy: Selected Papers of Milton H. Erickson, M.D. edited by Haley (1967), Barber (1969b) refers to a study by Secter (1960) involving 48 subjects who were exposed to a hypnotic induction procedure. The subjects were subsequently asked to judge whether they had entered deep, medium, or light hypnosis or were not hypnotized at all. Erickson acted as an observer and also judged which of the four levels the subjects had attained. Barber points out that whereas Erickson judged 65 per cent of the subjects to have entered a medium or deep trance, only 17 per cent of the subjects judged themselves to have entered a medium or deep trance. Barber notes that by chance one would have expected Erickson and the subjects to agree 25 per cent of the time as to whether the subjects had entered a deep, medium or light trance or had not been hypnotized, and the actual amount of agreement - 29 per cent - did not significantly exceed chance expectation.

Orne (personal communication, 1982) indicates that, when put to the test, Erickson was not impressively accurate in distinguishing between "real" and simulating hypnotic subjects. Orne writes:

... Erickson visited my laboratory at Harvard back in the early 60s, and we provided four subjects for him, which he ran blind, knowing that two of them were simulators, so that he could test his assertions in a rigorous fashion. Erickson turned out to be correct in one out of four. He was misled by some of his preconceptions; thus, he tried to use his confusion technique of trance induction with one of the best subjects I have ever known, who he decided was simulating. Actually he caused the subject to become very troubled, who finally explained to Erickson that if he used a technique which was very popular in Dr. Orne's laboratory - suggesting the hand floating upward - it might be easier for him. Actually, that was quite amusing because the hand levitation procedure was invented by Erickson.

Thus, not only did I try to test many of Erickson's assertions, but I went to the trouble of having him test them and, contrary to his beliefs, he could not distinguish reliably between reals and simulators. Unfortunately, he was not with me long enough for him to learn, and because of my positive feelings toward him, I refrained from publishing these data during his lifetime.

In a recent review of The Collected Papers of Milton H. Erickson on Hypnosis (Rossi, 1980a,b,c,d), Hilgard (1984) notes that Erickson:

had great confidence in his ability to detect the depth of trance by small indications, many of which were not as convincing to others as they appeared to be to him. For example, in a filmed demonstration conducted in the hypnosis laboratory at Stanford University in the late 1950s, with the co-operation of Gregory Bateson and Jay Haley, Erickson attempted for two hours to obtain signs of hypnotic involvement in an office secretary who had never before experienced hypnosis. It was an excellent opportunity to observe his arsenal of techniques, but he was not successful in eliciting hypnotic responses, even the simplest one of hand levitation. Still, at the end

of the performance, he announced that she was an excellent subject. Because she had somewhat underestimated the time that had been spent, he assured the audience that the reason she had not gone further was that she had so distorted time that she thought the induction was just beginning. He therefore recommended to Dr. Weitzenhoffer and me that we use her for experiments on distortion. Dr. Weitzenhoffer, who was friendly to Erickson's methods, on a subsequent day attempted to hypnotize her, and, despite her evident desire to become hypnotized, she proved as intractable as she had for Erickson. (Hilgard, 1984, p.264)

Erickson and Rossi (1981, pp.154-178) present a transcript of and commentary on a hypnosis session filmed at Stanford University in 1958. It seems most probable that this is the demonstration referred to by Hilgard (1984). However, in contrast to Hilgard's description, Erickson and Rossi's account of the demonstration depicts the subject as having been hypnotically responsive.

Comments

The data considered above indicate that Erickson's case reports were not always accurate and that at times he might have been faulty in his judgement about subjects' response to hypnotic induction procedures. As indicated earlier in this chapter, another problem with Erickson's work is that he did not always specify exactly what criteria he used to decide whether and to what extent subjects were "hypnotized". (So far as the present writer is aware, Erickson did not make use of standardized hypnotic susceptibility scales.)

On the basis of the evidence considered above, it would seem that great caution is warranted in evaluating Erickson's assertions, clinical reports, and experimental work.

CHAPTER V

AN INVESTIGATION OF SOME OF ERICKSON'S CLAIMS
BEARING ON THE STATE--NON-STATE ISSUE, I: METHOD

OVERVIEW

As indicated in the last chapter, Erickson believed that subjects who respond to hypnotic induction procedures experience an altered state that is qualitatively different from the normal waking state. Among the manifestations of this presumed altered state, Erickson described two apparently unsuggested and counter-expectational features: (1) He reported that the overwhelming majority of "hypnotized" subjects, including those in only a "light trance", manifest a peculiar literalness of response to questions and requests. (2) He reported that when hypnotized, "somnambulistic" hypnotic subjects behave in a consistently different fashion from unhypnotized subjects when asked to select positions for hypothetical pictures of persons or objects present in the room. If independent investigation could substantiate Erickson's observations regarding these phenomena, and if the phenomena could be shown not to arise from subjects' expectations of or knowledge about hypnosis, cues in the experimental situation, relaxation, drowsiness or lethargy, then these phenomena could be seen as supportive of the notion that hypnosis involves a rather special altered state. The research discussed in this and the following chapter was aimed primarily at testing these assertions of Erickson.

The present writer also carried out some investigations pertaining to Erickson and Erickson's (1941) assertion that subjects executing post-hypnotic suggestions temporarily re-enter a trance state which can be perpetuated if the experimenter intervenes appropriately.

Outline of the Investigations

The investigations to be reported fall into six categories which will be described as (1) Stage I Experiments, (2) Stage II Experiments, (3) Stage III Experiments, (4) Non-Experiments, (5) Tests for Literalness with "Unhypnotized" Adults, Adolescents and Children, and (6) Supplementary Experiments concerned with Literalness.

Stage I Experiments

These experiments involved exposing subjects, who were seen individually, to a hypnotic induction procedure and then carrying out some tests, including the asking of questions that could have been answered in a literal manner. With some Stage I Experiment subjects, the questions were asked in a deliberately "distorted" fashion to see whether literalness could be cued in that way. For example, instead of asking a subject, "Would you mind telling me your first name?" in a normal manner, the question would be asked with the emphasis placed on the word "mind".

Subjects who gave evidence of high hypnotizability during Stage I Experiments were invited to return for Stage II Experiments.

Stage II Experiments

Subjects for Stage II Experiments were seen individually. They were recruited in three ways:

- (1) Stage I Experiment subjects who appeared to be highly hypnotizable were invited to return for Stage II Experiments.
- (2) Subjects who scored highly on one or other of two screening measures (the Harvard Group Scale of Hypnotic Susceptibility, Form A, and the Creative Imagination Scale¹) were invited to participate in Stage II Experiments.
- (3) One individual was invited to participate in a Stage II Experiment after exhibiting behaviour suggestive of high hypnotizability in a clinical setting.

Stage II Experiments were in two parts. In the first part, the subject was tested with the Stanford Hypnotic Susceptibility Scale, Form C². The second part involved the administration of a lengthy hypnotic induction procedure followed by tests of Erickson's assertions: (1) that "hypnotized" subjects are peculiarly literal in response to questions and requests, (2) that when "hypnotized", "somnambulistic" hypnotic subjects select unusual positions for hypothetical pictures of objects or persons present in the room, and (3) that when executing post-hypnotic suggestions, subjects briefly re-enter "trance" - a state that can be prolonged if a suitable intervention is made.

¹ These scales are described in Chapter I, pp.15-19.

² This scale is described in Chapter I, pp.9-14.

Stage III Experiments

Three subjects who exhibited interesting responses during Stage II Experiments were invited to return for a further session. One of these subjects declined the invitation. The procedures employed with the two subjects who participated in Stage III Experiments differed and are described in detail in Chapter VI.

Non-Experiments

Subjects seen for sessions labelled "Non-Experiments" were seen individually and were taken through the second part of the Stage II Experiment but without undergoing the hypnotic induction procedure. The subjects were asked to indicate how they thought a deeply hypnotized subject would behave under the circumstances described. The aim of these Non-Experiments was to ascertain whether positive responses to the critical test items could arise from subjects' expectations or from cues in the experimental situation.

Tests for Literalness with "Unhypnotized" Adults, Adolescents and Children

Informal tests were made with "unhypnotized" adults and adolescents to gauge the accuracy of Erickson's assertion that literalness of response is decidedly infrequent in everyday life.

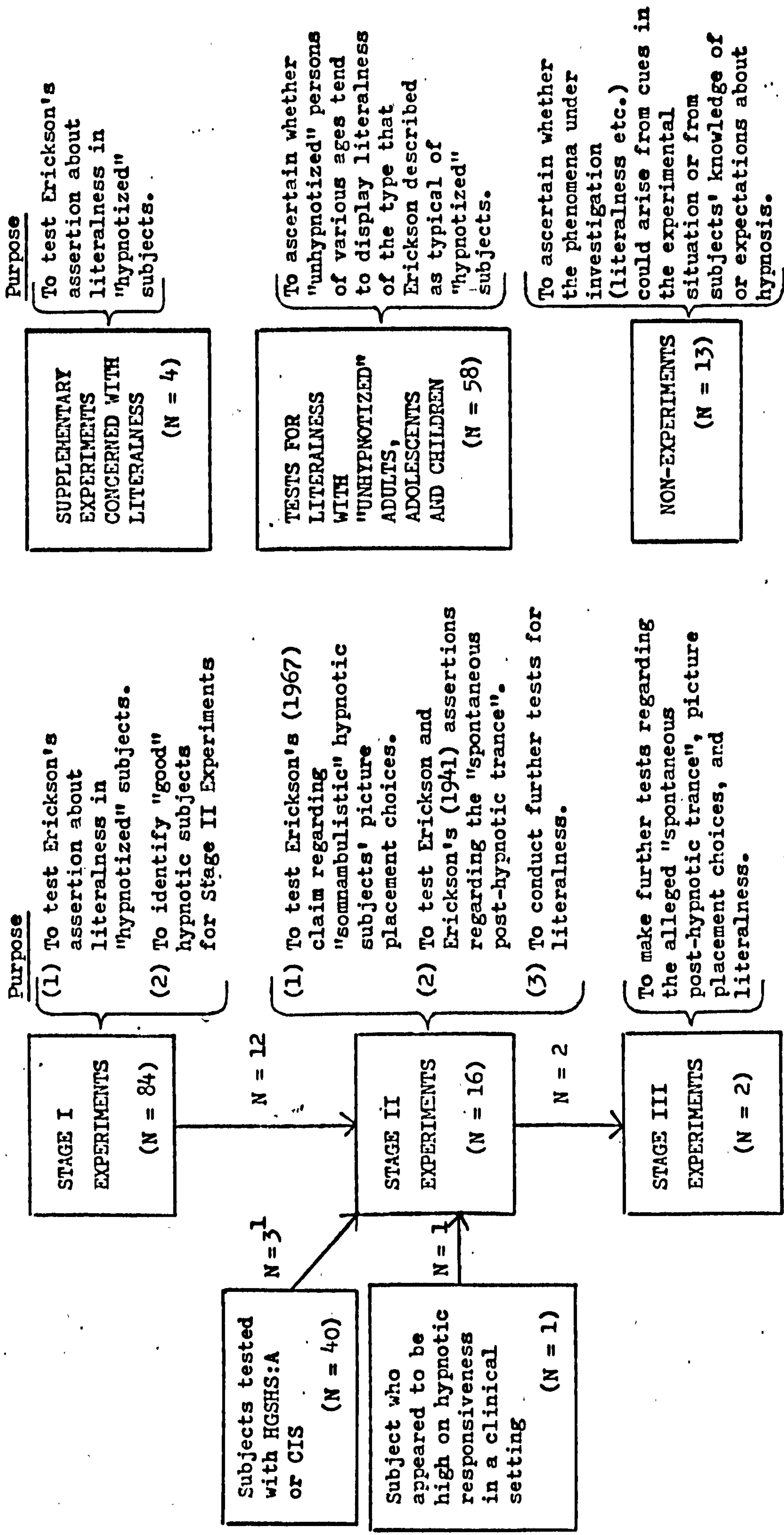
Primary school children ranging in age from just under 5 to 11 were seen individually and asked questions to ascertain whether they would give literal or non-literal responses. If literalness of response is common among children and if "hypnotized" adults and adolescents also manifest considerable literalness, one could hypothesize that "hypnotized" subjects' literalness is a manifestation of a regressive shift to a child-like understanding of and use of language.

Supplementary Experiments concerned with Literalness

For the reason explained on pp.237-238, experiments were conducted with four subjects with the present writer's wife acting as the hypnotist and asking questions aimed at testing Erickson's assertion about literalness in "hypnotized" subjects.

Main Investigations

Additional Investigations



Note ¹A total of five subjects attended for Stage II Experiments after taking part in group screening with the HGSHS:A or the CIS, but in the case of two of them the experiments were not completed.

FIGURE 1. Schematic representation of research design

RECRUITMENT OF SUBJECTS

For reasons discussed in the next chapter (pp. 333-334), not all of the subjects who participated in the present writer's investigations have been included in what will be called the "final subject pool". A total of 198 individuals are included in the "final subject pool". They include (1) 84 subjects who participated in Stage I Experiments (some of whom went on to participate in Stage II and III Experiments), (2) 40 subjects who participated in group screening with the HGSHS:A or CIS (some of whom went on to participate in Stage II Experiments), (3) 13 subjects who participated in Non-Experiments, (4) 58 adult, adolescent and child subjects who were involved in tests for literalness without the application of a hypnotic induction procedure, (5) two subjects who participated in Supplementary Experiments concerned with Literalness¹, and (6) one subject who participated in a Stage II Experiment after exhibiting behaviour suggestive of high hypnotizability in a clinical setting.

Details of the subjects are given in Appendix I or, in the case of subjects in category (4) above, in Tables XI and XII in Appendix III. It can be seen from Appendix I that a substantial proportion of the subjects were nurses or trainee nurses. Most of these were contacted through the circulation of letters in hospitals² inviting staff to participate in some research concerned with hypnosis. The letters did not specify the nature of the research but assured potential volunteers that there would be no probing into private matters, that nothing would be done to cause any embarrassment, and that strict confidentiality would be observed. In arranging appointments with subjects, the present writer did not give details of the nature of the research. In the case of Stage I Experiment subjects, if he was asked, when arranging appointments, whether an attempt would be made to hypnotize the subject, he did not deny this. In the case of Non-Experiment subjects, however, the present writer avoided giving any specific information in advance of the session as to whether the subject would be "hypnotized", although the subjects knew that the present writer's research was

¹ Four subjects participated in Supplementary Experiments concerned with Literalness but two of these had previously participated in Stage I and II Experiments. Thus, the latter subjects are already counted among the 84 subjects who participated in Stage I Experiments.

² Ravenscraig Hospital, Greenock (a psychiatric hospital), Inverclyde Royal Hospital, Greenock (a general hospital), Rankin Memorial Hospital, Greenock (a maternity hospital), Southern General Hospital, Glasgow (a general hospital), and Gartnavel Royal Hospital, Glasgow (a psychiatric hospital).

concerned with hypnosis. If subjects who were to attend for Stage I Experiments or Non-Experiments asked whether they were to be seen individually or in a group, it was explained that their participation would be on an individual basis. In the case of subjects who were to participate in group screening procedures, it was explained in advance to the subjects that they would be seen along with others.

A fellow member of the Scottish Branch of the British Society of Experimental and Clinical Hypnosis, Dr. S.J.T. Robertson (a general practitioner based at Woodside Health Centre, Glasgow), kindly agreed to ask some of his hypnotherapy patients whether they would be interested in participating in the present writer's research¹. A number of volunteers were recruited in this way. The information given to them was essentially the same as that given to individuals contacted through hospitals.

Letters of the type circulated in hospitals were sent elsewhere and subjects were recruited from local yoga classes, the teaching staff of a local school, the staff of a local technical college, and the membership of a local women's club.

A few subjects were recruited by the present writer's directly approaching them and asking whether they would be good enough to volunteer for his research.

With the co-operation of a local primary school headmaster, the present writer was given access to primary school children to conduct tests for literalness. No hypnotic procedures were employed with these subjects.

Informal tests for literalness with "unhypnotized" adults and adolescents were conducted by the present writer and his wife. The subjects included patients and NHS staff.

STAGE I EXPERIMENTS

The final subject pool contains 84 subjects who participated in Stage I Experiments. The subjects were seen individually for sessions lasting approximately 50 minutes. The experiments were

¹ Dr. Robertson, who has now retired from general practice, for some years saw patients privately outside normal working hours for hypnotherapy for conditions such as smoking and obesity. He also used hypnotic techniques with some of his NHS patients.

aimed at testing Erickson's assertion that "hypnotized" subjects are peculiarly literal in response to questions, and the sessions also provided an opportunity to identify highly hypnotizable subjects who could be invited to return for Stage II Experiments for testing Erickson's assertions relating to "somnambulistic" subjects¹.

When the present writer had tested a number of subjects and observed no clear indications of literalness, he introduced variations in the experimental procedure to try to eliminate possible biasing factors that might have precluded literalness. Also, in the case of some subjects, the test-questions were asked in a deliberately "distorted" manner to see whether literalness could be cued in that fashion. These procedural variations resulted in the Stage I Experiment subjects falling into eight groups, which will be labelled (1) the Normal/Tape Group, (2) the Normal/Live Group, (3) the Normal/Live/Scriptless Group, (4) the Normal/Live/Other Hypnotists Group, (5) the Distorted/Tape Group A, (6) the Distorted/Tape Group B, (7) the Distorted/Live Group, and (8) the Miscellaneous Group.

The Normal/Tape Group

Subjects

This group comprised 15 subjects who, like all Stage I Experiment subjects, were seen individually. Nine of the subjects were seen in a spacious room in the Psychology Department at Ravenscraig Hospital, Greenock, and six, recruited via Dr. S.J.T. Robertson, were seen in the latter's office at Woodside Health Centre, Glasgow.

Procedure

After entering the room in which the experiment was to take place, the subject was asked to sit down in an armchair and the experimenter (the present writer) read the following introductory statement from a typed sheet:

¹ I.e. Erickson's (1967) claim that when "hypnotized", "somnambulistic" subjects select unusual positions for hypothetical pictures of persons or objects present; and Erickson and Erickson's (1941) claim that subjects executing post-hypnotic suggestions temporarily re-enter "trance". The Stage II Experiments also permitted further testing of Erickson's assertion about literalness.

Thank you for agreeing to be a subject in this study. I am reading this to you from a prepared sheet since this is a scientific study and I want to standardize what I say to those who participate.

As you know, this study involves hypnosis. Sometimes people have fears and misgivings about hypnosis based on fictional stories, inaccurate information and the antics of stage hypnotists. I can assure you that in this study nothing will be done or said to cause you any embarrassment and there will be no probing into any private or personal matters, nor will your name or address ever be written up in a professional journal. This is a purely scientific study and you can rest assured that nothing improper or unethical will be said or done.

A number of subjects have already participated in this research and to the best of my knowledge they have all found the experience pleasant and relaxing.

Shortly you will be asked to close your eyes and listen to my voice. Some of what I shall be saying will come from a tape recorder. Try not to bother whether I am speaking "live" or whether my voice is on tape. Incidentally, to help me record today's session, I shall be recording the proceedings with a second tape recorder. I hope you don't mind if I do this. If you have any objection, I shall of course respect your wishes.

Now if anything is worrying you or if there is anything I can do to help you feel more comfortable, please tell me¹.

When the subject was ready for the experimenter to proceed, the latter switched on a Grundig CR 485 cassette tape recorder, which was positioned near the subject, so as to obtain an audio-recording of the session. The experimenter spoke into the microphone of the tape recorder, giving the subject's name, the date of the session and the location. The experimenter then said to the subject, "If you're ready to start, please close your eyes." The experimenter then pressed the "play" button on a second Grundig 485 cassette

¹ Subjects knew that the present writer's research was concerned with hypnosis but they were not given details of the matters under investigation.

tape recorder. The following is a transcript of the material (hypnotic induction procedure and test items) recorded on the tape that the subject listened to:

Settle back comfortably, close your eyes and relax. Relax to the best of your ability. And as you continue relaxing like that, I want you to think of your eyelids. In your eyelids there are thousands of tiny muscle fibres - each like a tiny strand of elastic. And throughout so much of the day those little muscle fibres are tense and taut. Whenever your eyes are open and you are looking at things, there's tension in those muscle fibres. But as you sit there with your eyes comfortably closed I want you to relax those muscle fibres - I want you to relax those muscle fibres by imagining that you've already achieved tremendous relaxation there. Believe your pretence with all your heart and soul and make it happen. Feel how those muscle fibres give out their tension and become slack, loose, limp and relaxed - wonderfully, deeply relaxed. Feel it happen, make it happen. Feel how they literally respond to your own disciplined relaxation by becoming slack, loose, limp and relaxed - so wonderfully, deeply relaxed you could scarcely drag one weary eyelid apart from the other. Enjoy that developing and deepening relaxation. You can picture the tension draining out of those eyelid muscles just like water trickling out of a leaking bucket. And as those eyelid muscle fibres relax so deeply, you can imagine that your eyelids have been stuck down with a powerful glue - comfortably and heavily closed and stuck down so completely that as you try to open them they resist and remain stuck down - unable to open.

After a gap of approximately five seconds the recording proceeded as follows:

But now stop trying to open them. Enjoy having them comfortably and heavily closed, knowing that when I ask you to open them in due course, they will open easily. And now continue relaxing those eyelids, and I want you to spread that relaxation to your facial muscles, to the muscles around your head and to your throat and neck. And I want you to relax those muscles by imagining that you've already achieved tremendous relaxations there - believe your pretence with all your heart and soul and feel how your muscles literally respond to your own disciplined

relaxation and imagination by becoming slack, loose, limp and comfortably relaxed. Let that relaxation deepen and develop.

And now I want you to spread the relaxation to the muscles of your back. Right along your back there's a powerful group of rugged, strong muscles that are involved in every act of stooping, bending, kneeling, crouching, reaching forward and leaning back. And whenever you do any of those things, you have to do so against a background of taut, tight back muscles. But now, I'd like you to relax those muscles - and I'd like you to relax those muscles by imagining that you've already achieved tremendous relaxations there. Feel it happen, make it happen - feel those powerful muscles give out their tension and become slack, loose, limp and relaxed, in response to your own disciplined relaxation. You can picture a sack of grain in a barn or granary - a sack that's nearly bursting at the seams with grain. You can imagine the farmer coming along and snipping the corner off¹ the sack at the bottom - all the grain comes pouring out and the taut, tight sack loses its tension and becomes loose, limp and floppy - just as your muscles can become relaxed as all that tension and strain drains away and is replaced by relaxation.

And now spread the relaxation to your arms and legs. Let all the powerful muscles of your arms relax, and all the muscles in the legs - the muscles of the shins, thighs, buttocks and calves, and all the little muscles of your hands and feet. Let them all relax. Imagine that you've already achieved tremendous relaxations there - believe your pretence with all your heart and soul. Feel it happen, make it happen. Feel how all those muscles literally respond to your own disciplined relaxation by becoming wonderfully, deeply, relaxed, loose, limp and slack.

And as you continue relaxing in this comfortable hypnotic state, it will be interesting to see which of your hands gets light first. It could be your left hand or it could be your right. I don't know, and my subconscious mind doesn't know.

1

With other Stage I Experiment subjects, the word used at this point was "of" rather than "off". This minor discrepancy with subjects in the Normal/Tape Group was not intentional.

But your subconscious mind does know, even though your conscious mind probably doesn't know yet. Of course, it would be possible for you to lift one or other hand deliberately. But that would be a deliberate action by your conscious mind. Instead, I'd like you to leave it to your subconscious mind. In its own time, at its own pace, your subconscious mind can cause one of your hands to get light and float upwards. The lightness may begin in the little finger, or it may start in the thumb. It may develop in the palm of your hand and one of the fingers at the same time or maybe in two different fingers at the same time. The really important thing is to simply let it happen in its own time, at its own pace, without any rushing. It's good to leave it to the subconscious mind and wait patiently and comfortably as the subconscious mind starts to make it happen ... It's good to feel the hand floating up by itself, knowing that when it touches your cheek or chin you will enter an even deeper state of hypnosis with your hand then becoming heavy and returning to your lap. But first enjoy the lightness as it builds up in your hand and arm. It's good just to let it happen in its own time, at its own pace.

A gap of approximately 185 seconds then ensued before the experimenter's (i.e. the present writer's) voice was heard again from the tape recorder¹. The tape-recorded voice proceeded as follows:

And as you continue going deeper and deeper into this comfortable hypnotic state, you can picture yourself in a large country garden in the spring or early summer. In the distance you can see the country house with its brick or stone reflecting the morning sun. There's a blue sky overhead with a few puffs of white cloud. The sun is shining down warmly and there's a slight breeze, which stops you getting too hot. You can hear

¹ If the subject did not exhibit an upward movement of a hand within about two minutes after the taped voice had stopped speaking, the tape was stopped for a few minutes and additional ("live") suggestions were given. The wording of these differed from subject to subject since the experimenter did not read them from a script. They tended to be along the following lines: "And it's good to leave it to the subconscious mind ... You might notice that the first movements occur as little jerks ... You might notice muscle fibres higher up the arm beginning to contract or twitch all by themselves ... And it's good just to let it happen at its own pace, in its own time ... It will be interesting to see whether it's the left or the right hand that gets light and lifts first ..."

the chirping of the birds and there are colourful flower beds surrounded by neatly mown grass. The grass is like green velvet and soft and springy underfoot. Here and there it glistens as the sun catches beads of dew. In the flower beds there are rich arrays of colour - strong reds, blues and yellows, and a variety of gentle pastel shades in between. I want you to see yourself walking along a stone path in the garden, approaching the top of a flight of 12 stone steps that go down into a lower section of the garden where the plant life is even richer and where there is a splendid oak tree. As I slowly count from one to 12 you can see yourself going down the stone steps into the lower section of the garden: 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12. And positioned in the shade of the oak tree there is a deck-chair. Picture yourself flopping down in the deck-chair, relaxing and enjoying the peace of the garden. The branches and leaves of the tree protect you from the direct glare of the sun. Enjoy the relaxation and peace ... and as you are relaxing there, notice that brightly coloured butterfly coming towards you. It's about to land on the back of your left hand. When it starts to tickle or itch, give your hand a gentle flick and the butterfly will go on to visit another part of the garden as you continue relaxing - relaxing very deeply.

After a gap of approximately 135 seconds, during which time the experimenter noted whether the subject flicked or moved one or other of his or her hands, the recording proceeded as follows:

About three-quarters of a mile from the garden there's a small village with a church. There's going to be a wedding at the church and today they are practising ringing the bells. Listen carefully and if you can hear the bells, lift your right hand a couple of inches.

After a gap of approximately 95 seconds, during which time the experimenter noted whether the subject lifted a hand, the recording proceeded as follows:

And as you continue relaxing in this comfortable and deep hypnotic state, you now think of yourself being back in this room, remaining deeply hypnotized. Even though you are comfortably and deeply hypnotized, you will be able to speak to me if you wish to. Would you mind telling me your first name?

After a gap of approximately 70 seconds, the recording proceeded as follows:

Do you mind telling me where you were born?

After a gap of approximately 57 seconds, the recording proceeded as follows:

Would you like to tell me when you last visited Edinburgh?

After a gap of approximately 60 seconds, the recording proceeded as follows:

Would you mind telling me your mother's maiden name?

After a gap of approximately 60 seconds, the recording proceeded as follows:

Do you mind telling me your father's first name?

After a gap of approximately 61 seconds, the recording proceeded:

As I jingle my keys, you will invariably get up from your chair and lift the book off the floor with your left hand and pass it to me. As I jingle my keys, you will invariably get up from your chair and lift the book off the floor with your left hand and pass it to me.

Between giving this post-hypnotic suggestion and completing the act of "dehypnotizing" the subject, the experimenter quietly placed a book on the floor near the subject's feet.

The recording proceeded as follows:

Shortly I am going to wake you up from this state of hypnosis and when you wake up, it will be like waking from a deep, dreamless sleep. You will not remember what has happened during the hypnosis. You will be awake, comfortable and relaxed, but unable to remember what you did or said while you were hypnotized. It can be comfortable and pleasant to forget things you don't need to remember. Shortly I am going to wake you up from this state of hypnosis and when you wake up, it will be like waking from a deep, dreamless sleep. You will not remember what happened during the hypnosis. You will be awake, comfortable and relaxed, but unable to remember what you did or said while you were hypnotized. It can be comfortable and pleasant to forget things you don't need to remember.

I'm now going to slowly count back from 20 to one. When I get to one, your eyes will open, you'll be wide awake, relaxed and comfortable. 20 - 19 - 18 - 17 - 16 - 15 - 14 - 13 - 12 - 11 - 10 - 9 - 8 - 7 - 6 - 5 - 4 - 3 - 2 - 1.

A word of explanation is needed about the gaps between periods of speaking in the tape-recording. The five seconds' gap following the suggestion that the subject's eyelids would feel stuck down was intended to give the subject sufficient time to notice the suggested effect (if it occurred) but without giving too much time for the subject to break the eyelid "catalepsy". Following the suggestions for a tactile hallucination (feeling a butterfly landing on the back of the left hand) and an auditory hallucination (hearing church bells), there were intervals of 135 and 95 seconds respectively. These were intended to give the subject time to respond to the suggestions. When the sequence was tape-recorded, it happened that there was a larger gap left for the subject to respond to the tactile hallucination suggestion; this was not intentional but the present writer judged that it was not necessary to re-record the sequence and exactly balance these intervals. Similarly, although there was some small variation in the duration of the intervals following the questions aimed at testing for literalness (the intervals ranged from approximately 57 to 70 seconds), this was judged to be of no significance with regard to the validity of the experimental procedure.

After the subject was counted back from 20 to one, he or she was engaged in neutral conversation such as talk about the weather or the subject's job. After a short period of such conversation, the experimenter reached for a ring of keys lying nearby, jingled them, and observed whether the subject responded to the post-hypnotic suggestion by lifting the book off the floor. Finally, the experimenter said, "Well thank you very much, _____¹. That's the end of the experiment."

The experimenter then began the post-experimental inquiry by reading the following material to the subject:

I'd like to hear about your experiences here today and I should be grateful if you would be quite frank. Sometimes in experiments like this subjects don't really experience all of the things suggested and described by the experimenter. Because they don't want to disappoint or embarrass the experimenter they find it hard to be completely frank. Since this is a serious

¹ The subject's name.

scientific study, it's important that I get an honest, frank report from you. So, if you failed to experience things that I suggested or described I should like to know. I shall be grateful to you for being open and honest. And now I'd be grateful if you would report your recollections of everything that has happened since you entered this room today.

Using a check list of items, the experimenter noted which elements of the session the subject mentioned. Throughout this inquiry, the experimenter used the casual prompt, "Anything else?" to encourage further reporting of recollections. When the subject appeared to run out of recollections, the following prompt was used: "Try very hard to remember what else happened." The inquiry then proceeded as before until the subject reached another impasse, whereupon the experimenter said, "Are you sure you can't remember some more things? Please try." Once again, any further recollections were noted and the subject was encouraged to relate more recollections by the experimenter's casually asking, "Anything else?" The aim of this inquiry was mainly to identify subjects who appeared to be largely amnesic for the events of the hypnosis session and who might prove to be responsive Stage II Experiment subjects. In the case of some subjects who exhibited a good degree of recall during the post-experimental inquiry, the full range of prompts was not used.

After eliciting the subject's recollections, further information was sought via a series of questions:

What do you think was the purpose of this experiment? What do you think I was trying to find out?

Prior to today, had you had any other experiences of hypnosis?

Did you respond today as you expected you would?

Do you think you were hypnotized today?

If the subject's responses to the above questions were not entirely clear, he or she was encouraged to elaborate further. However, the experimenter attempted not to bias the content of the subject's answers.

Subjects who exhibited evidence of high hypnotic responsiveness were invited to return for another, more lengthy, session (a Stage II Experiment).

In conducting his investigations with Stage I Experiment subjects and other subjects, the present writer tried to minimize the possibility of subjects' behaviour being influenced by prior knowledge of the experimental procedures and by knowledge of other subjects' experiences. In the case of subjects recruited via Dr. S.J.T. Robertson, it seems unlikely that the results could have been affected by inter-communication between the subjects since the latter were hypnotherapy patients of different ages and backgrounds and they probably did not know one another. In the case of other subjects, however, the possibility of inter-communication was a real one and the present writer took steps to try to reduce this possible source of bias. Thus, at the end of sessions, subjects were asked not to discuss the contents of the session with others for some considerable time. If at the end of a session a subject asked about the purpose of the experiment, it was explained that this information could not be divulged until later, when the investigations had been completed. As will be indicated later (pp.218-220), some individuals participated in group screening with the Harvard Group Scale of Hypnotic Susceptibility, Form A or the Creative Imagination Scale. At the end of their session, these subjects were asked to desist from discussing their experiences with others who might participate, since the latter's responses could be affected.

Since the investigations reported in this and the next chapter involved a considerable number of subjects, it is only to be expected that there would have been some inter-communication between subjects. The present writer's impression, however, was that this was not widespread¹.

Comments

The hypnotic induction procedure described earlier (pp.201-203) was used with all the Stage I Experiment subjects and drew on elements from the Elman "pretence" method described by Robertson (1979)² and

¹When the present writer asked subjects whether they had heard details of the study from others, the usual answer was that they had not. Some subjects reported that they had sought information about the study from acquaintances who had participated as subjects but the latter had refrained from giving details. It is, of course, possible that some subjects were not entirely frank with the present writer when he asked whether they had prior knowledge of the experimental procedures.

² Elman's techniques and views on hypnosis are discussed in his book, Findings in Hypnosis (Elman, 1968).

Erickson's hand levitation technique, which is described by Wolberg (1948a) and Hartland (1971). Although a different type of induction procedure could have been employed (e.g. an eye-fixation method), the present writer used an induction sequence based on procedures he was most familiar with.

The Normal/Live Group

As will be indicated in the next chapter, none of the subjects in the Normal/Tape Group was observed to respond to the test-questions in a clearly literal manner. Since this lack of literalness could conceivably have resulted from the fact that the questions were addressed to the subjects via a tape-recording, other subjects were seen and the procedures were administered "live".

Subjects

The 15 subjects comprising the Normal/Live Group were predominantly nursing staff. They were all seen at the Psychology Department, Ravenscraig Hosptial.

Procedure

Subjects were seen individually and underwent essentially the same procedure as subjects in the Normal/Tape Group but a pre-recorded taped sequence was not used, all the proceedings being "live". An introductory statement of the type used with the Normal/Tape Group was read to the subjects but of course no mention was made of the experimenter's voice coming from a tape recorder. The experimenter (the present writer) read the hypnotic induction and test procedures from a script. Until the subject closed his or her eyes at the start of the hypnotic induction procedure, the experimenter tried to keep the script out of sight and it was removed from the subject's view before the "dehypnotization" sequence was completed. This was because the experimenter did not wish to make it obvious that he was reading from a script¹. With most subjects, additional (unscripted) suggestions for hand levitation were given.

Since the experimenter's attention was taken up to a considerable extent during sessions by his reading a script, his wife, Dr. E.C. McCue, sat in on these sessions as an observer.

¹ It is, of course, possible that despite the experimenter's attempt to conceal the script, subjects detected or inferred that the induction and test procedures were being read from a script.

The Normal/Live/Scriptless Group

As will be indicated in the next chapter, none of the subjects in the Normal/Live Group was observed to respond to the test-questions in a clearly literal manner. The present writer reasoned that if a "hypnotized" subject realizes that questions are being read from a script, that could conceivably preclude a tendency to give literal responses. Accordingly, subjects in what will be called the Normal/Live/Scriptless Group were tested without the experimenter's reading the hypnotic induction and test procedures from a script.

Subjects

The 15 subjects comprising this group were all seen at the Psychology Department, Ravenscraig Hospital. Like other Stage I Experiment subjects, they were seen individually. They were predominantly nursing staff.

Procedure

The procedure was broadly similar to that employed with subjects in the Normal/Live Group but the experimenter (the present writer) relied on memory rather than on a script in making his introductory remarks and in administering the hypnotic induction and test procedures.

The introductory statements employed with other groups of Stage I Experiment subjects were brief but with subjects in this group the experimenter gave a fuller briefing to try to facilitate greater rapport and reduce subjects' anxiety. The experimenter tried to recall and present material broadly along the following lines:

Thank you very much for agreeing to be a subject in this study. As you know, my research is concerned with hypnosis. Sometimes people have fears or misgivings about hypnosis based on fictional stories, inaccurate information and the antics of stage hypnotists. I'd like to explain a few things to you about hypnosis and this study before we start. First of all, I can assure you that nothing will be done or said to cause you any embarrassment and there will be no probing into any private or personal matters. Nor will your name or address ever be written up in a professional journal. This is a purely scientific study and you can rest assured that nothing improper or unethical will be said or done. A number of subjects, about a 100 in fact,

have already participated in this research and to the best of my knowledge they have nearly all found the experience pleasant and relaxing. Two or three people were too nervous to settle down and relax into hypnosis but that might have been because I hadn't explained enough about the experiment and cleared up their fears and misconceptions about hypnosis.

One misconception about hypnosis that many people have is that under hypnosis one becomes unconscious and loses all awareness and sort of blacks out. This is not so. Hypnotized subjects don't become unconscious and although by concentrating on what the hypnotist says and describes they may be able to disregard or forget about outside noises etc., they are quite capable of hearing them if they want to. In fact, hypnosis is very much a skill of the subject rather than something imposed on the subject by the hypnotist. Or, to put it another way, I couldn't make you do anything while you were hypnotized that you wouldn't want to do. The hypnotist has no magical power over the subject, so there's no question of your being dominated or intimidated. In fact, I think you'll find hypnosis very pleasant and relaxing. Incidentally, I, my wife, and various friends and colleagues have experienced hypnosis, and we've all enjoyed it. In fact, hypnosis can be so pleasant and relaxing that people often practise self-hypnosis in order to relax and unwind.

In the course of his research, the present writer found that sometimes subjects would open their eyes during experiments without being instructed to do so. In the case of subjects in the Normal/Live/Scriptless Group, additional wording was employed to try to preclude this. Thus, early in the session, after he had commented about the subject's eyelids being stuck down and after a few seconds had elapsed, the experimenter went on to say something along the lines of:

I'd like you to keep your eyes closed until the end of this experiment. Although it is possible to have one's eyes open and remain in hypnosis, that would not be helpful in this study since I want you to think about and picture various things and this is best done with the eyes closed. Also, if you opened your eyes during the session, it could disrupt the hypnosis.

So I'd be grateful if you would keep your eyes closed until the end of the experiment.

In the case of other groups of Stage I Experiment subjects, the questions aimed at testing for literalness were not clearly related to anything else within the sequence. The procedure was amended in the case of subjects in the Normal/Live/Scriptless Group so as to make the test-questions more relevant to the general context. Thus, after mentioning a country church and giving the subject an opportunity to signal in response to the suggestion about hearing bells, the experimenter proceeded along the following lines: '

And as you continue relaxing in this comfortable hypnotic state, I want you to think of yourself being back in this room, remaining in this comfortable hypnotic state. And shortly I am going to ask you to imagine some more scenes. Imagining relaxing scenes while under hypnosis can be very pleasant. I'd like you to think of a place where you'd like to go on holiday sometime - maybe somewhere you've never been to or perhaps a place you know and would like to return to. Try to picture the place. Would you like to tell me the name of the place? [After the subject had answered or after a reasonable amount of time had been given for him or her to answer¹:] O.K., continue picturing it, enjoying it ... Now I'd like you to picture yourself going into a house in [the place named by the subject] and looking at a vase of flowers. Try to picture the flowers and their colours clearly ... Imagine yourself lifting one of the flowers out of the vase, lifting it to your nose and smelling its fragrance. Do you mind telling me what sort of flower it is? [Again, time was allowed for the subject to answer.] Good, now picture yourself replacing the flower in the vase and glancing at the walls of the room. Picture a calendar hanging on the wall. Take a look at it. See which month is displayed. Would you like to say what the month is? [Again, time was allowed for the subject to respond.] Now, as you are looking at the calendar,

1

In contrast to the procedure adopted with most other Stage I Experiment subjects, the experimenter did not wait for a predetermined period of about a minute before proceeding after asking each question. Instead, he proceeded with the sequence shortly after subjects gave their replies. However, if no answer was given to a question, the experimenter waited for more than a minute before proceeding.

I want you to think of someone switching on a radio somewhere else in the house. Imagine that you can hear music - some music that you very much like. Listen to it and enjoy it. Would you like to tell me about the music? [Again, time was given for the subject to respond.] Good. Now think back to the last holiday you had. Do you mind telling me where you went? [Again, time was given for the subject to respond.] Fine, imagine you're back there; picture it as vividly as you can ... O.K., now think of yourself being back in this room, remaining relaxed and comfortably hypnotized.

It can be seen that the test-questions in this case are: (1) Would you like to tell me the name of the place? (2) Do you mind telling me what sort of flower it is? (3) Would you like to say what the month is? (4) Would you like to tell me about the music? (5) Do you mind telling me where you went?

The Normal/Live/Other Hypnotists Group

As will be indicated in the next chapter, except in the case of some subjects who were asked questions in a deliberately "distorted" fashion, the present writer was unable to elicit any clear-cut evidence of literalness in the subjects he tested, irrespective of how hypnotically susceptible they appeared to be. In order to exclude the possibility that these negative findings were a result of some peculiarity of his own voice, pronunciation or rate of speech, he recruited the assistance of some colleagues who agreed to act as experimenters in some Stage I Experiments. These colleagues were unaware that the present writer was investigating Erickson's claim that "hypnotized" subjects are peculiarly literal in response to questions and requests. After these colleagues had completed their participation as experimenters and before they were given any explanation about the precise nature of the study, they were asked to write notes indicating what they thought the study was about¹. None of them indicated an awareness that the study was concerned with the question of literalness.

The colleagues who acted as assistant experimenters were as follows:

- (1) Mr. J. Fraise, aged 27, a clinical psychologist with experience in using behaviour therapy and relaxation techniques but

¹ The present writer judged that it would be advantageous from the methodological point of view if these assistant experimenters performed their task without knowing that the experiments were concerned with literalness.

- with little or no experience in using formal hypnotic techniques.
- (2) Mr. R. Cassidy, aged 44, an educational psychologist with experience in using hypnotic procedures.
 - (3) Ms. S. Paterson, aged 29, an educational psychologist with experience in using hypnotic procedures.
 - (4) Dr. J.A. Crocket, aged 71, a part-time general practitioner with experience in using hypnotic procedures.

Subjects

There were seven subjects in the Normal/Live/Other Hypnotists Group. Two subjects (a male and a female college lecturer) were seen at the Psychology Department, Ravenscraig Hospital, with Mr. J. Fraise acting as the assistant experimenter. Two subjects (a housewife and a student) were seen at Woodside Health Centre, Glasgow, with Mr. R. Cassidy acting as the assistant experimenter. Two subjects (trainee nurses) were seen at the Southern General Hospital, Glasgow, with Ms. S. Paterson acting as the assistant experimenter. The final subject, a nursing officer, was seen at the Southern General Hospital, Glasgow, with Dr. J.A. Crocket acting as the assistant experimenter.

Procedure

The procedure was essentially the same as with subjects in the Normal/Live Group but with a colleague rather than the present writer acting as the hypnotist and administering the test procedures. The present writer sat in on all sessions.

The present writer arranged to meet the colleague about half an hour before the first (in Dr. Crocket's case, the only) subject was due to attend. Procedural aspects of the experiment were discussed and the colleague was given time to read through the script containing the hypnotic induction and test procedures. The present writer explained to the colleague that he did not wish to make it obvious to the subject that the material was being read from a script and therefore it would be helpful if the colleague tried to speak in a natural manner, as if he or she were not reading from a script.

The present writer welcomed the subject and read the introductory material used with subjects in the Normal/Live Group, although he explained that the hypnotist would be the colleague, not himself.

After the subject was asked to close his or her eyes, the present writer quietly handed the colleague the script containing the hypnotic induction and test procedures. During the "dehypnotization" procedure (the countback from 20 to one) the colleague quietly handed the script back to the present writer so that when the subject opened his or her eyes, it would not be obvious that the material had been read from a script. The present writer engaged the subject in some neutral conversation for a minute or two and then paused whereupon the colleague jingled some keys. After observing whether the subject executed the post-hypnotic suggestion (lifting the book that had been placed on the floor earlier, when the subject's eyes were closed) the present writer said, "Well thank you very much, ___¹. That's the end of the experiment." The present writer then conducted the post-experimental inquiry.

The Distorted/Tape Group A

In discussing Erickson's assertions about literalness in the last chapter, the present writer speculated that Erickson might have cued literal responses in "hypnotized" subjects by the way in which he asked questions. In order to ascertain whether literal responses can be cued by the way in which questions are asked, a number of Stage I Experiment subjects were asked test-questions in a "distorted" fashion. Thus, the words "mind" and "like" were stressed as follows:

Would you mind telling me your first name?

Do you mind telling me where you were born?

Would you like to tell me when you last visited Edinburgh?

Would you mind telling me your mother's maiden name?

Do you mind telling me your father's first name?

If a substantial proportion of individuals respond to such "distorted" questions with literal replies, this finding would justify serious consideration of the possibility that Erickson cued literalness in his subjects, although it would not, of course, definitely establish that that was the case.

Subjects

For the reason explained below, the present group comprised only four subjects. They were all nursing staff and were seen at the Psychology Department, Ravenscraig Hospital.

¹ The subject's name.

Procedure

The present writer tape-recorded a hypnotic induction and test sequence of the type used with the Normal/Tape Group but with the test-questions being "distorted" in the manner described above. The experimental procedure was the same as with the Normal/Tape Group.

As indicated in the next chapter, none of the four subjects exhibited clear-cut literal responses of the type described by Erickson as typical of "hypnotized" subjects, so the present writer made another tape-recording, attempting to stress the key words in the test-questions more strongly. The subjects exposed to the latter recording will be referred to as the Distorted/Tape Group B.

The Distorted/Tape Group B

Subjects

The 15 subjects comprising this group were all seen at the Psychology Department, Ravenscraig Hospital. With the exception of one subject, a housewife, all were nursing staff.

Procedure

The procedure was the same as with the Distorted/Tape Group A.

The Distorted/Live Group

As indicated in the next chapter, despite the use of "distorted" test-questions, the majority of subjects in the Distorted/Tape Group B responded non-literally. The present writer considered the possibility that "distorted" questions would be more likely to elicit literal responses if they were administered "live" rather than via a tape-recording.

Subjects

The Distorted/Live Group comprised 10 subjects of various occupational backgrounds. Seven were seen at the Psychology Department, Ravenscraig Hospital, and three were seen at Woodside Health Centre, Glasgow.

Procedure

The procedure was essentially the same as that with subjects in the Normal/Live Group but with the test-questions being asked in a "distorted" manner. Since much of the experimenter's (i.e. the present writer's) time was taken up with reading the script,

his wife, Dr. E.C. McCue, sat in on these sessions to observe and note subjects' responses.

During the session with the third subject in this group, the experimenter forgot to "distort" the first test-question. The subject gave a normal, non-literal response to that question. The experimenter "distorted" the following questions and although the subject did not give purely literal responses of the type described by Erickson as typical of "hypnotized" subjects, there was some tendency towards literal responses. For example, in response to, "Do you mind telling me where you were born?" the subject replied, "No. No, I don't mind. Stirling." Wondering whether the contrast between asking a question in a normal fashion and then in a "distorted" fashion would make literal responses more likely, the experimenter deliberately desisted from "distorting" the first test-question with three other subjects. The results of this variation are discussed in the next chapter.

The Miscellaneous Group

Subjects

The three subjects comprising what will be termed the Miscellaneous Group were all seen at the Psychology Department, Ravenscraig Hospital. They were all nursing staff.

Procedures

For the first subject in this group, the hypnotist was the present writer's wife, Dr. E.C. McCue, and the procedure was similar to that used with subjects in the Distorted/Live Group. The present writer made some introductory remarks, noted the subject's responses during the session and conducted the post-experimental inquiry. The time intervals between some of the items during the session were probably different from those in the standardized format adopted with the Distorted/Live Group.

The second subject in this group was treated like a subject in the Normal/Live Group, although the time intervals between items of the session were not entirely comparable to those in the standardized format used with the Normal/Live Group. Hence, the subject is not included in that group. The hypnotist was the present writer and his wife acted as an observer.

The third subject was treated in a similar way to subjects in the Normal/Live Group but the suggestions pertaining to a butterfly landing on the subject's hand and the subject's hearing bells were not given because of lack of time. (The subject took a long time over the hand levitation part of the sequence, first developing a levitation of the right hand and then a levitation of the left hand.) The hypnotist was the present writer and his wife acted as an observer.

STAGE II EXPERIMENTS

The present writer tried to select highly responsive subjects for Stage II Experiments, which were designed for three purposes:

- (1) To test Erickson's (1967) assertion that when "hypnotized", highly responsive subjects ("somnambulists") exhibit unusual choices when asked where they would place hypothetical pictures of persons or objects present in the room.
- (2) To examine Erickson and Erickson's (1941) claim that subjects executing post-hypnotic suggestions enter a trance state which can be perpetuated if a suitable intervention is made.
- (3) To provide further data on the question of literalness.

Subjects

Sixteen subjects completed Stage II Experiments¹. Twelve of these subjects had participated in Stage I Experiments and were invited to participate in Stage II Experiments after giving performances suggestive of high hypnotizability. One subject participated in a Stage II Experiment after giving evidence of possible high hypnotizability in a clinical context. (She was being seen by a clinical psychologist colleague of the present writer for treatment of a thunderstorm phobia.) The remaining three subjects had participated in group screening with the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A).

A total of 27 subjects participated in group screening sessions with the HGSHS:A. The main procedures were administered via a tape-recorded sequence in the present writer's voice. Details of the subjects are given in Appendix I. Ten were trainee nurses

¹ As will be indicated shortly, another two subjects attended for Stage II Experiments but the sessions were not completed.

and were seen during a session at the Southern General Hospital, Glasgow. Two groups of subjects totalling 17 were seen at the Psychology Department, Ravenscraig Hospital. Most of them were recruited via a local yoga teacher.

Of the 27 subjects who were tested with the HGSHS:A, five who scored in the range 9 - 11 were invited to participate in Stage II Experiments. One of these subjects failed to contact the present writer to arrange an appointment and so was not seen. Another subject, a 40 year-old housewife who had scored 9 on the HGSHS:A, scored only 2 or 3 on the SHSS:C¹. In view of this low score, which suggested that the subject was probably not a very "good" hypnotic subject, the present writer decided against proceeding with the second part of the Stage II Experiment. The three subjects who, following group screening with the HGSHS:A, completed Stage II Experiments, obtained scores of 5, 6 and 8 on the SHSS:C and thus exhibited only moderate to moderately high susceptibility.

In a further attempt to obtain responsive subjects for Stage II Experiments, the present writer used the Creative Imagination Scale (CIS) as a group screening instrument. The attraction of the CIS compared with the HGSHS:A is that it takes considerably less time to administer.

The CIS was administered via a tape-recording² to a total of 13 subjects, details of whom are given in Appendix I. Two of these subjects, contacted via a local yoga teacher, were a husband and wife and were tested together in the Psychology Department at Ravenscraig Hospital, Greenock. The other 11 subjects (probably mainly nursing staff) were seen at Gartnavel Royal Hospital, Glasgow.

One subject who scored 36 (out of a possible maximum of 40) on the CIS agreed to participate in a Stage II Experiment. The SHSS:C was not administered entirely correctly during the first part of the Stage II Experiment, but it is probable that the subject would have obtained a score of about 7 on the scale if it had been

¹ There was some doubt as to whether the subject had passed the "Moving Hands Apart" item of the SHSS:C.

² The present writer is grateful to Dr. B.J. Fellows of the Department of Psychology, Portsmouth Polytechnic, for supplying him with a tape-recording of the CIS suggestion sequence.

administered correctly. During the second part of the Stage II Experiment, while the subject was listening to the lengthy taped hypnotic induction procedure, he opened his eyes and indicated that he felt that he was not responding properly. The session was therefore abandoned.

In summary, then, it can be said that the present writer's attempts to secure highly responsive subjects through screening with the HGSHS:A and the CIS did not prove fruitful. Of course, it cannot be assumed that none of the subjects who participated in these group screening sessions was highly hypnotically susceptible. It is possible that there were some highly susceptible subjects present but expression of their hypnotic responsiveness was inhibited by aspects of the group situation, preconceptions about hypnosis, or other factors.

Procedure

The procedure in the Stage II Experiments was as follows:

- (1) On coming into the room where the experiment was to be conducted, the subject was introduced to the present writer's wife, Dr. E.C. McCue, and asked to sit down. (Dr. McCue acted as an observer during these experiments and she was one of the "target objects" in the picture positioning tasks [to be described shortly].) The following material was read to the subject from a sheet by the experimenter (the present writer):

Thank you very much for agreeing to come back for another session. I am very grateful to you for giving up your time and helping me in this study.

As before, I can assure you that in this study nothing will be done or said to cause you any embarrassment and there will be no probing into any private or personal matters, nor will your name or address ever be written up in a professional journal. This is a purely scientific study and you can rest assured that nothing improper or unethical will be said or done.

I hope you don't mind Dr. McCue being here with us today. She will be assisting me. If for some reason you object to her being present, I shall of course respect your wishes and ask her to leave.

Today's session will be in two parts and for the first I'd like you to make yourself comfortable in that chair. If there's anything worrying you or if there is anything I can do to help you feel more comfortable, please tell me.

As in the previous session, I'd like to record today's proceedings with a tape recorder. If you have any objection, I shall of course respect your wishes¹.

The experimenter told the subject that he wanted him or her to go into hypnosis. A hypnotic induction procedure was applied and the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C) was administered. Although the SHSS:C manual (Weitzenhoffer & Hilgard, 1962) contains an eye-fixation induction procedure, alternative induction procedures are permissible. In most cases, the experimenter employed an induction procedure in which the subject was asked to focus on a spot on the back of the left or right hand and was then given suggestions for hand levitation and entry into "hypnosis". In other cases, he employed an eye-fixation procedure similar to that in the SHSS:C manual. With the subject's eyes closed, the experimenter read the following material from part of the induction sequence in the SHSS:C manual:

You feel pleasantly drowsy and sleepy as you continue to listen to my voice. Just keep your thoughts on what I am saying. You are going to get much more drowsy and sleepy. Soon you will be deep asleep but you will have no trouble hearing me. You will not

¹ In the case of subjects who had not participated in Stage I Experiments, these comments were not all entirely applicable, so the experimenter varied the wording slightly.

wake up until I tell you to.... Soon I shall begin to count from one to twenty. As I count you will feel yourself going down further and further¹ into a deep restful sleep, but you will be able to do all sorts of things I ask you to do without waking up ... One - you are going to go more deeply asleep Two - down, down into a deep, sound sleep Three - four - more and more asleep Five - six - seven - you are sinking into a deep, deep sleep. Nothing will disturb you. I would like you to hold your thoughts on my voice and those things I tell you to think of. You are finding it easy just to listen to the things I tell you Eight - nine - ten - halfway there - always deeper asleep Eleven - twelve - thirteen - fourteen - fifteen - although deep asleep you can hear me clearly. You will always hear me distinctly no matter how deeply asleep you feel you are Sixteen - seventeen - eighteen - deep asleep, fast asleep. Nothing will disturb you. You are going to experience many things that I will tell you to experience Nineteen - twenty. Deep asleep! You will not wake up until I tell you to. You will wish to sleep comfortably and to have the experiences I describe to you.

I want you to realize that you will be able to speak, to move, and even to open your eyes if I ask you to do so, and still remain just as hypnotized as you are now. No matter what you do, you will remain hypnotized until I tell you otherwise All right, then

(From Weitzenhoffer & Hilgard, 1962, pp.14-15)

The experimenter then proceeded to administer the test-suggestions of the SHSS:C with his wife, Dr. E.C. McCue, observing and noting the subjects' responses².

¹ The wording in the SHSS:C manual at this point is "farther and farther" but the experimenter substituted "further and further" since the latter form seems to be more common among British speakers, at least in Scotland.

² In his experience with the SHSS:C, the present writer has found it difficult to combine the tasks of observing a subject carefully while at the same time administering the scale items. For this reason, he believes that it is helpful to have an observer present to note the subject's responses.

After completion of the administration of the SHSS:C, the subject (now "dehypnotized") was asked to take a seat in a waiting room for a few minutes. If the subject needed to use a lavatory, he or she was given access to one.

- (2) On returning to the room in which the experiment was being conducted, the subject was told that the experimenter would like him or her to go into hypnosis again, but this time lying on a bed, listening to a tape-recording. A transcript of the recording, which lasted approximately 52 minutes, is given in Appendix II. (A lengthy induction procedure was employed since Erickson [é.g. Erickson, 1952] claimed that some workers fail to devote sufficient time to the induction of hypnosis.) The lengthy induction procedure was administered via a tape-recording rather than "live" in order to standardize the procedure and to make it less laborious for the experimenter.
- (3) After the experimenter's voice on the tape-recording had asked the subject to open his or her eyes and yet remain deeply hypnotized, the experimenter walked over to the bed and held a small card out in front of the subject bearing a statement of the form, "This is the summer of 1983." (The season and year indicated on the card varied in accordance with the actual season and year pertaining at the time.) The experimenter then made a request that permitted a possible literal response. With two subjects, the question took the form, "Would you mind reading this to me?" and with 13 subjects the question took the form, "Do you mind reading this to me?" (In the case of one subject, the first of the 16 subjects who completed Stage II Experiments¹, no such question was asked since the format of the session at that time did not include the presentation of a card and the asking of the associated test-question.) As will be seen in the next chapter, all of the subjects who were handed the card read it and thus exhibited a non-literal response.
- (4) After the subject had read the card, the experimenter said, "Would you like to come over here?" and indicated by gesture that he wished the subject to get off the bed and go across the room. Although the form of this question invited a possible literal response ("Yes" or "No", meaning that the

¹ As indicated earlier (pp.219-220), two other subjects attended for Stage II Experiments but the sessions were not completed.

subject would or would not like to get off the bed and go in the direction indicated by the experimenter), all of the subjects obliged and followed the experimenter to the position that he indicated - a few feet in front of Dr. E. C. McCue, who was sitting in a chair with her back to a window.

The experimenter read the following from a card^{1,2}: "Where in this room if you had a three by four foot picture of Dr. McCue, where in this room would you hang it? Consider carefully, and when you have made up your mind, specify exactly." After giving his or her response, the subject was asked to accompany the experimenter to another position, a few feet in front of a 4½" x 6" black and white photograph of a man. The photograph was positioned in such a way that the space above and behind it would not have been suitable, by normal criteria, for hanging a three by four foot picture. Thus, in the Stage II Experiments conducted in the Psychology Department at Ravenscraig Hospital, the photograph was positioned in such a way that the space behind was a corner of the room. The experimenter directed the subject's gaze to the photograph and read the following from a card^{1,2}: "Where in this room if you had a three by four foot picture of this man, where in this room would you hang it? Consider carefully, and when you have made up your mind, specify exactly." After giving his or her response, the subject was asked to accompany the experimenter to another location in the room, a position a few feet in front of a bowl of fruit which was placed on a radiator under a window. The experimenter directed the subject's gaze to the bowl of fruit and read the following from a card^{1,2}: "Where in this room if you had a three by four foot picture of this bowl of fruit, where in this room would you hang it? Consider carefully, and when you have made up your mind, specify exactly."

¹In actual fact, the experimenter soon got to know the questions so well that he did not need to read the cards. Nevertheless, he looked at them when asking the questions, as if he were reading them.

²In the case of the first of the 16 subjects who completed Stage II Experiments, the questions about pictures were probably asked without the use of cards.

After reading the cards and while awaiting the subject's responses, the experimenter was careful not to look around the room and thereby possibly influence the subject's selection of positions for the hypothetical pictures.

- (5) After the subject had given his or her response to the third picture placement question, the experimenter directed the subject's attention to an armchair and said, "Would you like to sit down and close your eyes?" (another question testing for literalness). The experimenter also sat down and after a brief interval said:

As I jingle my keys, you will invariably get up from your chair and lift the pen off the floor with your left hand and pass it to me.

The above post-hypnotic suggestion was repeated and then the experimenter said:

Shortly I am going to wake you up from this state of hypnosis and when you wake up it will be like waking from a deep, dreamless sleep - you will not remember what happened during the hypnosis; you will be awake, comfortable and relaxed, but unable to recall what you did or said while you were hypnotized. It can be comfortable and pleasant to forget things you don't need to remember.

These suggestions for post-hypnotic amnesia were repeated and the subject was told that the experimenter was going to count back from 20 to one, whereupon the subject would be wide awake, relaxed and refreshed. Before the experimenter counted back to one, a pen was placed on the floor, near the subject's feet. After counting back from 20 to one, the experimenter immediately engaged the subject in some conversation not pertaining directly to the experiment. For example, the experimenter might ask the subject about some aspect of the latter's job.

- (6) After a minute or two of conversation, the experimenter reached for a nearby ring of keys and jingled them. If the subject made no immediate response, the jingling was continued for a short period (perhaps up to about 20 - 25 seconds). As will be indicated in the next chapter, all but one of the subjects went to pick up the pen. This action was interrupted by the experimenter's reaching forward and taking hold of the subject's wrist or hand. At this point the experimenter also

spoke to the subject. Since the experimenter was not reading from a script, there was some minor variation in the actual words used. A typical sequence was as follows: "Wait a moment, stay as you are just now. Would you mind looking at the lampstand in the corner of the room?"¹ After the subject had turned to look at the designated object, the experimenter continued: "If you look round now, you'll notice that the bowl of fruit is no longer in the room and there's a small ginger cat there instead. Do you see it?"²

As will be indicated in the next chapter, two of the 15 subjects who executed the post-hypnotic act reported seeing the suggested cat. After engaging these two subjects in some dialogue (which is discussed in the next chapter), the experimenter looked down at the pen on the floor and cued completion of the post-hypnotic act by saying, "O.K., you can go ahead now." In the case of the subjects who did not report seeing the suggested cat, the experimenter similarly cued completion of the post-hypnotic act, but without preceding this with any prolonged dialogue.

- (7) Following the completion of the post-hypnotic act, the subject was engaged in further conversation (unrelated to the experiment) for a minute or two. (In the case of the one subject who did not reach for the pen following the jingling of keys, neutral conversation was similarly resumed.) The subject was then asked to get up and was taken through the questions about hypothetical pictures again. The procedure was the

¹ If interrupting the execution of a post-hypnotic act in this way serves to prolong the presumed "post-hypnotic trance" described by Erickson and Erickson (1941), and if "hypnotized" subjects tend to give literal responses to questions and requests, a literal response from the subject might be expected at this point.

² According to Erickson and Erickson (1941), "deep trance" phenomena can be elicited from subjects who are arrested in the "spontaneous post-hypnotic trance". It was to test this assertion that the present writer suggested a visual hallucinatory experience to subjects at this point in the Stage II Experiment.

same as earlier in the experiment, prior to the subject's being "dehypnotized". The experimenter made no mention of the fact that the subject had previously been asked the same questions. (If the subject behaved in the fashion described by Erickson [1967], he or she would display unusual picture positioning choices during the period of "hypnosis" but select "reasonable" positions in the "waking state". As will be indicated in the next chapter, only one subject gave markedly unusual responses during the "hypnosis" part of the experiment.)

- (8) On completion of the second round of questions about hypothetical pictures, the subject was asked to sit down. The experimenter then pursued an inquiry into the subject's recollections of the session (i.e. the second part of the Stage II Experiment, which began with the subject's returning to the room and being asked to lie on a bed and listen to a lengthy tape-recorded hypnotic induction sequence). This inquiry was conducted in a similar manner to that pursued with subjects at the end of Stage I Experiments and began with the experimenter's reading some material emphasizing the need for honest reporting (see pp. 206-207). As with Stage I Experiments, the proceedings of Stage II Experiments were tape-recorded, enabling the experimenter to check details after the session. (The part of the Stage II Experiment when the subject was listening to the lengthy taped induction sequence was not recorded, of course, because at that time there was no "live" dialogue between the experimenter and the subject.)
- (9) Towards the end of the session, the subject was asked what he or she thought was the purpose of the experiment - what he or she thought the experimenter was trying to find out. (Through an oversight, this part of the inquiry was not pursued with one subject.) As will be seen in the next chapter, subjects' responses to this part of the inquiry were somewhat vague and, not surprisingly, no subject revealed a correct understanding of the specific aims of the experiment.

Comments

It can be seen from the above descriptions of the Stage I and Stage II Experiments that suggestions were given for post-hypnotic amnesia. Not surprisingly, these suggestions only appeared to be effective with a minority of the subjects.

No "reversal cue" to lift the suggested amnesia was included in the experimental procedure. The reason for this was as follows: In an attempt to minimize discussion of the experiment and inter-communication between subjects and subjects-to-be, it was thought advisable to desist from trying to lift any post-hypnotic amnesia that occurred since, if Erickson was right, the very subjects who exhibited post-hypnotic amnesia would be the ones most likely to display interesting features of behaviour such as unusual picture placement choices and renewed hypnotic-like behaviour following the interruption of the execution of post-hypnotic suggestions. If such unusual behaviour occurred and if subjects had been able to remember it by virtue of reversal of post-hypnotic amnesia, they might have been inclined to discuss it with future subjects, whose behaviour could then have been influenced.

STAGE III EXPERIMENTS

As will be indicated in the next chapter, three Stage II Experiment subjects were invited to return for a further session (a Stage III Experiment). Two of these subjects returned for a third session. The procedures employed with these subjects differed and will be described in some detail in the next chapter.

NON-EXPERIMENTS

If an experimenter applies a hypnotic induction procedure and finds that subjects then exhibit literalness, make unusual choices when asked to select positions for hypothetical pictures, and display hypnotic-type behaviour after being interrupted in the execution of a post-hypnotic suggestion, these observations might be seen as supportive of the contention that hypnotic induction procedures bring about a rather special altered state. However, a cautious investigator might wish to exclude the possibility that the subjects' behaviour arises not from a special trance state but from cues in the experimental situation or from the subjects' knowledge of or expectations about the behaviour of "hypnotized" persons. With regard to literalness, an investigator might also wish to exclude the possibility that the phenomenon arises from relaxation, drowsiness or lethargy rather than from something more uniquely "hypnotic"¹.

¹For footnote, see page 229.

Light could be thrown on some of these possibilities through the application of Orne's real-simulator methodology (see pp. 71-73). If it transpired that both "real" and simulating subjects exhibited literalness and the other phenomena under investigation following a hypnotic induction procedure, one could conclude that the behaviour of the "real" subjects might have arisen from cues in the experimental situation or from subjects' expectations or knowledge of hypnosis. (Such a finding would not, of course, necessarily mean that the "reals" behaved the way they did because of demand characteristics, prior knowledge or expectations - it is conceivable that "reals" and simulators behave alike for different reasons.) If it transpired that the "reals" exhibited literalness and the other effects under investigation but the simulators did not, this finding would be in line with the assertion that responsive subjects react to hypnotic induction procedures by entering a special state that gives rise to counter-expectational behaviour. As pointed out in Chapter III (p. 72), however, differences between "real" and simulating subjects' behaviour may arise not from some "essence" feature of a "hypnotic state" but from the different instructions the two sets of subjects receive, the different situations they find themselves in, or pre-existing personality differences related to their being or not being high on hypnotic susceptibility.

In order to ascertain whether the phenomena under investigation could arise from cues in the experimental situation or from subjects' knowledge of or expectations about the behaviour of "hypnotized" persons, the present writer did not use the real-simulator technique but another procedure, which has been described by Orne (1962, 1970) - the Non-Experiment. Orne (1970) writes:

This technique for uncovering the demand characteristics of a given experimental design is the preinquiry, or "nonexperiment". This procedure was independently proposed

Footnote from p.228:

Since the present writer obtained no clear-cut evidence in support of Erickson's assertion that "hypnotized" subjects are peculiarly literal in response to questions and requests, he did not conduct further investigations to ascertain whether the phenomenon arises from relaxation, drowsiness or lethargy.

by Riecken (1962). A group of persons drawn from the same population as the actual experimental subjects will be selected from and are asked to imagine that they are subjects themselves. They are shown the equipment that is to be used and the room in which the experiment is to be conducted. The procedure is explained in such a way as to provide them with information equivalent to that which would be available to the actual experimental subjects. However, they are not exposed to the experimental treatment; it is only explained. (p.240)

Compared with the real-simulator technique, the Non-Experiment procedure has the advantage of not requiring a second experimenter who is blind to the identity of experimental subjects (i.e. whether subjects are "reals" or simulators). Another advantage of the Non-Experiment procedure is that it does not require prior hypnotic susceptibility screening to select two groups of subjects, one high and one low on hypnotic responsiveness. (As already indicated, the fact that "real" and simulating subjects differ on a predetermined trait - hypnotic responsiveness - contributes to the difficulty in interpreting the results of studies that reveal a difference between the behaviour of "real" and simulating subjects.)

Subjects

Thirteen individuals, details of whom are given in Appendix I, are included in the final "subject pool" for Non-Experiments. Eleven of these subjects were seen in part of an unoccupied ward at the Southern General Hospital, Glasgow; one subject was seen at the Psychology Department, Ravenscraig Hospital; and the other subject was seen in a room at Woodside Health Centre, Glasgow.

Procedure

During Non-Experiments, subjects were taken through the procedures of the second part of the Stage II Experiment and were asked how they thought a "good" hypnotic subject would respond. They were not exposed to the hypnotic induction procedure.

To avoid confusion in describing the Non-Experiments, the word subject will be applied to the actual subject participating in this research and the abbreviation S will be used to refer to the hypothetical subject whose behaviour was under consideration by the Non-Experiment subjects. For example; a statement such as, "The subject thought that the S would sit down and close his eyes", means that the subject in the Non-Experiment indicated that a typical good hypnotic subject would sit down and close his eyes. The abbreviation E will similarly be used to refer to the experimenter in the hypothetical experiment.

Subjects were seen individually. On coming into the room for the session, the subject was introduced to the present writer's wife, Dr. E.C. McCue¹. It was explained that she would be assisting the experimenter (the present writer). The subject was thanked for coming along and it was explained that no attempt would be made to hypnotize him or her. The subject was asked whether he or she would mind the session being tape-recorded². The following material was then read to the subject from a sheet³:

People have different ideas about hypnosis and how hypnotized subjects behave. I'd like to hear from you how you think a typical good hypnotic subject would respond in an experiment that I'll shortly describe. By "typical good hypnotic subject", I mean someone who is able to go into a very deep state of hypnosis. I shall describe an experiment to you in detail and ask you to tell me what you think the subject would do, say, and experience. It may be that you are not very familiar with hypnosis and how hypnotized people behave, but don't worry; I'm

¹Dr. McCue sat in on these sessions to observe and note subjects' responses since the present writer's time and attention were largely taken up with administering the Non-Experiment procedure. As in the Stage II Experiments, Dr. McCue also constituted one of the "target objects" for questions about hypothetical pictures.

²No subjects participating in the present writer's research objected to their sessions being tape-recorded.

³In the case of Subjects 11, 12 and 13 the sheet was not available, so the experimenter paraphrased its contents from memory.

still interested in your opinions and guesses, which may well be correct. I'm simply interested in finding out what you think a good hypnotic subject would do and experience in the situation that I'll be describing. Before I start to describe the experiment, is there anything you're not sure about? Is there anything I can clarify?

All right, now let's assume that the experiment is taking place here in this room. The subject, who is not yet hypnotized, is sitting where you are now and he is assured that nothing will be done to cause any embarrassment, that there will be no probing into any private or personal matters, and that his name or address will not be written up in a professional journal. By the way, although I say "he" and "his" the subject could just as well be female, so if you prefer to think of the subject as a women, please feel free to do so. The experimenter says he hopes the subject won't mind Dr. McCue being present and that if he does, she will be asked to leave. He is told that the experimenter would like to record the proceedings with a tape recorder but if the subject has any objection his wishes will be respected. The experimenter asks the subject to lie on the bed [at this point the experimenter pointed to a bed near at hand] and explains that he would like the subject to go into hypnosis by listening to a recording of the experimenter's voice from a tape recorder. [At this juncture the experimenter pointed out a second Grundig CR 485 cassette tape recorder which was positioned beside the bed. In the case of Subjects 11, 12 and 13, however, this second tape recorder was not physically present during the Non-Experiments.] The tape-recording then plays for over three-quarters of an hour and contains suggestions for a very deep state of hypnosis. Before the tape recorder is switched off, the voice says, "And now, as you remain very very very deeply hypnotized, I'd like you to slowly open your eyes, remaining very very deeply hypnotized ... Slowly opening your eyes now but remaining very very deeply hypnotized."

At this point the subject was taken across to a bed and asked to lie on it. (In the case of the one Non-Experiment subject seen at Woodside Health Centre, Glasgow, the session was conducted in a room without a bed, so the introductory comments were modified accordingly and the subject was asked

to sit in a chair rather than lie on a bed.) The subject was reminded that the S would have just heard the E's voice on the tape-recording asking the S to open his eyes but remain deeply hypnotized. The experimenter explained to the subject that the E would present a card to the S and say, "Do you mind reading this to me?" As in an actual Stage II Experiment, the experimenter presented a card to the subject bearing a simple sentence about the season and the year, e.g. "This is the summer of 1983". The experimenter asked, "What would the subject's response be?"¹ (The experimenter wished to gauge whether the subject thought the S would give a literal response.)

The experimenter explained that at this point in the hypothetical experiment the E would say to the S, "Would you like to come over here?" (In two cases, slightly different wording was used, unintentionally, viz. "D'you mind coming over here?" and, "Would you mind coming over here?") The experimenter asked the subject, "What would the subject's response be?" (This question was again intended to ascertain whether the subject thought the S would respond in a literal fashion.) The experimenter took the subject to a position in front of Dr. McCue and, as in a Stage II Experiment, read the following from a card:

Where in this room if you had a three by four foot picture of Dr. McCue, where in this room would you hang it? Consider carefully, and when you have made up your mind, specify exactly.

Once again, the experimenter asked the subject, "What would the subject's response be?" The same procedure was then repeated with the photograph of the man and the bowl of fruit as the "target objects". In the case of three subjects, the bowl of fruit was not available and a small ornament was substituted as a "target object".

¹ In eliciting the subject's thoughts about the likely behaviour of a deeply hypnotized S at various points throughout the hypothetical experiment, the present writer attempted to standardize his inquiry procedure by employing the question, "What would the subject's response be?" Some early subjects seen for Non-Experiments were excluded from the "final subject pool" because the present writer had failed to employ such a standardized form of questioning.

After completing the round of questions pertaining to hypothetical pictures, the experimenter explained to the subject that the E would say to the S, "Would you like to sit down and close your eyes?" The subject was asked, "What would the subject's response be?" (Once again, the experimenter was trying to ascertain whether the subject thought the S would respond in a literal fashion.)

The subject was asked to sit down and the experimenter explained that in the hypothetical experiment the E would say the following to the S:

As I jingle my keys, you will invariably get up from your chair and lift the pen off the floor with your left hand and pass it to me.

The experimenter explained that this suggestion would be repeated, and he reiterated it to the subject. He then explained that in the hypothetical experiment the E would go on to say:

Shortly I am going to wake you up from this state of hypnosis and when you wake up it will be like waking from a deep, dreamless sleep - you will not remember what happened during the hypnosis; you will be awake, comfortable and relaxed, but unable to recall what you did or said while you were hypnotized. It can be comfortable and pleasant to forget things you don't need to remember.

The experimenter explained that this statement would be repeated and he repeated it to the subject. The experimenter then explained to the subject that the E would say to the S that he was shortly going to wake him up by counting back from 20 to one and when he got back to one the S would be wide awake, relaxed and refreshed. The subject was asked what he thought the S would do when the E had counted back to one.

The experimenter explained that the S would be engaged in neutral conversation (i.e. conversation about a matter such as the S's job or the weather) for a short period and then the E would pick up his keys and jingle them. The experimenter demonstrated that action by jingling some keys and asked the subject what the S's response would be. If the subject indicated that the S would pick up the pen that was lying on the floor, the experimenter asked the subject to do that and demonstrated

the interruption of the post-hypnotic act by reaching forward and taking hold of the subject's wrist or hand. The experimenter spoke to the subject along the following lines: "... just before he [the S] gets to the pen, the experimenter reaches forward, takes hold of the subject's wrist and says, 'Wait a moment. Stay as you are just now. Would you mind looking at the wall over there?' What would the subject's response be?" (Because the experimenter was not reading from a script when he described the interruption of the post-hypnotic act, there was some minor variation in the wording he used with subjects. In some cases, for example, the sentences, "Wait a moment/Stay as you are just now" were omitted.) The experimenter continued his description of the hypothetical experiment along the following lines: "The experimenter says at this point, 'If you look round now, you'll notice that the bowl of fruit [or ornament] is no longer in the room and there's a small ginger cat there instead. Do you see it?' What would the subject's response be?" After the subject had ventured his or her opinion, the experimenter explained that the E would direct the S's attention to the pen again and say, "O.K., you can go ahead now." The subject was asked what the S's response would be. After the subject had given his or her opinion, the experimenter explained that in the hypothetical experiment some more neutral conversation would ensue, followed by the E's asking the S to stand up. The experimenter then took the subject through the picture positioning questions again, for each "target object" asking the subject what the S's response would be.

The subject was then asked to venture his or her opinion as to what the S would recall of the session during a post-experimental inquiry of the type incorporated in the Stage II Experiments.

TESTS FOR LITERALNESS WITH "UNHYPNOTIZED" ADULTS,
ADOLESCENTS AND CHILDREN

Informal Tests for Literalness with
"Unhypnotized" Adults and Adolescents

In his paper Literalness: An Experimental Study¹, Erickson claims that "hypnotized" subjects are peculiarly literal in

¹ Published in Rossi (1980c, pp. 92-99).

response to questions and requests. He also claims that "Such literalness of response is decidedly infrequent in everyday living - when it does occur then . . . is suspect of being a deliberate play, as it often is" (Rossi, 1980c, p.92). In order to examine this claim that literalness of response is rare in everyday situations, the present writer and his wife conducted some informal tests for literalness with colleagues, patients, and relatives of patients¹.

Procedure

The procedure was very simple. Without being informed that they were being tested, 26 subjects (24 adults and two adolescents) were asked ordinary, casual questions such as, "Would you like to come through [to my office]?", "Do you mind telling me the time?", "Would you like to take a seat over there?" and "Do you mind telling me your [telephone]number?" The subjects' responses, i.e. what they did and said and whether they exhibited head movements, were noted. None of the subjects was informed that the questions had constituted test items. (Since the test procedure involved no intrusion into private matters or gross interference with the subjects' activities, the present writer and his wife felt no ethical obligation to divulge to the subjects that their responses had been noted as part of some research.)

As will be seen in the next chapter, no purely literal responses were exhibited by any of the subjects.

Tests for Literalness with "Unhypnotized" Primary School Children

Although he claimed that literalness is exhibited by "hypnotized" subjects, Erickson offered no detailed explanation as to how this alleged phenomenon arises. If literalness is indeed a characteristic of individuals who, by other criteria, are judged to be "hypnotized", and if literalness is also common among children, one could hypothesize that hypnotic induction procedures facilitate a shift to a more immature or child-like understanding of and use of language. The present writer is unaware of any available data indicating that children are

¹ The present writer works as a clinical psychologist and his wife works as a psychiatrist.

considerably literal in response to questions such as, "Do you mind telling me your name?" He decided, therefore, to test a group of primary school children to ascertain whether they would tend to answer questions in a literal fashion.

Procedure

Thirty-two primary school children aged from just under 5 to 11.3 years were tested individually during an afternoon visit to a primary school in Gourock in December 1983. (The present writer is grateful to the school's headmaster, Mr. J. Currie, for his permission and assistance in letting this study be carried out.)

On coming into the testing room, each child was shown, in succession, some (in nearly all cases, four) plates from the Ishihara colour blindness test (Ishihara, 1936). While indicating each plate, the experimenter asked the subject what number he or she saw. The experimenter worded his questions in a way that would permit literal responses; in most cases he alternated between, "Do you mind telling me what number you see there?" and "Would you like to tell me what number you see there?"

The time taken for testing each child was only a minute or two.

As well as making a written note of subjects' responses at the time, the experimenter tape-recorded what they said (using a Grundig CR 485 cassette tape recorder) so that later he could double check the responses given.

As will be indicated in the next chapter, no literal responses were noted.

SUPPLEMENTARY EXPERIMENTS CONCERNED WITH LITERALNESS

As indicated earlier in this chapter, questions were embodied in the Stage I and Stage II Experiments to ascertain whether subjects who had been exposed to a hypnotic induction procedure would give literal responses of the type described by Erickson as typical of "hypnotized" subjects. Except in the case of some subjects to whom the test-questions were put in a deliberately "distorted" manner, no clear-cut literal responses were observed. In order to exclude the possibility

that this lack of literalness resulted from some peculiarity of his own voice, pronunciation, or rate of speech, the present writer recruited the assistance of some colleagues who acted as hypnotists in some Stage I Experiments. However, the subjects so tested (the Normal/Live/Other Hypnotists Group) also failed to exhibit literal responses of the type described by Erickson. In these latter experiments, the hypnotists read the hypnotic induction and test procedure from a script. In order to exclude the possibility that the absence of literal responses might have arisen from the fact that the procedure was read from a script, the present writer recruited the assistance of his wife, Dr. E.C. McCue, to act as the hypnotist in some experiments with four subjects. In these experiments, a hypnotic induction procedure was administered and test-questions were asked but the hypnotist did not read from a script.

Details of the subjects are given in Appendix I. All were female. Subjects 1 and 2 had previously participated in Stage I and Stage II Experiments and had obtained scores of 10 and 5 respectively on the SHSS:C. Subjects 3 and 4 had not previously participated in the present writer's research. They were invited to participate in these experiments by the present writer, who knew them through his work as a clinical psychologist at Ravenscraig Hospital, Greenock.

The procedures employed with the four subjects differed somewhat and each experiment is described in turn in the next chapter (pp. 321-327).

As indicated at various points in this chapter, the present writer's wife was often present during experiments. One could ask, therefore, whether her manner of speaking to subjects and asking test-questions in the experiments presently under consideration closely mimicked the present writer's. If so, her value as a "control hypnotist" would be questionable. The present writer does not, however, believe that there is a problem regarding this matter, since there are distinct differences between his and his wife's speech: the present writer's accent is generally recognized as being English whereas his wife's is recognizably Scottish; the present writer's voice is lower pitched than his wife's, and the latter tends to speak more quietly to subjects in a hypnosis setting.

As will be indicated in the next chapter, none of the subjects in these supplementary experiments exhibited literal responses of the type described by Erickson as typical of "hypnotized" subjects.

CHAPTER VI

AN INVESTIGATION OF SOME OF ERICKSON'S CLAIMS

BEARING ON THE STATE — NON-STATE ISSUE, II:

RESULTS

EVIDENCE FROM STAGE I EXPERIMENTS

REGARDING LITERALNESS

The responses of the 84 Stage I Experiment subjects are summarized in Tables I - VIII¹ in Appendix III. In the case of 54 of these subjects, questions were asked in a normal manner to test Erickson's assertion that "hypnotized" subjects exhibit literalness. As would be expected, some of these subjects appeared to be low on hypnotic responsiveness. Therefore, failure by them to exhibit literalness is not necessarily disconfirmatory of Erickson's assertion. However, it can be seen from Tables I, II, III, IV and VIII that a substantial number of subjects gave positive responses to suggestions for hand levitation, hearing church bells, etc. In conventional hypnotic state terms, these subjects could be described as having been at least "lightly hypnotized" and in the case of the very responsive subjects, the conventional term "deep hypnosis" could have been applied. Accordingly, if Erickson was right about literalness, one might have expected a good number of the subjects participating in Stage I Experiments to display this phenomenon.

With the remaining 30 Stage I Experiment subjects, whose responses are summarized in Tables V - VIII², the questions were asked in a deliberately "distorted" fashion in order to see whether that would cue literal responses. This variation was included because the present writer wondered whether Erickson obtained literal responses from "hypnotized" subjects artefactually, through speaking to them differently than he did to subjects whom he did not judge to be "hypnotized".

¹ Responses to the suggestions for "stuck down eyelids" have not been included in Tables I - VIII since many subjects did not appear to make an effort to open their eyes.

² As explained in the last chapter, the Miscellaneous Group (whose responses are summarized in Table VIII) comprised three subjects, two of whom were asked test-questions in a normal manner and one who was asked test-questions in a "distorted" manner.

The responses of the 84 Stage I Experiment subjects will be discussed in some detail. It will be seen that the results of the investigations provide no convincing evidence in support of Erickson's assertion that literalness is a spontaneous manifestation occurring in responsive subjects who are exposed to hypnotic induction procedures.

The Normal/Tape Group

The responses of the 15 subjects in this group are summarized in Table I in Appendix III. It can be seen that the overwhelmingly predominant verbal response to the test-questions was a normal, non-literal one¹. For example, Subject 2, a 24 year-old nurse who appeared to be a responsive hypnotic subject², answered the question, "Do you mind telling me your father's first name?" by saying, "Duncan."

After being asked, "Would you like to tell me when you last visited Edinburgh?" Subject 8 answered, "Don't know" and also exhibited a head movement (unfortunately the record of the experiment did not indicate whether this was a nod or a shake). If the movement was a shake of the head, it would of course have been consistent with the subject's verbal response that she did not know when she last visited Edinburgh. In any case, a shaking or nodding of the head could only be considered a literal response of the type described by Erickson as typical of "hypnotized" subjects if it were unaccompanied by a normal verbal response.

Subject 11 gave no verbal response to the "Edinburgh" question but shook his head slightly. While this could conceivably have been a non-verbal literal response meaning, "No, I do not want to tell you when I last visited Edinburgh", another and perhaps more likely possibility is that he could not remember when he last visited Edinburgh, if indeed he had been there at all.

¹ Stage I Experiment subjects often spoke quietly and were not always heard clearly. Frequently, however, enough was heard to indicate that they were not giving literal verbal responses of the type described by Erickson as typical of "hypnotized" subjects.

² When she attended for a Stage II Experiment, this subject obtained a score of 10 on the SHSS:C.

In retrospect, the present writer believes that a question not requiring efforts to remember would have been a better test item than the "Edinburgh" question.

Regarding head movements, it would, of course, have been possible for the experimenter to ask about them during the post-experimental inquiry. It seems probable, however, that in many cases subjects would not have remembered what head movements they made and exactly what they were thinking at the time. Also, inquiry about this item of behaviour might have focused subjects' attention on the fact that the experiments were concerned with how individuals respond to questions. If subjects then discussed this with others who were yet to act as subjects, the responses of the latter might have been influenced.

Subjects 2 and 6 were invited to return for Stage II Experiments. Subject 2 participated as a Stage II Experiment subject but, despite initially expressing willingness to participate further, Subject 6 eventually declined.

The Normal/Live Group

The responses of the 15 subjects in this group are summarized in Table II in Appendix III. As in the case of subjects in the Normal/Tape Group, no literal verbal responses of the type described by Erickson as typical of "hypnotized" subjects were noted.

During the session with Subject 8, it became apparent that there was a little discrepancy between the basis on which the observer¹ and the experimenter (the present writer) judged whether subjects had nodded or shaken their heads. Unlike the experimenter, who would have noted even slight nodding or shaking of subjects' heads, the observer tended to record such movements only if they were clear or fairly clear. After discussion, it was agreed

¹ As explained in the last chapter, the present writer's wife, Dr. E.C. McCue, acted as an observer during sessions with subjects in the Normal/Live Group, the Distorted/Live Group, and in the sessions with two subjects in the Miscellaneous Group. This was because the present writer's attention was taken up to a considerable extent by his reading a hypnotic induction and test procedure from a script. Dr. McCue also assisted as an observer during Stage II and Stage III Experiments and during Non-Experiments.

that the observer would adopt the experimenter's broader criterion for recording head movements (so that possibly interesting data would not be lost from the study). For the first eight subjects in the Normal/Live Group, where there might have been discrepancies between what the observer and the experimenter would have recorded, no data have been entered in Table II regarding head movements. However, the observer's endorsements on the original record sheets indicate that with none of these eight subjects did she observe any nods or shakes that appeared to be non-verbal literal responses. In the case of Subject 9, the observer's notes regarding head movements were not entirely clear, so again no entries have been made for head movements in Table II. However, Subject 9 gave normal, non-literal verbal responses to all of the test-questions and thus did not behave in the manner described by Erickson as typical of "hypnotized" subjects.

In response to the question, "Do you mind telling me your father's first name?" Subject 4 gave a response that the observer believed might have been, "No, Louis." (The subject was not heard clearly.) Even if the subject did say, "No, Louis" (meaning, "No, I don't mind telling you my father's first name. It's Louis"), this would not constitute a literal response of the type described by Erickson as typical of "hypnotized" subjects since, despite the literal component ("No"), the subject responded to the implication of the question and gave the name without further prompting.

Subjects 2 and 7 gave no verbal responses to any of the test-questions. Interestingly, during the post-experimental inquiry Subject 2 appeared to believe that she had replied to two of the questions.

The observer noted that Subject 5 exhibited a slight shake of her head after she was asked, "Do you mind telling me your father's first name?" This head movement could be seen as consistent with the subject's verbal response, "Don't know." (During the post-experimental inquiry, she indicated that she had been adopted and did not know her real father's first name.)

Subject 6 gave no verbal response to the question about her father's first name.

Subject 8 gave no verbal response to the first test-question but the experimenter noticed slight lateral head movements. During the post-experimental inquiry the subject reported that she did not say anything in response to the question. It is therefore uncertain whether the slight lateral head movements constituted a non-verbal literal response (meaning, "No, I don't mind telling you my first name") or whether they were random and without significance.

Subject 11 exhibited a very slight shake of his head after being asked the "Edinburgh" question, but he gave a normal, non-literal verbal response. The observer could not make out his verbal response to the question about his mother's maiden name.

With regard to Subject 12, the observer noted that on being asked the first test-question ("Would you mind telling me your first name?"), the subject "nodded [her] head up and down a bit but opened eyes and came round. Closed eyes on instruction and then answered [Brenda]." It could be surmised that the head movements constituted a non-verbal literal response (meaning, "Yes, I do mind telling you my name") and that when the subject opened her eyes "the trance was broken" - hence the normal, non-literal verbal response. However, such an argument would be rather speculative. If a literal non-verbal response were to be given, it seems more likely that the subject would have exhibited shaking of her head (meaning, "No, I don't mind telling you my first name").

After being asked the "Edinburgh" question, Subject 12 exhibited a very slight shake of her head but she gave a non-literal verbal response, noted by the observer as: "It was to buy my wedding dress. I think about 1975."

Subject 13 exhibited a slight nodding of her head after being asked two of the test-questions. However, she gave normal, non-literal verbal replies to the questions. In one case she had stopped speaking before she nodded, and in the other case the head movement occurred after she had already spoken some words¹.

Subject 14 exhibited a slight nod of her head after being asked, "Do you mind telling me your father's first name?" but at the same time she gave a non-literal verbal reply.

¹ Head movements of this type (i.e. those occurring after a subject had given a verbal reply) are not recorded in Tables I - VIII.

Subject 11 went on to participate in Stage II and III Experiments. Subject 6 appeared to be high on hypnotic responsiveness but she was not invited to return for a Stage II Experiment because she exhibited a degree of emotional upset during the session.

The Normal/Live/Scriptless Group

The responses of the 15 subjects in this group are summarized in Table III in Appendix III. No literal verbal responses of the type described by Erickson as typical of "hypnotized" subjects were noted.

Subject 1 exhibited a very slight nod-like movement of her head after being asked, "Do you mind telling me where you went?" but she gave a non-literal verbal response, "Edinburgh."

Subject 2 failed to give verbal responses to three of the test-questions.

Subject 3 failed to give a verbal response to the first test-question but her head shook very slightly. During the post-experimental inquiry she said that she did not give a verbal response because: "I didn't feel relaxed. I was tense all of a sudden ... I felt, well if I was to say to you, it wouldn't've been any good." Asked to explain further, she added, "I felt as though I wasn't ... hypnotized and I could've just said it to you, which wouldn't've been any good for - for your research." It seems possible, then, that the subject thought that a proper "hypnotic" response would have occurred automatically or involuntarily. This subject exhibited very slight shakes of her head after being asked the other test-questions. (In one case the head movement might have been a roll rather than a shake as such.) She gave verbal responses to these questions, two of her replies being definitely non-literal. Her replies to the other two questions were not heard clearly but were probably also non-literal.

Subject 4 gave no verbal responses to the questions. After being asked, "Would you like to tell me about the music?" she was observed to shake her head. Although this could be interpreted as a literal response meaning, "No, I would not like to tell you about the music" during the post-experimental inquiry she indicated that she had not heard any music and that she had felt apprehensive around the time of the experimenter's asking her about

the calendar and the music. Hence the shaking was probably not a literal response to the experimenter's question.

Subject 5 gave verbal responses to only the third and fifth test-questions. Very slight shaking of her head was observed after the first test-question was asked, and some rolling of her head was observed after the fourth question was asked.

Subject 6 gave verbal responses to all of the questions, although these were not all heard clearly. The experimenter's observation of possible head movements might have been inadequate with respect to the third and fifth test-questions.

Subject 7 exhibited a very slight shake or vibration-like movement after she was asked the first test-question but she gave a non-literal verbal response.

Subject 8 exhibited a slight shake of her head after being asked, "Would you like to tell me about the music?" but her verbal response was, "I'm sorry, I don't hear music."

Subject 9 exhibited small shake-type movements (restlessness?) after being asked the second test-question but he gave a non-literal verbal response. He was observed to shake his head after being asked, "Would you like to tell me about the music?" but he gave a non-literal verbal response, "Piano music."

Subject 10 gave no responses to four of the test-questions.

Subject 11 shook her head after being asked, "Do you mind telling me what sort of flower it is?" but this might have been because she was not experiencing the suggested imagery. During the post-experimental inquiry she related: "Then something went wrong; I don't know. I had to go into a house and I don't remember a house in Shildaig - so it didn't work out. I was sort of coming to then." After being asked, "Would you like to tell me about the music?" the subject replied, "No ... can't hear it." It seems reasonable to infer that the "No" part of her answer pertained to her not hearing the music and was not a literal response meaning that she did not want to tell the experimenter about the music. This subject was observed to exhibit slight shaking or rolling of her head after being asked the first and fifth test-questions, but she gave normal, non-literal verbal replies to both.

Subject 12 exhibited a very slight shake of her head after being asked, "Would you like to say what the month is?" but she gave a non-literal verbal response ("April") at the time that this movement was observed.

Subject 13 shook her head after being asked, "Do you mind telling me what sort of flower it is?" This does not appear to be a literal response since she also replied verbally, "I don't know - don't know the smell ...". This subject said, "June" before the experimenter had a chance to ask the next question, "Would you like to say what the month is?" Therefore, another question was asked: "Would you like to say what the picture is?" The subject was observed to shake her head but she also gave a non-literal verbal response, "I don't know."

Subject 14 exhibited a slight shake or roll of her head after being asked the first test-question ("Would you like to tell me the name of the place?") but she gave a non-literal verbal response indicating that she could not remember the name of the place. In response to the last question ("Do you mind telling me where you went?") she exhibited slight head movements, but she also gave a verbal response (which sounded like the name of a foreign place, although it was not heard clearly or at least not recognized by the experimenter).

Because the present writer is not sure whether head movements (if any) were observed and recorded properly in the case of Subject 15, "uncertain" responses have been entered in Table III. For the first four test-questions, the subject gave normal, non-literal responses. Her response to the fifth question was, "No, I went to Glen Coe." Although there was a literal component to this response ("No"), this is not the sort of response that Erickson described as typical among "hypnotized" subjects. According to him, "hypnotized" subjects typically give purely literal verbal or non-verbal responses¹.

¹ In his article Literalness: An Experimental Study (Rossi, 1980c, pp. 92-99), Erickson does not make clear what proportion of "hypnotized" subjects give literal verbal responses as opposed to head movement responses equivalent to "Yes" or "No". However, he writes: "Comparable questions with dozens of hypnotic subjects led almost invariably to a simple verbal affirmative reply ..." (p.92).

On listening to the tape-recording of the session with Subject 6, the present writer noticed that he commented "Good" after the subject had given her responses to the first and last test-questions. Similarly, in the case of Subject 7, the present writer noticed that he said, "Good, continue picturing yourself there" after the subject had responded to the first test-question. It is conceivable that such comments could reinforce a non-literal style of responding. However, if the hypnotic induction procedure engendered a tendency to give literal responses, some such responses might have been expected to the first test-question, before the opportunity had arisen for inadvertent reinforcement of a non-literal manner of responding. It is noteworthy that no subject gave a literal verbal response to the first test-question.

Subjects 3, 5 and 13 were invited to participate in Stage II Experiments but Subject 5 declined when she was told how long the session would last.

The Normal/Live/Other Hypnotists Group

The responses of the seven subjects in this group are summarized in Table IV in Appendix III. No literal verbal responses were noted.

In the case of Subject 1's response to the second test-question ("Do you mind telling me where you were born?"), note was not taken of whether the subject exhibited head movements, although he gave a normal, non-literal verbal response.

Subject 3 nodded slightly after being asked the first test-question but she gave a normal, non-literal verbal reply. She might have exhibited a slight nod after being asked the second test-question. However, her verbal response was non-literal. In response to the third test-question ("Would you like to tell me when you last visited Edinburgh?"), the subject replied, "Yes, a year ago maybe. I used to live in Edinburgh." Although this answer contains a literal element ("Yes"), the subject did not behave in the manner described by Erickson as typical of "hypnotized" subjects, since she responded to the implication of the question by indicating when she had last visited Edinburgh. Subject 3's verbal responses to the fourth and fifth test-questions sounded like names of people but were not heard clearly. She exhibited

a very slight nod when asked the fourth question but, as indicated, it seems that her verbal response was non-literal.

Subject 5 exhibited slight nod-like head movements while giving non-literal verbal replies to the last two test-questions.

Subject 4 participated in a Stage II Experiment.

The Distorted/Tape Group A

The responses of the four subjects in this group are summarized in Table V in Appendix III. It can be seen that despite the "distorted" manner in which the test-questions were asked, no literal verbal responses were noted.

Although Subject 1 probably gave normal, non-literal verbal responses to all of the test-questions, the record of the experiment was not entirely clear regarding her verbal replies to the second and third questions. Hence, "uncertain" responses have been recorded in Table V in respect of them. After being asked the third question, she nodded or shook her head but the record of the session did not specify which. She nodded her head after being asked the second question ("Do you mind telling me where you were born?") and she shook her head after she was asked the fourth question ("Would you mind telling me your mother's maiden name?").

Subject 2 gave non-literal verbal responses to the first three test-questions. Her verbal responses to the fourth and fifth test-questions were not heard clearly, but they did not appear to be literal. She exhibited a slight slow shaking of her head after being asked the "Edinburgh" question; this could be seen as consistent with her verbal response, "Don't remember."

Subject 3's response to the fourth test-question ("Would you mind telling me your mother's maiden name?") was not heard clearly, although it appeared to be a name beginning, "O'N..."

Subject 4 gave no verbal response to the "Edinburgh" question but she was observed to shake her head slightly. During the post-experimental inquiry she indicated that she had tried to think when she was asked the question but she "just couldn't be bothered thinking hard." It is therefore uncertain whether the slight shake of her head was a literal communication to the experimenter, meaning, "No, I would not like to tell you when I last visited Edinburgh."

The Distorted/Tape Group B

The responses of the 15 subjects in this group are summarized in Table VI in Appendix III. Some literal verbal responses were noted.

Subject 2 exhibited shaking of her head after being asked four of the five test-questions. She gave no verbal response to the first test-question ("Would you mind telling me your first name?"), so conceivably her head movement response was a literal one, meaning, "No, I don't mind telling you my first name." In response to the fourth test-question ("Would you mind telling me your mother's maiden name?") the subject gave a surname but there was some sound before it, which was not picked up clearly. Accordingly, her verbal response is recorded as "uncertain" in Table VI.

Subject 3 gave clear-cut literal verbal responses to at least four of the five test-questions. For example, in response to, "Do you mind telling me where you were born?" she replied, "No." The subject's verbal response to the first test-question was not heard clearly and is therefore recorded in Table VI as "uncertain". She exhibited a slight head movement after being asked the first question but the record of the experiment did not indicate what form it took, i.e. whether she shook or nodded her head. It has therefore been recorded as "uncertain" in Table VI.

Subject 4's verbal response to the first test-question was not heard clearly and is therefore recorded as "uncertain" in Table VI. She failed to respond to the second and third test-questions. (Around the time that she was asked the second and third questions her right hand levitated. During the post-experimental inquiry she referred to hand movements that she had experienced as involuntary. She apparently believed that answers to the questions that she had failed to answer should have come automatically as well.)

Subject 5 failed to reply to the "Edinburgh" question but during the post-experimental inquiry she related that she could not remember the last time she had been there.

Subject 7's response to the second test-question was possibly "No" but the experimenter had some doubt as to whether he had heard her correctly. During the post-experimental inquiry her

recollection was: "I just said 'No' as far as I can recollect." For the third, fourth and fifth test-questions the subject gave "mixed" responses, i.e. normal replies prefaced with "Yes", "No" and "No" respectively. For example, in response to, "Do you mind telling me your father's first name?" she replied, "No - Hugh." During the post-experimental inquiry she commented, "I didn't object at all to your questions but I wasn't at all sure whether I should answer them or not ..."

Subject 8 prefaced four of her verbal responses to the test-questions with "No". For example, after being asked, "Do you mind telling me your father's first name?" she replied, "No - Duncan." Her head movement response (if any) to the first test-question was not observed. After the second and fifth questions were asked, she shook her head, and there was some slight shaking of her head after the fourth question was asked.

In the case of Subject 9, "uncertain" verbal responses have been recorded in respect of four of the test-questions since the subject was not heard clearly. However, from what the experimenter did hear, it is likely that all or most of these replies were non-literal.

Subject 10's response to the fourth test-question was not heard clearly. Her other replies were non-literal.

Four of Subject 11's verbal responses were not heard clearly and have therefore been recorded as "uncertain" in Table VI. However, three of them were possibly "mixed" responses, i.e. normal verbal responses prefaced with "No". The subject exhibited very slight shaking of his head after he was asked the third test-question and there might also have been some slight shaking after the second and fourth questions.

Subject 12 opened her eyes around the time that she was asked the first test-question and then again around the time that she was asked the second test-question. She might have exhibited a very slight shake of her head after being asked the first test-question. She failed to give a verbal response to the first test-question but to the other questions she gave normal, non-literal verbal responses.

Subject 13 gave no verbal responses to the test-questions and exhibited no clear shakes or nods of her head. During the

post-experimental inquiry, she said: "Well, it was a bit difficult. I don't know. You were saying, do you mind if you ask me and it was as if I was to say, 'No, I don't mind', or whether was I just to answer, you know, 'My first name is Theresa' ..."

Subject 14 failed to give verbal responses to two of the test-questions. No head movement responses were observed, although full attention might not have been paid to this aspect in the case of the third test-question. Accordingly, with regard to that question, an "uncertain" response has been entered in Table VI in respect of head movements.

Subject 15 gave no response to the first test-question. After being asked the second test-question, "Do you mind telling me where you were born?", she indicated that she could answer but she really did not feel hypnotized. She was not heard to give a direct answer to the third question; she said what sounded like: "... Need to think about that one ...". With regard to the fourth test-question ("Would you mind telling me your mother's maiden name?"), she was not observed carefully enough to state with confidence whether she exhibited any head movement response. However, to this question she gave a non-literal verbal response.

In summary, it can be said that despite the "distorted" manner in which the test-questions were asked, there were relatively few purely literal verbal responses from subjects in this group - Subject 3 gave at least four purely literal responses and Subject 7 might have given a purely literal response to the question about where she was born. Subjects 7 and 8 (and probably Subject 11) gave some "mixed" verbal responses (i.e. non-literal verbal responses prefaced with "Yes" or "No"). However, it should be borne in mind that "mixed" responses of this type are not what Erickson described as typical of "hypnotized" subjects. According to him, "hypnotized" subjects tend to give literal responses without going on to give the information or carry out the action implicitly required.

Subjects 1, 3, 9 and 10 participated in Stage II Experiments. Subject 14 was also invited to attend for a Stage II Experiment but she did not participate in one.

The Distorted/Live Group

The responses of the 10 subjects in this group are summarized in Table VII in Appendix III.

In the case of Subjects 3, 4, 7 and 9, the experimenter did not stress the word "mind" in the first test-question ("Would you mind telling me your first name?").

Subject 3 gave a normal, non-literal verbal response to the first test-question (which was not "distorted"). In response to the remaining four questions (which were "distorted") she gave "mixed" verbal responses, i.e. she responded normally but she prefaced her answers with literal elements. Thus, in response to the second test-question ("Do you mind telling me where you were born?") she replied, "No. No, I don't mind. Stirling." She was seen to shake her head after being asked this question, which could be seen as consistent with the literal part of her verbal response. She nodded her head after being asked the third test-question; this could be seen as consistent with the literal part of her verbal response ("Would I like to? - yeah"). She shook her head after being asked the fourth test-question; this could be seen as consistent with the literal part of her verbal response ("I don't mind"). After being asked the fifth test-question ("Do you mind telling me your father's first name?") she was seen to nod her head, a non-verbal response not obviously in harmony with her verbal response: "Don't mind. My father's dead. His name was James."

Subject 4 gave a normal, non-literal response to the first test-question (which was not "distorted"). She gave a literal response ("No") to the second test-question and shook her head. She also replied literally (with "Yes") to the third test-question and a slight nod of her head was observed. Her verbal response to the fourth test-question was not heard clearly, so an "uncertain" response has been entered for this item in Table VII. She gave a normal, non-literal verbal response to the fifth test-question.

In response to the first test-question, Subject 5 said "No" and, after a delay, "Sheila". It is probable that her response to the second test-question was "No" but the observer (Dr. E.C. McCue) was not entirely sure that she had heard the subject correctly, so an "uncertain" verbal response to this test-question has been recorded in Table VII. In response to the third test-question,

the subject indicated that she could not remember the last time she went to Edinburgh. She also exhibited a very slight shake of her head. In response to the fourth test-question ("Would you mind telling me your mother's maiden name?"), the subject asked the experimenter whether he wanted to know the name. In response to the final test-question, she gave a normal, non-literal verbal response.

Subject 6 responded to the first test-question with a "mixed" verbal response ("No - Grace"). She also shook her head, a response consistent with the literal part of her verbal response. In response to the second test-question ("Do you mind telling me where you were born?") she replied, "Edinburgh" and was observed to shake her head. In response to the fourth test-question, she gave what was possibly a normal, non-literal verbal response but since it was not heard clearly it has been recorded as "uncertain" in Table VII. She gave normal, non-literal verbal responses, unaccompanied by nods or shakes of her head, to the third and fifth test-questions.

Subject 7 gave a normal, non-literal verbal response to the first test-question (which was not "distorted"). She responded with a literal verbal response ("No") to the second test-question and exhibited a very slight up and down movement of her head. In response to the third test-question ("Would you like to tell me when you last visited Edinburgh?"), she eventually whispered "No." If this somewhat surprising answer is taken as a literal response, it presumably means, "No, I would not like to tell you when I last visited Edinburgh." The subject responded to the fourth test-question ("Would you mind telling me your mother's maiden name?") and the fifth test-question ("Do you mind telling me your father's first name?") with "No."

Subject 8 gave normal, non-literal verbal responses to all of the test-questions. After being asked the second test-question she exhibited a very slight shake of her head to the right and a very slight shake was noticed after she was asked the fifth test-question.

Subject 9 gave a normal, non-literal verbal response to the first test-question (which was not "distorted"). In response to the second test-question ("Do you mind telling me where you were born?"), he replied "No" and exhibited a slight shake of

his head. In response to the question, "Would you like to tell me when you last visited Edinburgh?" the subject gave a literal verbal response ("Yes") and exhibited a slight shake of his head. If the latter is interpreted as a literal non-verbal communication, it does not of course match his verbal response. About a minute after asking the "Edinburgh" question, the experimenter mistakenly asked the first test-question again, this time emphasizing the word "mind" ("Would you mind telling me your first name?"). The subject gave a literal verbal response ("No") and shook his head. He responded to the last two test-questions with "No". He exhibited a shake of his head and a slight shake of his head respectively after being asked the latter two questions.

Subject 10 gave normal, non-literal verbal responses to the test-questions and did not exhibit any nodding or shaking of his head.

Whereas only one or two of the 15 subjects in the Distorted/Tape Group gave some purely literal verbal responses, three or four of the 10 subjects in the Distorted/Live Group gave one or more such responses. In the case of three of the latter subjects (Subjects 4, 7 and 9), the first test-question was not "distorted" and was answered in a normal, non-literal way. This suggests that the contrast between asking questions in a normal and in a "distorted" manner may help to cue literalness of response. The fact that the questions were asked "live" rather than via a tape-recording might also have been a relevant factor in the higher incidence of purely literal responses among subjects in the Distorted/Live Group.

Subject 2 went on to participate in a Stage II Experiment.

The Miscellaneous Group

The results for the three subjects comprising this group are summarized in Table VIII in Appendix III.

Subject 1 was asked the test-questions in a "distorted" manner. Despite this, she gave normal, non-literal verbal responses. No nods or shakes of the head were observed but in the case of the second test-question there was a lapse in the experimenter's observation of possible movements, so an "uncertain" response has been entered in Table VIII in respect of head movements.

In the case of Subjects 2 and 3, the test-questions were asked in a normal manner. Subject 2 gave normal, non-literal verbal responses to all of the test-questions and no shakes or nods of her head were observed. Subject 3 gave a normal, non-literal verbal response to the fourth test-question but she gave no verbal responses to the other questions. After being asked the third test-question she might have exhibited a slight shaking of her head. Since there was some doubt about this, an "uncertain" response has been entered in Table VIII in respect of that item.

Subjects 1 and 3 went on to participate in Stage II Experiments.

Comments

Taking the 54 Stage I Experiment subjects to whom the test-questions were put in a normal fashion, it is significant that no literal verbal responses of the type described by Erickson as typical of "hypnotized" subjects were observed.

A total of 12 subjects were observed to give no verbal response to one or more of the test-questions. It is relevant to ask whether they nodded or shook their heads (meaning "Yes" or "No") instead. The behaviour of these subjects has already been discussed along with that of other Stage I Experiment subjects in the preceding pages, but in the interests of clarity their responses will be considered again here.

Subject 11 of the Normal/Tape Group gave no verbal response to the question, "Would you like to tell me when you last visited Edinburgh?" but he shook his head slightly. While it is possible that this was a literal non-verbal response meaning that he did not wish to tell the experimenter when he last visited Edinburgh, an alternative explanation is that he could not remember when he last visited the city. Another possibility, of course, is that he had never been there. He gave normal verbal responses to at least three of the other four questions, which suggests that he was willing to reveal information to the experimenter. Accordingly, if the subject had experienced a tendency to give a literal response to the "Edinburgh" question, it seems more likely that he would have nodded his head, meaning, "Yes, I would like to tell you when I last visited Edinburgh."

Subjects 2 and 7 of the Normal/Live Group gave no verbal responses to any of the test-questions. For the reasons explained on pp. 242 and 243, no endorsements have been made in Table II in respect of possible head movement responses for the first nine subjects in this group. However, the observer (Dr. E.C. McCue) noted no nodding or shaking of the head in respect of Subjects 2 and 7.

Subject 6 of the Normal/Live Group gave no verbal response to the last test-question but no nodding or shaking of her head was noted by the observer. Subject 8 of this group gave no verbal response to the first test-question but the present writer observed slight lateral head movements.

Subject 2 of the Normal/Live/Scriptless Group failed to give verbal responses to three of the test-questions but she was not observed to shake or nod her head. Subject 3 of this group failed to answer the first question ("Would you like to tell me the name of the place?") but she was observed to shake her head very slightly. During the post-experimental inquiry she related that around that time she had not felt relaxed and hypnotized, and that she could have answered the question but she did not think that would have been any good for the present writer's research (see p.245). Subject 4 in this group gave no verbal responses to the questions. After being asked, "Would you like to tell me about the music?" she shook her head but during the post-experimental inquiry she indicated that she had not heard any music. Subject 5 of this group failed to give verbal responses to three of the test-questions; she exhibited very slight shaking of her head after being asked one of them and rolling of her head after being asked another. Subject 10 of this group failed to respond to four of the test-questions but no nodding or shaking of her head was observed. Subject 11 failed to give a verbal response to the question, "Do you mind telling me what sort of flower it is?" but she shook her head. During the post-experimental inquiry she indicated that she had had difficulty in experiencing the situation suggested by the experimenter (see p.246).

Subject 3 of the Miscellaneous Group failed to give verbal responses to four of the five test-questions. She might have exhibited a slight shaking of her head after being asked one of those questions.

It seems reasonable to conclude that the data on head movements provide no clear-cut support for Erickson's assertion regarding literalness. In cases where subjects exhibited only slight head movements it is questionable whether any communication was being made at all. In cases where the head movements were more overt, alternative explanations to literalness suggest themselves. In the case of Subject 4 of the Normal/Live/Scriptless Group, for example, the head shaking observed after the subject was asked, "Would you like to tell me about the music?" could be interpreted as a reaction to her inability to experience what was being suggested (hallucinatory or imaginary music). Similarly, the head shaking exhibited by Subject 11 of the Normal/Live/Scriptless Group when she was asked about a flower, could be regarded as a response to her difficulty in experiencing what the experimenter was suggesting and asking her about.

As indicated in the preceding pages, the only convincing manifestations of literalness with Stage I Experiment subjects occurred with some individuals to whom test-questions were put in a "distorted" manner. Subject 3 of the Distorted/Tape Group B gave four clear literal verbal responses to test-questions. Subjects 4, 7 and 9 of the Distorted/Live Group were observed to give some literal verbal responses. Subject 7 of the Distorted/Tape Group B might have given a literal verbal response to the second test-question. Similarly, Subject 5 of the Distorted/Live Group might have given a literal verbal response to one of the test-questions. (Subjects were not always heard clearly and their responses were not always clearly audible on the tape-recording of the session.) Subject 4 of the Distorted/Tape Group A gave no verbal response to the third test-question but shook her head slightly, which conceivably was a non-verbal literal response. Subject 2 of the Distorted/Tape Group B gave no verbal response to the first test-question but shook her head. Again, this could have been a non-verbal literal response.

The fact that some literal responses were given when "distorted" questions were employed lends credence to the possibility that Erickson inadvertently cued literal responses by the manner in which he spoke to subjects whom he regarded as "hypnotized". However, in the present writer's research, literal responses were only elicited in a minority of the subjects who were asked "distorted"

questions. As indicated in the last chapter (pp. 140-146), Erickson reported that the large majority of "hypnotized" subjects display literalness. It follows that if Erickson's results are to be explained in terms of inadvertent cueing, this cueing of subjects must have had more impact than did the "distorted" questions asked by the present writer during some of the Stage I Experiments.

If it was the case that Erickson obtained literal responses by inadvertent cueing, it is surprising that he did not quickly discover what was happening. In the present writer's research, some of the subjects who had been asked "distorted" questions subsequently commented on the uncertainty they had experienced as to the type of answer required of them.

GENERAL COMMENTS ON THE PERFORMANCES OF THE
STAGE I EXPERIMENT SUBJECTS

Sex Ratio and Age of Subjects

It can be seen from Tables I - VIII that most of the Stage I Experiment subjects were female. The female/male ratio was 5:1 (70 females, 14 males). This sex ratio does not pose any problems so far as interpretation of the results is concerned since according to Erickson the occurrence of literalness in "hypnotized" subjects is not differentially related to subjects' sex.

The mean age of the Stage I Experiment subjects was 31.83 years and the range was 18-58 years.

Aspects of the Subjects' Hypnotic Responsiveness

The data coded in Tables I - VIII largely pertain to observations of how the subjects behaved during the experiments. Caution must, of course, be exercised in drawing inferences about the subjects' private experiences. For example, it cannot be assumed that every subject who exhibited a positive objective response to suggestions for hand levitation experienced the lifting of the hand(s) as involuntary. Since the aim of the Stage I Experiments was to test for literalness and to select responsive subjects for Stage II Experiments, a lengthy and detailed inquiry into subjective experiences was not conducted.

Hand Levitation

It can be seen from Tables I - VIII that the majority of subjects exhibited an objective response to the suggestions for hand levitation included in the hypnotic induction procedure. During the post-experimental inquiry a number of subjects commented on their experiencing the hand levitation as involuntary. In some cases, this experience apparently led subjects to believe that they had been or might have been "hypnotized". In at least one case, the experience of an apparently involuntary hand levitation gave the subject a brief "fright".

Suggested Tactile and Auditory Hallucinations

During Stage I Experiments it was suggested that subjects picture themselves sitting in a garden in the shade of an oak tree. It was suggested that they would feel a butterfly landing on the back of the left hand and that when the hand started to tickle or itch, a gentle flick would dislodge the butterfly, which would go off to another part of the garden. It was then suggested to subjects that they might hear the sound of church bells and if so they were to signal by lifting the right hand a couple of inches. As expected, subjects' responses to the "butterfly" and "bells" suggestions varied, with some individuals experiencing neither of these suggested effects.

Some subjects reported during the post-experimental inquiry that they had experienced the lifting of their hands as automatic or involuntary. For example, one subject reported during the post-experimental inquiry that she had seen the butterfly and that her hand "seemed to get awful light" although she had not actually felt the butterfly. Another subject commented: "I could hear the bells, but I don't know if it was the tape recorder ... I had a feeling that maybe it was the tape recorder I was hearing and not actually bells, but my right hand just went up when you said it."

One subject described her experience of the "butterfly" and "bells" as follows:

" ... and there was a butterfly, which came and landed on my hand, and it tickled, and then as it went away I relaxed even further."

Experimenter: "Did you feel the butterfly?"
Subject: "I didn't while I was sitting in that chair but when I was sitting in the deck-chair I did, if that makes sense - and the same with the bells, the church bells, which I heard."¹

Responses to the Post-Hypnotic Suggestion

At least 41 of the 84 Stage I Experiment subjects were observed to execute the post-hypnotic suggestion (i.e. lift a book from the floor when the experimenter jingled some keys). In the case of four subjects, "uncertain" responses have been entered in Tables I - VIII. In three of these cases, the record of the experiment did not make clear what the subjects' response had been; in the other case, the subject lifted the book before the experimenter had jingled his keys.

The fact that some subjects lifted the book after the experimenter jingled keys does not of course necessarily mean that the subjects were amnesic for the post-hypnotic suggestion and executed it in an automatic or involuntary manner. During the post-experimental inquiry, 28 of the 41 subjects who were noted to have carried out the post-hypnotic act indicated an awareness or partial awareness of the post-hypnotic suggestion, although some of these subjects indicated that there had been an involuntary or compulsive aspect to their picking up the book.

Subjects' responses to the post-hypnotic suggestion were taken into account in deciding which Stage I Experiment subjects to invite to participate in Stage II Experiments. Of the 15 Stage I Experiment subjects who were invited to return for Stage II Experiments², 11 responded to the jingling of keys by picking up the book during the Stage I Experiment. During the post-experimental inquiry only three of these 15 subjects indicated clear or fairly clear recall of the post-hypnotic suggestion.

¹ During the experiment, this subject did not give any objective sign of experiencing the "butterfly". However, she lifted a hand after receiving the suggestion about church bells.

² Three of these 15 subjects did not participate in Stage II Experiments.

Responses to Suggestions for Post-Hypnotic Amnesia

Suggestions were given to subjects in Stage I Experiments for post-hypnotic amnesia and during the post-experimental inquiry they were asked about their recollections of the session. It can be seen from Tables I - VIII that for each subject an endorsement has been made as to whether the subject exhibited "moderate or good recall" or "little recall". The decision as to which endorsement to employ was a global one, with "little recall" being applied when a subject gave few, if any, detailed recollections of what had transpired during the session. The following examples illustrate how these endorsements were used.

Subject 2 of the Normal/Tape Group appeared to be largely amnesic for the events of her session. During the post-experimental inquiry she mentioned "Questions", "Names", "My Mum", and "What her name was". On the basis of these very limited responses she was classified as having exhibited "little recall". She subsequently participated as a Stage II Experiment subject and passed the post-hypnotic amnesia item of the SHSS:C. (The SHSS:C was administered during the first part of the Stage II Experiment.) Subject 3 of the Normal/Live/Scriptless Group gave only patchy recollections of her session. She recalled having felt very relaxed and mentioned her hand feeling "funny". She said that she thought she had gone down "stairs" (stone steps were mentioned by the experimenter in connection with the suggested garden scene) and she reported remembering flowers (flowers were mentioned during the garden scene and also later in the session, when the subject was asked to picture a vase of flowers). The subject recalled being asked about a holiday (during the session the experimenter had asked her to think of a place where she would like to go on holiday, and he asked her, "Would you like to tell me the name of the place?"). The subject recalled that she had not answered the experimenter and she indicated that this was because she had not felt relaxed ("... I was tense all of a sudden ... I felt, well if I was to say to you, it wouldn't've been any good"). The subject failed to give any details of the early part of the hypnotic induction procedure (i.e. suggestions for muscle relaxation) and she made no mention of the "butterfly" and "bells" suggestions. She also failed to mention the post-hypnotic

suggestion, the suggestions for post-hypnotic amnesia, and the experimenter's counting back from 20 to one. Accordingly, she was deemed to have exhibited "little recall". She subsequently participated in a Stage II Experiment and passed the post-hypnotic amnesia item of the SHSS:C.

As expected, some subjects gave quite full and detailed recollections during the post-experimental inquiry and hence were classified as having exhibited "moderate or good recall". Other subjects recalled fewer items but were still given this classification. For example, Subject 7 of the Normal/Tape Group failed to mention the "bells" suggestion and the post-hypnotic amnesia suggestion but she was classified as having exhibited "moderate or good recall" because she mentioned a fair number of details including the experimenter's suggesting hand levitation, the "butterfly" suggestion, the post-hypnotic suggestion, and being asked three of the test-questions.

After conducting the formal inquiry procedure described on pp.206-207, the experimenter sometimes asked subjects whether they remembered certain items and some subjects indicated a recollection of them. It is probable that a number of subjects failed to mention some of the items that they recalled during the post-experimental inquiry because they did not think the experimenter was interested in knowing about them. (During the post-experimental inquiry, after the experimenter had completed the formal attempt to elicit recollections, Subject 4 of the Normal/Tape Group indicated that she had remembered more than she had indicated previously - she had not realized that the experimenter was interested in her recollections of all the steps in the session.)

It is, of course, possible that some subjects withheld recollections from the experimenter in order to please him or to avoid embarrassment. (Although subjects were requested to give an honest account of their recollections, they might have judged the experimenter's true wish to be that they should be amnesic or relatively amnesic for the events of the session.)

Subjects' Thoughts Regarding the Purpose of the
Stage I Experiment

During the post-experimental inquiry subjects were asked, "What do you think was the purpose of this experiment? What do you think I was trying to find out?"

No subjects gave evidence of having identified the specific aims of the research. Instead, responses tended to be either vague and general or specific but inaccurate. The following are some examples:

"Possibly to see how hypnosis would help in psychiatrically ill persons ..."

"I don't know whether any of the story would relate to any experience in that person's life, in the past."

"The power of the subconscious over the conscious mind?"

"Whether I was able to take hold of the situations and believe that I was actually in that situation."

"To see how many people can be hypnotized ... and just how people react to it and how they feel about it or what they remember about it."

"How responsive people were to hypnosis - how easily some people were put under ... and how easily they answered questions and could imagine themselves in certain situations ..."

With regard to the validity of the results of the present research, it is reassuring that no subject mentioned literalness as being a likely topic of interest to the present writer. The data from the Non-Experiments reported later in this chapter suggest that literalness of the type described by Erickson is not generally seen as an attribute of good hypnotic subjects. In fact, the present writer would speculate that Erickson's assertion about literalness is little known outside the ranks of some researchers and clinicians interested in hypnosis.

Subjects' Previous Experience of Hypnosis

During the post-experimental inquiry Stage I Experiment subjects were asked whether they had had any previous experience of hypnosis. At least 33 of the 84 subjects had seen hypnosis

used in an entertainment context and two of them had participated as subjects at such performances. Some subjects reported having seen hypnosis on television, e.g. in documentaries. In addition to the two subjects who had participated in stage demonstrations, 16 subjects reported having previously acted as hypnotic subjects - in most cases this was in the context of some form of treatment, but one subject, a hospital doctor, reported that she had attended training courses in hypnosis during which she had acted as a subject.

Other Data from the Post-Experimental Inquiry

During the post-experimental inquiry subjects were asked, "Did you respond today as you expected you would?" As expected, answers varied considerably. The following are some examples:

"I'd no idea what I would do."

"... I'm quite surprised that I was able to remember certain things that occurred."

"Didn't give it much thought."

"No ... I think I was more relaxed than I felt I could be. I've never really felt I could be hypnotized."

Subjects were also asked during the post-experimental inquiry, "Do you think you were hypnotized today?" Again, answers varied considerably. The following are some examples:

"No. Because I was aware of everything that was going on and that was said."

"To a certain extent ... The fact that I was lifting my arm and my hand ... I didn't try to do it. I just kept thinking about my arms being light."

"I didn't while I was sitting there but when my hand started moving I thought I must be."

"No. I thought I would have felt really relaxed, like in a kind of floating state ..."

"No. Because I remember everything."

"... I really honestly don't know - I just remember feeling very comfortable ..."

While some subjects inferred from their response to one or more of the suggestions that they had been or might have been

"hypnotized", some subjects who appeared to be highly responsive were unsure or thought that they had not been "hypnotized".

EVIDENCE FROM STAGE II EXPERIMENTS
REGARDING LITERALNESS

As indicated in Chapter IV, according to Erickson's paper Literalness: An Experimental Study (Rossi, 1980c, pp. 92-99), 80 per cent of subjects in a "light trance" respond to questions such as, "Do you mind telling me your name?" with an utterance of "No" or a shaking of the head meaning "No". Erickson claimed that this type of response is exhibited by 90 per cent of subjects in a "medium trance" and by 97 per cent of subjects in a "deep trance". It follows that subjects who manifest more hypnotic responses - who, in traditional hypnotic state terms, might be described as being more deeply hypnotized - should exhibit even more literalness than subjects who are less responsive. The present writer therefore included tests for literalness in the Stage II Experiments, which employed subjects who were expected to manifest high hypnotic responsiveness. During the first part of the Stage II Experiment subjects were administered the SHSS:C and it can be seen from Table IX that most of them obtained high scores on that scale.

As explained in the last chapter, during the second part of the Stage II Experiments there were various opportunities for subjects to display literalness; At the end of the lengthy taped hypnotic induction procedure subjects were asked to open their eyes and were presented with a card (bearing a statement such as, "This is the summer of 1983"). They were asked, "Do you mind reading this to me?" or "Would you mind reading this to me?" All of the subjects who were presented with the card read it to the experimenter and thus responded non-literally¹. In asking subjects to accompany him to various locations in the room (to be asked questions about hypothetical pictures) the experimenter typically said, "Would you like to come over here?" No subject responded literally by simply saying "Yes" or "No" or by making an equivalent head movement without acceding to the implication of the request and accompanying the experimenter to a different part of the room.

¹ In the case of the first of the Stage II Experiment subjects, a card was not presented to the subject to be read.

Another opportunity to display literalness occurred at the end of the first round of questions about hypothetical pictures, when the experimenter said to the subject, "Would you like to sit down and close your eyes?"¹ All of the subjects sat down and thus responded non-literally. Subject 13 of the Stage II Experiment group responded to the experimenter's saying, "Would you like to sit down and close your eyes?" by making for the chair and she said "Uh huh" or something similar. Since she was already acceding to the request that she sit down, this affirmative verbalization did not constitute a literal response of the type described by Erickson as typical of "hypnotized" subjects².

Six of the Stage II Experiment subjects had previously participated in Stage I Experiments in which test-questions were asked in a "distorted" manner. One of these subjects had given literal responses during her Stage I Experiment. However, neither she nor the other subjects displayed any obvious literalness during the Stage II Experiments.

In summary, none of the subjects participating in Stage II Experiments was observed to exhibit literal responses of the type described by Erickson as typical of "hypnotized" subjects. This negative finding regarding literalness is consistent with that from the Stage I Experiments.

POSITIONS FOR HYPOTHETICAL PICTURES SELECTED BY STAGE II EXPERIMENT SUBJECTS

Only one subject (Subject 9 of the Stage II Experiment group) exhibited responses on the "picture positioning" tasks approximating to some extent to those described by Erickson (1967) as typical of "somnambulistic" hypnotic subjects. This subject's behaviour will be described in some detail.

At the time of participating in the present writer's research, the subject was 28 years-old and was working as a nursing sister at a maternity hospital. Prior to her participation as Subject 9 of the Stage II Experiment group, she had participated in a Stage I Experiment as Subject 13 of the Normal/Live/Scriptless Group.

¹ In one case there was a slight deviation from this wording, although the question was essentially of the same form, viz. "Would you like to take a seat and close your eyes?"

² After she sat down, the subject had to be asked again to close her eyes. Similarly, Subject 5 of the Stage II Experiment group did not close her eyes immediately after she sat down.

On the SSS:C, which was administered during the first part of the Stage II Experiment, the subject obtained a score of 10 or 11 depending on whether she is deemed to have passed the "Age Regression" item, which the present writer found difficult to judge from the handwriting she did when tested at that point. The only item that she clearly failed on the SSS:C was "Anosmia to Ammonia".

Before discussing the subject's responses to the questions about hypothetical pictures, some other aspects of her performance during the Stage II Experiment will be mentioned.

When the experimenter jingled his keys (the cue for the execution of the post-hypnotic suggestion) after the "dehypnotization" ritual and a short period of neutral conversation, the subject asked whether she could go to the lavatory. The experimenter asked whether she could delay going for some minutes and after some more noise from the keys the subject reached down to pick up the pen. The response was interrupted in the manner described in the last chapter (pp.225-226) but the subject did not respond to the suggestion that she would see a cat in place of the bowl of fruit.

During the post-experimental inquiry the subject gave no indication of recalling the post-hypnotic suggestion. With regard to her picking up the pen, she said, "It was like a compulsion..." She indicated that she could not remember getting off the "couch" (actually a bed) and getting to the chair where she was now sitting¹. She appeared to recall only one round of questions about pictures. Thus, she was possibly amnesic for much of what occurred prior to the "dehypnotization" ritual and in traditional hypnotic state terms she could be described as having been in a "somnambulistic hypnotic state".

¹ As indicated in the last chapter, during the second part of the Stage II Experiment, subjects listened to a lengthy taped hypnotic induction procedure while lying on a bed. After going through the first round of questions about hypothetical pictures, they were asked to sit down in a chair. After being given a post-hypnotic suggestion pertaining to the lifting of a pen from the floor, post-hypnotic amnesia was suggested. The experimenter then proceeded with the "dehypnotization" ritual.

The first "target object" for which the subject was asked to select a suitable position for a hypothetical three by four foot picture, was the experimenter's wife, Dr. E.C. McCue. For this hypothetical picture the subject appeared to select a position in mid-air, in front of Dr. McCue and perhaps a little to her left (from the subject's point of view - see Figure 2a). If it be assumed that the subject was trying to indicate a space behind Dr. McCue's chair, that would have placed the picture wholly or partly over a window! For the second "target object", the photograph of a man, the subject's indication of a position was somewhat vague but seemed to be roughly in the same direction as she had chosen for the hypothetical picture of Dr. McCue. Similarly, the position that she selected for a hypothetical picture of the bowl of fruit was also in the same general direction. When she was asked the same questions about positions for pictures later in the session, after the "dehypnotization" procedure, she selected a "reasonable" position for all three "target objects" - a space on the wall above the bed (see Figure 2b). She subsequently attended for a Stage III Experiment, which is described later in this chapter (pp. 299-314).

It should be noted that although this subject's choices of positions for hypothetical pictures during the "hypnosis" part of the session¹ were unusual, they were not entirely consistent with Erickson's (1967) description of how "somnambulistic" hypnotic subjects behave in such a task. Instead of choosing positions above and behind each of the "target objects", the subject indicated more or less the same position for all three of the hypothetical pictures.

The picture positioning choices of the other subjects in both the "hypnosis" and "waking" parts of the session were generally "reasonable", although not all of the subjects took full account of the large size (3' x 4') of the hypothetical pictures. For example, not all of the positions that Subject 15 selected were adequate for three by four foot pictures, but from her behaviour and comments during the session it seems that when she made her "errors" she was thinking of much smaller pictures. Unlike the case of Subject 9, however, there was not a marked contrast between

¹ The word "session" in the present context refers to the second part of the Stage II Experiment. The first part of the Stage II Experiment involved testing with the SHSS:C.

her performance of the picture positioning tasks in the "hypnosis" and "waking" parts of the session.

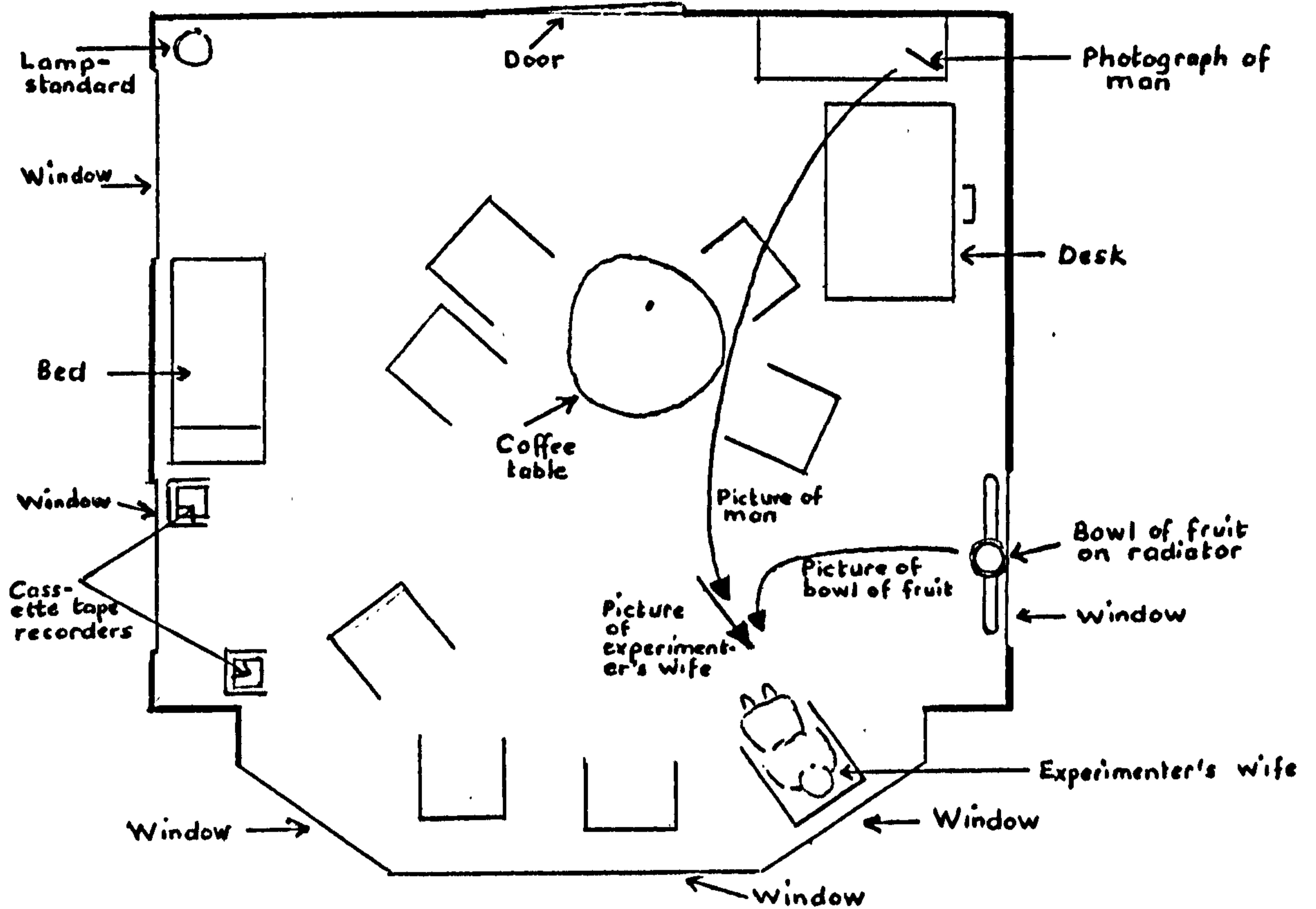


FIGURE 2a. Picture positions selected while the subject was "hypnotized"

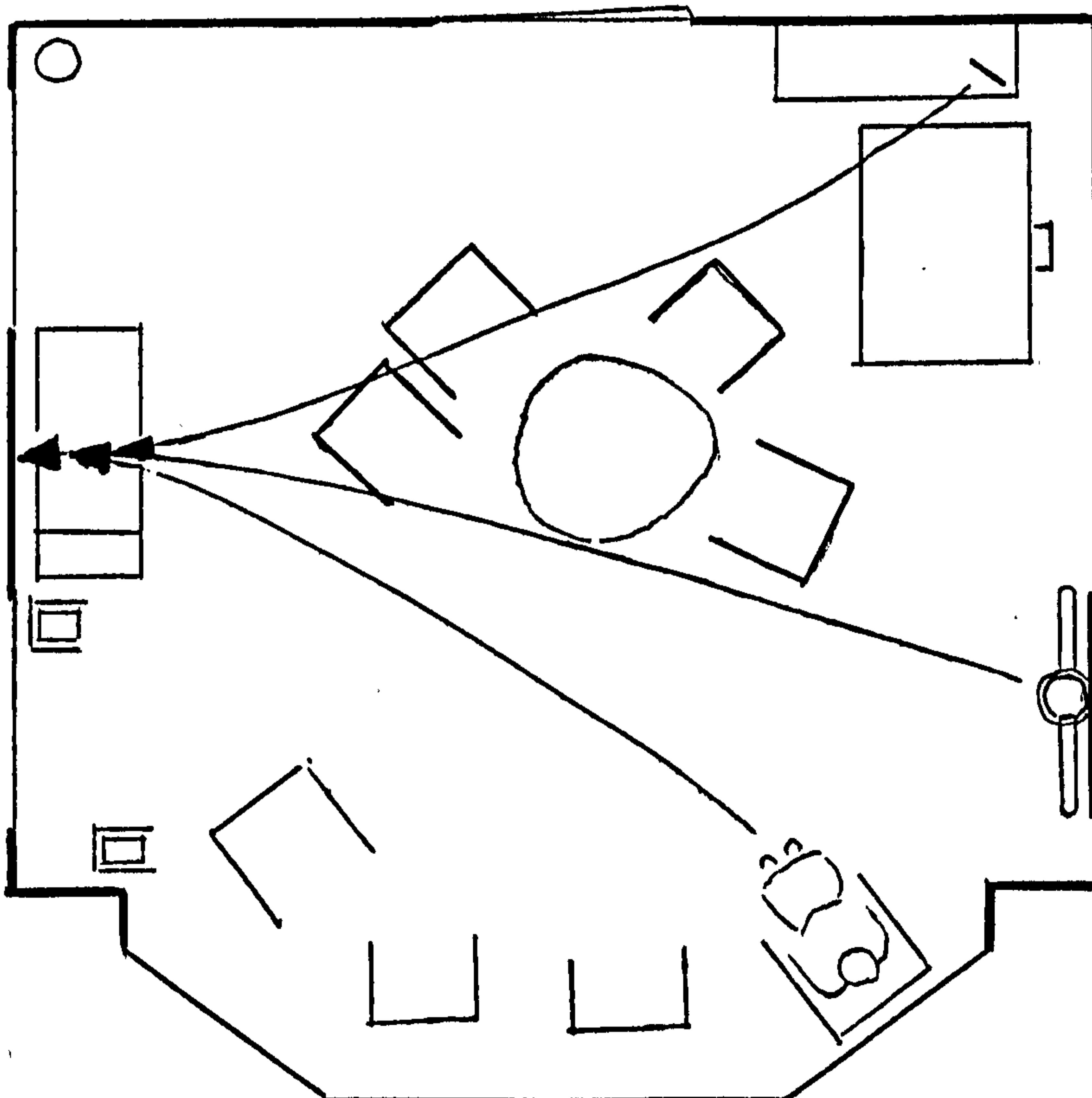


FIGURE 2b. Picture positions selected after the subject had been "dehypnotized"

EVIDENCE FROM STAGE II EXPERIMENTS BEARING ON
ERICKSON AND ERICKSON'S (1941) ASSERTIONS
ABOUT A "POST-HYPNOTIC TRANCE"

Hypnotic Phenomena Following the Interruption
of the Execution of a Post-Hypnotic Suggestion

As indicated in Chapter IV, Erickson and Erickson (1941) contend that when subjects execute post-hypnotic suggestions they enter a hypnotic state. The Ericksons further contend that if the execution of a post-hypnotic suggestion is suitably interrupted, the spontaneous trance state can be perpetuated, permitting a demonstration of the classic phenomena of "deep hypnosis". As explained in Chapter V, the Stage II Experiments incorporated procedures to test this assertion: Subjects were given a post-hypnotic suggestion that when the experimenter jingled his keys they would pick up a pen from the floor. This behaviour (the "post-hypnotic act") was interrupted by the experimenter who went on to suggest a visual hallucination (seeing a small ginger cat in place of the bowl of fruit present in the room). This suggestion was employed since if the interruption of a post-hypnotic act results in a prolongation of a trance state indistinguishable from a "state of deep hypnosis", then subjects in such a situation might be susceptible to suggestions for visual hallucinations.

Fifteen of the 16 Stage II Experiment subjects responded to the experimenter's jingling keys by reaching for the pen. Only two of these subjects (Subjects 7 and 10) reported seeing the suggested cat. Their behaviour will be described in some detail.

Subject 7, a 45 year-old man, had previously participated as a Stage I Experiment subject (Subject 11 of the Normal/Live Group). During the first part of the Stage II Experiment he scored 11 on the SHSS:C, failing only the "Hallucinated Voice" item. During the second part of the Stage II Experiment he responded to the cue for the execution of the post-hypnotic act (the experimenter's jingling keys) by reaching for the pen. He was interrupted by the experimenter¹ who said, "Wait a moment. Stay

¹ The experimenter's (i.e. the present writer's) recollection is that the subject reached for and took hold of the pen with his right hand and the pen was then removed from his hand by the experimenter, who replaced it on the floor.

as you are just now. Would you mind looking at the lampstand in the corner of the room?" The subject looked round¹. The experimenter went on to say, "If you look round now, you'll notice that the bowl of fruit is no longer in the room and there's a small ginger cat there instead. Do you see it?" The subject looked round and indicated that he could see a cat. The following is a transcript (from the tape-recording of the proceedings) of some of the conversation that ensued²:

Experimenter: "Would you mind telling me whether it's a black cat or a ginger cat or another colour?"

Subject: "It's an orangey-ginger colour."

Experimenter: "Mm hm. Would you like to tell me where it's looking at the moment?"

Subject: "I'm not sure what you mean?"

Experimenter: "Do you mind telling me whether it's standing up or sitting down?"

Subject: "It's sitting! ... although why it should sit on top of that radiator, I don't know."

The experimenter eventually cued the subject to complete the post-hypnotic act by saying, "O.K., you can go ahead now."

It will be noted that in questioning the subject about his experience of the cat, the experimenter employed questions that could have been answered literally but the subject answered in a normal, non-literal fashion. Thus, if it be assumed that the subject was in a renewed "hypnotic trance" at that point, it would seem that literalness was not a characteristic of it. This negative finding with regard to literalness is, of course, in line with the data reported earlier in this chapter.

During the post-experimental inquiry the subject remembered picking up the pen (when his attention was drawn to it) but he

¹ It is noteworthy that this was a non-literal response. If the subject was in a "hypnotic trance" at this point, and if literalness characterizes such a state, one might have expected the subject simply to reply "No" or shake his head, meaning that he did not mind looking round.

² Various sections of transcribed dialogue are included in this chapter. Since the tape-recordings were not always very clear, the transcripts may not be word-perfect.

did not spontaneously mention the interruption of the post-hypnotic act. The subject was asked whether the experimenter had done anything when he (the subject) went to pick up the pen. The subject did not answer immediately; he mentioned the experimenter's catching hold of him by the wrist. He asked, "Did you ask me something about that lamp?" and he reported that he could not recall what was said about "the light". He seemed unable to recall more about this matter.

Some other aspects of this subject's behaviour during the second part of the Stage II Experiment are worth noting. He selected "reasonable" positions for the hypothetical pictures in both the "hypnosis" and "waking" parts of the session¹. During the post-experimental inquiry he reported having experienced very deep relaxation. Looking slightly tearful he asked, "Why am I conscious of being in a cemetery?" He mentioned flowers and colours. It seems that the garden scene suggested during the induction procedure caused him to picture or think of the location of his mother's grave. The experimenter explained to the subject that he had described a pleasant garden but not a cemetery. (Normally, the experimenter did not divulge information while eliciting subjects' recollections. However, since this subject was exhibiting some [unhappy?] emotion, the experimenter wanted to make it clear that there had been no deliberate attempt to evoke such feelings.) The subject went on to report having gone down a "long, long ladder" which had 50 steps. He said that "it was as though it was inside a ship ...". He recalled walking on a path which went along to a flight of 12 steps that went into a lower part of a garden. He mentioned a bright day with very little cloud, and he remembered a tree and a chair. The experimenter asked the subject whether he remembered getting from the bed to the chair but he said that he did not. The subject appeared to recall only one round of questions about hypothetical pictures.

Because of his interesting behaviour following the interruption of the post-hypnotic act, the subject was invited to return for a Stage III Experiment and this will be described shortly.

¹ The term "session" in this context refers to the second part of the Stage II Experiment.

Subject 10, a 27 year-old nursing sister, scored 10 on the SHSS:C, failing the "Dream" and "Hallucinated Voice" items. She had previously participated as a Stage I Experiment subject (Subject 2 of the Distorted/Live Group). During the second part of the Stage II Experiment she selected "reasonable" positions for the hypothetical pictures during both the "hypnosis" and "waking" parts of the session. During the post-experimental inquiry she appeared to recall only one round of questions about hypothetical pictures.

When the experimenter jingled some keys (the cue for the execution of the post-hypnotic suggestion), the subject went to pick up the pen but her hand was grasped before she reached it. The experimenter said, "Wait a moment. Stay as you are just now. Would you mind looking round at the lampstand in the corner of the room?" The experimenter then proceeded: "If you look round now, you'll notice that the bowl of fruit is no longer in the room and there's a small ginger cat there instead. Do you see it?" The subject indicated that she could see the cat and the following is a transcript of part of the dialogue that ensued:

Experimenter: "Would you like to describe it [the cat] to me?"

Subject: "Orange and red. It's my cat!"

Experimenter: "It's your cat, is it? D'you mind telling me its name?"

Subject: "Nelson."

It can be seen that the experimenter asked questions that could have been answered literally, but the subject gave normal, non-literal replies. Eventually the experimenter cued completion of the post-hypnotic act by saying, "O.K., you can go ahead now." The period elapsing from when the subject first indicated that she could see the cat until she was cued to complete the post-hypnotic act was more than three minutes. During the post-experimental inquiry the subject recalled reaching down and handing the experimenter the pen. Her recollection was that that had taken a second or less. Asked why she had picked up the pen,

she said she did not know. After the subject was asked what she thought was the purpose of the study¹, the experimenter brought her thoughts back to the lifting of the pen. The subject mentioned the experimenter's jingling keys and her lifting the pen and handing it to him. Asked whether she knew why she had picked up the pen, she said, "I think I must have been told to", but she denied remembering being told to do so. The experimenter asked the subject to put the tape recorder down. (He had earlier asked the subject to place the tape recorder on her lap in order to obtain a clear recording of what she said during the post-experimental inquiry.) The experimenter mentioned his keys and shook them². He asked the subject how she felt but her reply was not clear on the tape-recording of the session. He asked her whether she was awake and she probably said "Yeah" or "Yes", although again her response was not very clear on the tape-recording. After making some more noise with the keys, the experimenter suggested that if the subject looked round she would see Nelson (her cat) on a chair. She indicated that she could see the cat. Shortly after, the experimenter said, "O.K., you can go ahead now." The dialogue continued as follows:

Experimenter: "Thank you very much ... How are you feeling?"
Subject: "All right."
Experimenter: "What just happened there?"
Subject: "Picked up the pen."
Experimenter: "Mm hm. And what did you do with it?"
Subject: "Gave it to you."
Experimenter: "And how long did it take?"
Subject: "Just a second or less than a second."
Experimenter: "Mm hm. Did I say anything to you?"

¹ She wondered whether it was to do with susceptibility to hypnosis depending on what hours of the day one works. This answer was most likely stimulated by some casual conversation earlier in the session when the experimenter had asked the subject about her hours of work.

² This was an ad hoc addition to the Stage II Experiment and the experimenter (the present writer) did not make notes of what happened. However, the probable course of events is outlined in the footnote on p.344.

Subject: (After a pause) "Yes, you said I could go ahead and pick up the pen."
Experimenter: "Yes. Just before that, did I say anything to you?"
Subject: (After a pause) "You asked me how I was feeling."
Experimenter: "Yes. And what - what happened then?"
Subject: (Lengthy pause) "You jingled the keys."
Experimenter: "Yes ... what did you do?"
Subject: "Picked up the pen."

The subject denied remembering anything about a cat.

She was subsequently invited to return for a Stage III Experiment but declined. Had she accepted the invitation, the experimenter would have employed a hypnotic induction procedure and given a post-hypnotic suggestion. After "dehypnotizing" the subject, the experimenter would have given a cue for the execution of the post-hypnotic suggestion and then interrupted the post-hypnotic act for a lengthy period (30 minutes, say). After the subject completed the post-hypnotic act, the experimenter would have conducted a post-experimental inquiry. It would have been interesting to know whether the subject would develop an apparently spontaneous amnesia for a lengthy interruption of the post-hypnotic act as she had done for the shorter interruptions during the Stage II Experiment.

Further Evidence Regarding the Alleged "Post-Hypnotic Trance"

According to Erickson and Erickson (1941), if a post-hypnotic suggestion is worded so as to carry immediate as well as remote implications (e.g. "As I jingle my keys, you will invariably -"), it will often result in a continuance in the "spontaneous post-hypnotic trance" of "original trance behaviour". In a similar vein, Erickson, Hershman and Selter (1961) write:

One can discuss a variety of topics with a [hypnotized] patient. A topic might be the life of Benvenuto Cellini and what the patient remembers about it. During the discussion, one gives the patient a posthypnotic suggestion to be carried out next week. Then, one induces another trance. This time, the discussion might be about the life of Michelangelo. One gives another posthypnotic suggestion, arouses the patient from the second trance and, after a while, puts him in a third trance. During this trance, one might discuss the intricacies of playing chess, interrupted by a third posthypnotic suggestion.

The following week, at the cue provided in the original trance, the posthypnotic suggestion is carried out. One arrests the subject at the moment that he starts to carry out the posthypnotic suggestion and he shows catalepsy; he is in the trance state. Then one says to him, "I forgot what you just said," or "I didn't quite understand" He now starts talking about Benvenuto Cellini. One finishes that discussion as though it were last week and awakens the patient. A little while later, one gives the next posthypnotic cue. He carries out the posthypnotic suggestion, again arrested in the trance state. Then one awakens him and gives him the second posthypnotic cue. He carries it out. One proceeds as before. "I don't quite remember that. Can you tell me the instance?" "Well, it happened when Michelangelo was so old." When the hypnotist remarks, "I don't quite follow you," the subject says, "But, of course, when you move your queen here, that's going to lead to check-mate." Obviously, he is discussing chess. (pp. 347 - 348).

The above passage is rather unclear. Presumably its essential meaning is as follows: If a "hypnotized" subject is engaged in some conversation around the time that he is given a posthypnotic suggestion, he can be re-oriented to the time of that conversation by being interrupted in the execution of the posthypnotic suggestion. The present writer obtained some evidence in support of this claim by including an additional procedure in the Stage II Experiment with Subject 10. After the subject had sat down following the first round of questions about hypothetical pictures, the experimenter asked her about people she would like to meet and talk to. He then proceeded:

I'd like you now to think about places. We've all seen places on the news and in films - far away places or sometimes even places within our own country and we'd very much like to visit. I'd like you to think of three places that you would like to visit if you could, assuming that money and distance were no barrier at all. What's the first place?

The subject replied, "Egypt." She was then asked, "What's the second place?" Unfortunately, her reply (if she gave one) was not audible on the tape-recording of the session. Instead of asking about the third place then, the experimenter went on to give the post-hypnotic suggestion (concerned with picking up a pen) and suggestions for post-hypnotic amnesia. After interrupting the subject's execution of the post-hypnotic suggestion and asking her about the (hallucinatory) cat that she claimed to see, the experimenter asked, "What's the third name - third place?" After a pause the subject replied, "Russia."

It occurred to the present writer that it may be that a subject will respond in the manner described by Erickson et al. (1961) without having to be interrupted in the execution of a post-hypnotic suggestion. To test this possibility, the present writer included an additional procedure in the Stage II Experiment with Subject 9. In most respects, this additional procedure was similar to that adopted with Subject 10. Thus, after the subject had sat down following the first round of questions about hypothetical pictures, the experimenter (the present writer) said to her:

I'd like you to think about interesting places. There're many places in the world or even in our own country that many of us would like to see or visit. Sometimes when we watch the news or see documentary programmes on television, we think to ourselves, "Gosh, I would like to go there and see that." And I'm sure that we all have many places that we'd like to go and see, even if it was only a day ... I'd like you to think about three places in the world or even in this country you would like to visit if you could - places that you'd like to see. I'd like you to think about three places that you would like to visit and see. What's the first place?

The sound quality of the tape-recording was not good but it seems that the subject said, "London." The experimenter then asked, "What's the second place?" The subject's reply was not clear from the tape-recording but the experimenter's wife thought that the subject said, "New York." Instead of asking about the third place then, the experimenter went on to give the post-hypnotic suggestion (concerned with picking up a pen) and suggestions for post-hypnotic amnesia. After the subject had been "dehypnotized" and after she had been allowed to complete the interrupted post-hypnotic act, she was asked, "What's the third place?" She replied, "Skye." She was asked why she had said "Skye". The tape-recording of this part of the dialogue was not clear but the experimenter's recollection is that the subject did not recall having been asked questions about places a short while before. During the post-experimental inquiry the subject recalled having said "Skye"; she described it as having been "like a compulsion". For the events transpiring between the beginning of the hypnotic induction procedure and the "dehypnotization" ritual she appeared to be more or less totally amnesic.

The fact that Subject 9 was able to give a meaningful answer to the question, "What's the third place?", even though she had completed the execution of the post-hypnotic act, could be seen as evidence that one does not have to be in a "spontaneous post-hypnotic trance" to behave in that manner. However, since the post-hypnotic suggestion had only just been completed, one might conjecture that the "post-hypnotic trance" (assuming that such a condition existed) had not entirely dissipated at the point when the subject was asked about the "third place". Indeed, Erickson et al. (1961) write: "In every posthypnotic performance, either just before, during, or immediately afterward, the subject goes into a brief, temporary trance, that is essentially identical with the trance in which the posthypnotic suggestion was given" (p.347; emphasis added). In retrospect, therefore, the present writer wishes that he had asked the subject about the "third place" somewhat later in the proceedings. Fortunately, it was possible to test the subject again, since she returned for a Stage III Experiment. Details of this will be given shortly.

GENERAL COMMENTS ON THE PERFORMANCES
OF THE STAGE II EXPERIMENT SUBJECTS

Sex Ratio and Age of Subjects

It can be seen from Table IX in Appendix III that most of the Stage II Experiment subjects were female. The female/male ratio was 7:1 (14 females, two males). The sex ratio does not pose any problems so far as interpretation of the results is concerned, since according to Erickson the occurrence of the alleged effects under investigation is not differentially related to subjects' sex. The mean age of the Stage II Experiment subjects was 31.4 years and the range was 19 - 61 years.

Aspects of the Subjects' Hypnotic Responsiveness

Adequate testing of Erickson's (1967) assertion about "somnambulist" hypnotic subjects' behaviour in the picture positioning task and Erickson and Erickson's (1941) assertions about post-hypnotic behaviour clearly requires highly responsive subjects. It is therefore relevant to ask whether the Stage II Experiment subjects' behaviour in the test situation was such that they could be described as highly responsive ("somnambulistic") hypnotic subjects. Some information about the subjects' responses is recorded in Table IX and further details are given below. It can be seen that the majority of the subjects exhibited high hypnotic responsiveness.

Subject 1

First Part of the Stage II Experiment: This subject scored 10 on the SHSS:C. She did not pass the "Hallucinated Voice" item and her response to the "Dream" item was considered insufficient for a "pass".

Second Part of the Stage II Experiment: During the post-experimental inquiry the subject appeared to have little or no recall of what transpired during the "hypnosis" part of the session. She recalled picking up a "pencil" (it was actually a pen) from the floor but she did not seem to remember that she had been given a post-hypnotic suggestion for that behaviour. She recalled deciding where to hang some pictures but she did not seem to remember doing the task on two occasions. Hence, she was possibly amnesic for the round

of questions about pictures asked before the "dehypnotization" ritual.

Subject 2

First Part of the Stage II Experiment: This subject scored 10 or 11 on the SHSS:C, depending on whether she is deemed to have passed the "Anosmia to Ammonia" item, about which there was a little doubt. The only item that she clearly failed on the SHSS:C was "Hallucinated Voice".

Second Part of the Stage II Experiment: During the post-experimental inquiry the subject appeared to be largely amnesic for the events of the "hypnosis" part of the session. Asked about her picking the pen up from the floor, she said that she did not know why she had done it. She said that she had felt a compulsion - "it was almost like an involuntary action." Later she said, "Obviously something has happened to make me ... do that." She indicated that she recalled only one round of questions about hypothetical pictures.

Subject 3

First Part of the Stage II Experiment: With this subject the SHSS:C was not administered entirely correctly, so her score of 8 should be regarded as approximate. She did not pass the "Dream", "Anosmia to Ammonia", "Hallucinated Voice" and "Post-Hypnotic Amnesia" items.

Second Part of the Stage II Experiment: During the post-experimental inquiry, the subject appeared to be less amnesic than Subjects 1 and 2 regarding the "hypnosis" part of the session. She recalled the experimenter's "saying about your keys", so she might not have been amnesic for the post-hypnotic suggestion. She remembered being asked about pictures but the record of the experiment did not indicate whether she recalled both rounds of questions about pictures.

Subject 4

First Part of the Stage II Experiment: This subject scored between 10 and 12 on the SHSS:C. With regard to the "Moving Hands Apart" item, the present writer's wife (who acted as an observer) was not sure whether the subject's hands were six inches or more apart at the end of a 10-second interval (the criterion for passing the item). With regard to the "Anosmia to Ammonia" item, the experimenter noticed that the subject blinked when the bottle of

ammonia was brought near to his face although he denied smelling it¹. The other SHSS:C items were clearly passed.

Second Part of the Stage II Experiment: During the post-experimental inquiry the subject recalled lying on the bed, listening to the tape-recorded voice and falling into a "deep sleep". Apart from that, he appeared to be amnesic for what transpired during the "hypnosis" part of the session (including his being given a post-hypnotic suggestion regarding picking up a pen). He appeared to recall only one round of questions about the positioning of pictures.

Subject 5

First Part of the Stage II Experiment: This subject scored only 5 on the SHSS:C, passing the "Hand Lowering", "Moving Hands Apart", "Taste Hallucination", "Age Regression" and "Post-Hypnotic Amnesia" items.

Second Part of the Stage II Experiment: During the post-experimental inquiry the subject recalled being asked to lie on the bed and being spoken to via a tape recorder. She appeared to be amnesic for what transpired from then until she was "dehypnotized". She made no mention of having been given a post-hypnotic suggestion and she appeared to recall only one round of questions about pictures.

Subject 6

First Part of the Stage II Experiment: This subject scored 8 or 9 on the SHSS:C, depending on whether she is deemed to have passed the "Dream" item. According to the SHSS:C manual (Weitzenhoffer & Hilgard, 1962) the item is passed "if subject dreams well (i.e., has an experience comparable to a dream - not just vague, fleeting experiences, or just feelings or thoughts without accompanying imagery)" (p.35). In terms of these criteria, the present writer judged the subject's response to be "borderline". The items she clearly failed were "Mosquito Hallucination", "Hallucinated Voice" and "Negative Visual Hallucination".

Second Part of the Stage II Experiment: During the post-experimental inquiry the subject appeared to have little or no recall

¹ The SHSS:C manual (Weitzenhoffer & Hilgard, 1962) indicates that for the item to be passed, the subject must deny smelling the ammonia and overt signs must be absent. The manual does not elaborate on what is meant by "overt signs", e.g. whether blinking constitutes an overt sign.

of the "hypnosis" part of the session. She appeared to remember only one round of questions about pictures. Unlike the other Stage II Experiment subjects, she did not respond to the experimenter's jingling keys by trying to lift the pen from the floor.

Subject 7

This subject's behaviour in the Stage II Experiment has already been discussed in some detail (pp.271-273).

Subject 8

First Part of the Stage II Experiment: This subject scored 9 on the SHSS:C, failing to pass the "Dream", "Anosmia to Ammonia" and "Hallucinated Voice" items.

Second Part of the Stage II Experiment: During the post-experimental inquiry the subject's recollections of the "hypnosis" part of the session appeared to be scant. She recalled the experimenter's tape-recorded voice telling her to relax from the eyelids down and she remembered being told to sleep deeper. She said that at one point she became scared - she felt as if she were becoming engulfed in black. She did not seem to recall the post-hypnotic suggestion pertaining to the lifting of the pen and she appeared to remember only one round of questions about pictures.

Subject 9

This subject's behaviour in the Stage II Experiment has already been discussed in some detail (pp. 267-270; pp. 278-279).

Subject 10

This subject's behaviour in the Stage II Experiment has already been discussed in some detail (pp.274-278).

Subject 11

First Part of the Stage II Experiment: This subject scored 8 on the SHSS:C, failing the "Dream", "Anosmia to Ammonia", "Hallucinated Voice" and "Negative Visual Hallucination" items.

Second Part of the Stage II Experiment: During the post-experimental inquiry the subject exhibited some recall of what transpired during the "hypnosis" part of the session. For example, she seemed to have a vague memory concerning the first round of questions about hypothetical pictures - she was unsure whether she had had actual pictures to hang up and did hang a picture or whether she had just imagined that she had a picture. She recalled picking the pen

up from the floor but she did not seem to recall the post-hypnotic suggestion.

Subject 12

First Part of the Stage II Experiment: This subject scored 9 or 10 on the SHSS:C, there being some uncertainty regarding her response to the "Moving Hands Apart" item. (The present writer's wife noted that the subject's hands "did not move more than 6" in the 10 secs." For the item to be passed, the subject's hands must be six inches or more apart at the end of a 10-second interval.) The items that the subject clearly failed were "Anosmia to Ammonia" and "Hallucinated Voice".

Second Part of the Stage II Experiment: During the post-experimental inquiry the subject recalled sensations she had experienced while lying on the bed during the "hypnosis" part of the session. She also mentioned thoughts or imagery most likely deriving from the suggested garden scene, e.g. smelling flowers, 12 steps going down into a place, and a big tree with a chair under it. The subject appeared to recall only one round of questions about pictures. Unfortunately, the experimenter failed to ascertain whether the subject remembered the post-hypnotic suggestion about lifting the pen from the floor.

Subjects 13 - 16

First Part of the Stage II Experiment: These subjects obtained scores of 6, 7, 8 and 5 respectively on the SHSS:C.

Second Part of the Stage II Experiment: During the post-experimental inquiry these subjects exhibited a fair degree of recall of the events of the "hypnosis" part of the session and Subjects 13, 15 and 16 indicated that they recalled the post-hypnotic suggestion. Subject 13 indicated that her picking up the pen was a voluntary action. From what she reported, it seems that Subject 14 might not have remembered the post-hypnotic suggestion when she went to lift the pen, although she had it in mind that she was going to give the pen to the experimenter. Although aware of the post-hypnotic suggestion, Subject 15 said that she had responded automatically to the experimenter's jingling his keys. Subject 16, on the other hand, said that she picked up the pen because she was "supposed to do it", which could mean that she did it as a voluntary act.

Subjects' Thoughts Regarding the
Purpose of the Stage II Experiment

Towards the end of the second part of the Stage II Experiment, subjects were asked what they thought was the purpose of the experiment. No subject correctly stated any of the specific purposes of the experiment. The following are examples of subjects' comments:

"Possibly to test people's reactions whilst under hypnosis and when conscious ... Possibly even to see if autosuggestion works under hypnosis." (Subject 1)

"Don't know... Perhaps how susceptible some people are to hypnosis ... Could be the whole thing's a con and you want to see how gullible people are." (Subject 2)

"I know it's something to do with the subconscious and how the subconscious reacts - if you can remember. You know, if the subconscious can sort of overtake you. I'm not sure."
(Subject 8)

The fact that no subjects expressed an awareness of the precise purposes of the Stage II Experiment does not of course exclude the possibility that correct inferences were drawn but withheld from the experimenter during the post-experimental inquiry. On balance, however, the present writer doubts whether any of the subjects had a very accurate idea of the purposes of the experiment.

STAGE III EXPERIMENTS

Two subjects (who will be referred to as Subjects 1 and 2) participated in Stage III Experiments. Details of them are given in Appendix I. They had previously participated in Stage I and II Experiments. A third subject who had participated in Stage I and II Experiments was invited to participate in a Stage III Experiment but declined.

In contrast to the Stage I and Stage II Experiments, the format of the Stage III Experiments was not standardized; instead, the procedures varied depending on the subject. In the case of Subject 1, the main purpose of the Stage III Experiment was to provide further

data on the question of renewed hypnotic-type behaviour following the interruption of a post-hypnotic act. In the case of Subject 2, the main purpose of the Stage III Experiment was to provide further data regarding the subject's selection of positions for hypothetical pictures.

The proceedings of the Stage III Experiments were recorded via a Grundig CR 485 cassette tape recorder. At some points the tape-recordings were not clear, so the sections of transcribed dialogue included in the following descriptions of the Stage III Experiments may not be entirely word-perfect. In reproducing the experimenter's and subjects' statements, a little editing has been done to make the material clear and readable. However, care has been taken so as not to alter the essential meaning of what was said.

As in the Stage II Experiments, the present writer's wife was present during the Stage III Experiments.

Subject 1

Subject 1 was nearly 46 years-old at the time of his participation in a Stage III Experiment. Since his participation in a Stage II Experiment some three and a half months previously, he had started attending the present writer for help in controlling migraine headaches. (The present writer works as a clinical psychologist. On becoming aware that this subject had for many years suffered from migraine, the present writer offered to try to help him using a hypnotically-oriented approach. While it is conceivable that in some way the patient-therapist relationship affected the subject's behaviour in the Stage III Experiment, the present writer was unaware of any problems arising in that way.)

Procedure and Responses

The subject was asked to take a seat and the experimenter read the following to him from a script:

When you came along for the last session, it was in two parts. At the end of the first part you sat down in the waiting room for a short period before coming back to this room for the second part. I'd like you to cast your mind back to that second part of the session and give me an account of your recollections of it.

The subject commented: "Was there a bowl of fruit mentioned on that - that bowl of fruit there? Was that involved somewhere? Something

rings in my mind that there was a bowl of fruit - and a cat ... There was something about a lamp in this corner here, but that is it ... That's my total recollection of the lamp."

Again reading from a prepared script, the experimenter said:

Since that session have you had any further thoughts or ideas about what you did then and experienced?

The subject's comments in response to this were not pertinent to the issues being researched. The experimenter went on to ask:

Have you had any further ideas about the aim of this study - what I am trying to find out?

The subject made some comments, but none pertaining specifically to the phenomena under investigation. Shortly after, the experimenter jingled his keys but the subject did not respond, although the experimenter's wife noted that at one point the subject looked at the pen, which was lying on the floor.

In order to ascertain what the subject would think a typical good hypnotic subject and he himself would do in an experiment of the type run with Stage II Experiment subjects, the experimenter described the procedure of a Stage II Experiment, asking the subject what he thought a "typical good hypnotic subject" and he himself would do in that situation. Of course, it is possible and probable that the subject's responses to this inquiry were influenced by his having been a Stage II Experiment subject (even though he might have been consciously amnesic for aspects of that previous experiment). However, this form of inquiry was considered useful since it might throw some light on whether the subject perceived certain phenomena as likely to occur in the experimental situation. More specifically, it was thought that the subject's responses to this inquiry might give some indication whether he regarded the occurrence of hypnotic-like behaviour on the interruption of a post-hypnotic act as likely. (It will be recalled that during the Stage II Experiment this subject reported seeing the suggested cat following the interruption of the post-hypnotic act.)

Reading from a prepared script, the experimenter said:

People have different ideas about what hypnosis is and how hypnotized subjects behave. I'd like to hear from you how you think a typical good hypnotic subject - that is, someone who is able to go into a very deep state of hypnosis - would

respond in an experiment. I shall describe an experiment to you in detail and ask you to tell me what you think the subject would do, say, and experience. There are no right or wrong answers and this certainly isn't a test of your intelligence or knowledge. I'm simply interested in finding out what you think a good hypnotic subject would do and experience in the situation that I'll be describing. You have of course had some experience of hypnosis yourself. In view of this I shall ask you not only how you think a typical good hypnotic subject would behave in the situation I describe, but also how you think you would react if you were the subject. It may be that sometimes you would behave just like a typical good hypnotic subject and at other times your behaviour or experience in the experiment would be different. As I say, there are no right or wrong answers - I am simply interested in your opinions and guesses. Before I start to describe the experiment, is there anything you're not sure about? Is there anything I can clarify?

The subject did not seek any clarification or further explanation at this point. The experimenter proceeded:

All right, now let's assume that the experiment is taking place here in this room. The subject is assured that nothing will be done or said to cause any embarrassment, and there will be no probing into any private or personal matters, and that his name or address will not be written up in a professional journal. The experimenter says he hopes the subject won't mind Dr. McCue¹ being present and that if he does, she will be asked to leave. He is told that the experimenter would like to record the proceedings with a tape recorder but if the subject has any objection his wishes will be respected.

The experimenter asks the subject to lie on the bed and explains that he would like the subject to go into hypnosis by listening to a recording of the experimenter's voice from a tape recorder. The tape-recording then plays for over three quarters of an hour and contains suggestions for a very deep state of hypnosis.

¹ The experimenter's wife.

Before the tape recorder is switched off, the voice says, "And now as you remain very very very deeply hypnotized, I'd like you to slowly open your eyes, remaining very very deeply hypnotized ... Slowly opening your eyes now but remaining very very very deeply hypnotized."

The subject was asked to lie on the bed (the one on which he lay during the lengthy hypnotic induction procedure in the second part of the Stage II Experiment) and was presented with a card bearing the statement, "This is the winter of 1983". The subject was asked what would be his and the typical good hypnotic subject's response to the experimenter's saying, "Do you mind reading this to me?" The tape-recording of the subject's response was not very clear but it seems that he thought that both he and a typical good hypnotic subject would probably read the card. In response to, "Would you like to come over here?" the subject indicated that both he and a typical good hypnotic subject would go across the room (a non-literal response). The subject was then taken through the questions about hypothetical pictures. In the case of both himself and a typical good hypnotic subject he appeared to think that "reasonable" positions would be selected.

The subject was told about the post-hypnotic suggestion (pertaining to lifting a pen from the floor) and the suggestions for post-hypnotic amnesia. It was explained to him that after the hypothetical subject had been counted out of hypnosis, he and the experimenter would engage in casual conversation and that after a while the experimenter would jingle his keys. The subject indicated that he thought that both he and the typical good hypnotic subject would pick up the pen and pass it to the experimenter. The experimenter asked the subject to show him what he thought would happen. The experimenter demonstrated the interruption of the post-hypnotic act. The subject said that he thought that the typical good hypnotic subject would see the suggested cat. He referred to his prior experience as a Stage II Experiment subject: "I think this is where the cat came into it - the cat I mentioned earlier. I think this is me realizing now that I did see a cat and that's where the cat came in. Up until now I remembered a cat but I couldn't remember exactly where the cat came into it ..."

The following dialogue ensued:

Experimenter: "You think that you would see a cat, do you?"

Subject: "I think I possibly did, yes."

Experimenter: "Yes. If you hadn't had an experience of that nature, what would you have thought?"

Subject: "If I hadn't had the experience that I have now, I would have treated it with a great deal of scepticism, I think."

Experimenter: "Yes. Why do you think a typical good hypnotic subject would see a cat or report seeing a cat?"

Subject: "I think because it has been implanted, if that's the proper word, into his subconscious by the investigator at the time. I would imagine if he is a good subject, then he would be able to see the thing suggested, in this instance the cat."

Experimenter: "Yes. When has the idea been implanted?"

Subject: "When the hypnotherapist said the bowl of fruit is now gone and there's a cat there."

Experimenter: "Yes."

Subject: "I would think that a good hypnotic subject would automatically see the cat."

Asked what he thought the typical good hypnotic subject would say in response to, "Do you mind telling me what colour it is?" the subject replied, "He would describe the cat as he could see it." The subject thought that he would respond similarly if he were the subject. The subject indicated that he believed that both he and the typical good hypnotic subject would lift the pen and hand it to the experimenter in response to the latter's saying, "O.K., you can go ahead now."

The subject was taken through another round of questions about the positioning of pictures. Once again he indicated a belief that both he and the typical good hypnotic subject would select "reasonable" positions.

The subject was asked what recollections the typical good hypnotic subject would report during a post-experimental inquiry. He said: "I would imagine the good hypnotic subject would be unable to remember very much of the experience while under hypnosis. He may recall parts of the experience which were outwith hypnosis, provided of course

it had been suggested to him that he was able to remember them. But recalling, of course, as you said earlier there, that it was suggested to him that he wouldn't remember anything - he would waken from a deep dreamless sleep and remember nothing of the experience - then I doubt very much if he would remember much about it at all." The experimenter sought clarification by asking the subject whether the typical good hypnotic subject would remember "the things that happened when he wasn't in a state of hypnosis". The subject indicated that he did not know but when asked to guess he said, "I would imagine he would remember possibly a good part of it." The subject was asked what he thought he would be able to tell the experimenter if he had been through the experiment discussed and had been asked to give a report of his recollections. He said: "I would probably be able to tell you about the siting of the various pictures because the second part was done outwith hypnosis. I probably wouldn't be able to tell you that it had occurred twice - because the first part was done under hypnosis. I would probably be able to tell you about the experience with the lamp because, once again, that was done after I had been brought out of hypnosis." Some of the ensuing dialogue was as follows:

Experimenter: "You'd be able to tell me the experience with the lamp?"

Subject: "I think so."

Experimenter: "What was that experience?"

Subject: "Where you stopped me from picking up the pen and asked me to look at the lamp." After a pause, the subject continued: "Y'know for the life of me I can't remember myself now what the experience was with the lamp. It's my own memory that's failing me there ..."

The Stage III Experiment proceeded with a hypnotic induction procedure. The subject was asked to leave his hands on his lap, close his eyes, and make himself comfortable. The experimenter said:

And as you continue making yourself comfortable like that, I'm going to start slowly counting from one towards 20 and as I do so you can find yourself entering the hypnotic state, and as you start to enter hypnosis your right hand can start to get

lighter and lighter, and when you're in a deep hypnotic state - which can happen quite quickly now you're a very experienced good subject - a hand will float clear of the trouser leg.
1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 -
15 - 16 - 17 - 18 - 19 - 20. Deeply hypnotized. Very very
very relaxed and deeply hypnotized.. Very very deeply hypnotized.
Becoming more and more deeply hypnotized, very very very comfortably
and deeply hypnotized.

A few seconds later, the experimenter proceeded with a post-hypnotic suggestion and suggestions for post-hypnotic amnesia:

Whenever I cough you will invariably lean forward and scratch your right ankle with your right hand. Whenever I cough you will invariably lean forward and scratch your right ankle with your right hand. Shortly I'm going to wake you up from this comfortable state of hypnosis by counting back from 20 to one and when you wake up from this hypnosis it will be as if you've been having a very deep dreamless sleep. You'll have no recollection when you wake up from the hypnosis of what happened during hypnosis. Your mind will be very pleasantly relaxed and it'll be as if you've been into a very deep sleep, as if you've been deeply asleep. You'll have no recollection of what happened during the hypnosis but you'll be very comfortable, very relaxed.

After a few seconds, the experimenter said:

I'm now going to slowly count back from 20 to one and when I get to one your eyes will open, you'll be wide awake, relaxed and refreshed. 20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1.

The experimenter and subject spent a short time discussing the latter's migraine. The experimenter then coughed and as the subject's hand reached down (presumably to scratch his ankle) the experimenter took hold of it. Pointing across the room, the experimenter said, "D'you like that portrait of the Queen?" (There was in fact no picture of the Queen present in the room.) The subject indicated that he could see the portrait and the following dialogue ensued:

Experimenter: "Do you mind telling me how old the picture looks?"

Subject: "It's not very old. Mind you, since she's wearing what would appear to be not the coronation robes but the coronation gown ..." (The subject said

some more words but they were not all clear on the tape-recording.)

Experimenter's wife: "Would you like a picture like that in your living room?"

Subject: "I'm sorry, the picture's gone. Can't see it ... It's strange."

Experimenter: "How are you feeling at the moment?"

Subject: "I feel fine. It was as though the change of voice just blanked it out completely. It was there. You know, it was definitely there."

The above incident merits some comments. As in the Stage II Experiment, after the subject was interrupted in the execution of a post-hypnotic suggestion he responded positively to a suggestion for a visual experience. In line with the assertions of Erickson and Erickson (1941) it could be argued that the interruption of the post-hypnotic act prolonged the "spontaneous post-hypnotic trance" and as a result the subject was hypersuggestible and therefore capable of experiencing visual hallucinations. Alternatively, one could hypothesize that the subject was capable of having hallucinatory or quasi-hallucinatory experiences even without being exposed to a hypnotic induction procedure or being interrupted in the execution of a post-hypnotic suggestion. This hypothesis is supported by some observations to be reported shortly.

When questioning the subject about his "seeing" a portrait of the Queen, the experimenter asked, "Do you mind telling me how old the picture looks?" It is interesting that the subject replied non-literally. Thus, if he was in a "trance" at the time, it would seem that a marked tendency to display literalness was not a characteristic of it.

In their 1941 paper, Erickson and Erickson claim that when a subject is arrested in a "post-hypnotic trance" via an interruption of a post-hypnotic act, the subject is unresponsive to individuals with whom he or she is not in "rapport"¹. The experimenter's wife's asking the subject, "Would you like a picture like that in your living room?" was intended to test that assertion. Thus, if the subject had failed to respond to her question and had acted as if she had not been present, that would have been in line with Erickson and Erickson's

¹For footnote, see p.294.

assertion. It is clear, however, from the subject's response that he heard the experimenter's wife, even though her speaking appeared to disrupt his imagery or hallucination of the portrait of the Queen. It could be argued, however, that since the experimenter's wife was known to the subject - she had been present when he attended for a Stage II Experiment - and she was evidently participating in some way in the present experiment, some "rapport" with her existed; if so, the above test might have been inadequate and it might have been better if a complete stranger had entered the situation and addressed the subject while the latter was "seeing" the portrait.

The experiment proceeded as follows: The subject was asked to stand up and the experimenter took him through the questions about picture positioning again. As before, the subject selected "reasonable" positions. After the subject had sat down again, the experimenter pointed across the room and suggested another visual hallucination: "Why don't you watch the tropical fish in that tank for a few minutes? Their colours are amazing. When you're ready, you can tell me about the fish and what they're doing." The subject appeared to respond positively to this suggestion. He commented:

Footnote from p.293:

Erickson (1934) discusses rapport in the following terms: "As the subject goes into a hypnotic sleep, the field of consciousness narrows and external stimuli, except those given by the hypnotist, lose their significance. Ultimately the subject loses contact with the external world except for the operator. Essentially, the 'consciousness' is in a state of sleep, while the 'subconsciousness' is left in control and in rapport with the hypnotist. This rapport, which constitutes a fixed phenomenon of hypnotic trances, may be defined as a state of harmony between the subject and hypnotist, with a dependence of the former upon the latter for motivating and guiding stimuli, and is somewhat similar to the 'transference' of the psychoanalytic situation. It enables the hypnotist to remain in full contact with the subject while to the rest of the world the hypnotized person remains an unresponsive object. This rapport may be transferred by the command of the operator to any designated person, and subjects who distrust the hypnotic state but permit hypnosis may spontaneously retain rapport with anybody they wish as they go into the trance" (Rossi, 1980c, p.9). These comments suggest that Erickson viewed rapport as an unsuggested feature of the presumed hypnotic state. If subjects do behave in the manner described by Erickson, an alternative view would be that rapport is an artefact arising from, say, suggestions or subjects' expectations. For example, if, during an induction procedure, a hypnotist said to a subject, "You will hear only my voice ...", and if the subject were trying hard to fulfil the role of a "good" subject, it would not be surprising if he ignored comments addressed to him by someone other than the hypnotist.

They may appear to be beautiful colourful fish. In actual fact they're Japanese cannibal fish, and they require to be separated, otherwise they'll eat each other. They are beautiful - they're very very flimsy, multicoloured - multicoloured in so far as they themselves are not multicoloured individually, but there are a lot of colours in the number of fish in the tank.

After some more conversation about the tank of fish that the subject appeared to be "seeing", the experimenter said, "O.K., you can go ahead now" (meaning that the subject could complete the post-hypnotic act, i.e. scratch his ankle). In order to facilitate that action, which possibly the subject would not have carried out without further prompting, the experimenter shortly after coughed. The subject scratched his leg and said, "It was a strange experience." Asked what he was referring to, the subject said, "Being able to see that fish." Asked to describe the experience, he said:

Roughly about three foot long, 18 inch high by 12 inch tank on a stand - on a painted black stand with a [?] ¹ shelf underneath. Possibly the reason I can visualize it so readily is because I have in my work made stands for tanks like that and I can visualize that very easily.

Asked by the experimenter, "Is it there now?" the subject said it was not. Questioned further, he said that his experience was, "Like in a ghost-like image of it against a white wall." He said that he could describe it in detail but he could tell that it was not wholly real.

Some further conversation ensued and the experimenter coughed. The subject executed the post-hypnotic suggestion by scratching his leg (without interruption from the experimenter). After further conversation, the experimenter made the following suggestion: "Notice that your right arm has become heavy - you can't lift it at all." The subject said that it was like a lump of lead hanging from his shoulder. The experimenter said, "Try to lift it", but the subject seemed unable to do so until several seconds later when the experimenter said, "Now it's O.K." It is noteworthy that at this point the subject had not been interrupted in the execution of a post-hypnotic suggestion.

The experimenter said to the subject, "What d'you think of that picture of the battleship up there, just beside the door?" This was another suggestion for a visual hallucination - there was in fact

¹ Word not heard clearly.

no picture of a battleship in the room. The subject said that he could not visualize it. He was asked, "Why d'you think you couldn't visualize that but you could visualize the fish tank?" He speculated that it was possibly because he had had no real experience with battleships. He recalled: "When I looked round, I could feel my sub-conscious searching for a picture of a battleship."

The experimenter suggested another visual experience. Pointing, he said to the subject, "Can you see that cat?" The subject indicated that he could; he described it as a big ginger cat. The experimenter asked, "Can you tell me what he's doing?"; the subject replied, "Sitting on top of the table" (a non-literal response). Asked how real the cat was, the subject said, "Like the fish tank, he is there, but only just there. He's translucent." Shortly after, the experimenter asked whether the cat was still there; the subject said it was not. Asked whether he had to make an effort to keep up the image, the subject denied this, saying it took no effort whatsoever. He indicated that despite being translucent, the image was obvious. He commented:

There are some small specks of dust or something on the table. I could see them through the cat, but the cat was there and he was sitting, facing me. Possibly because of my dislike for cats, I have very vivid pictures of cats.

During some further conversation that ensued the subject again exhibited scratching behaviour when the experimenter coughed. However, no attempt was made to interrupt this behaviour.

The experimenter suggested another visual experience: "Can you see the little dog there now?" The subject replied that it was not a little dog - it was an Alsation he had once owned. The subject, appeared to realize that the dog was not physically present. Although he said he could see through the image, he described it as very vivid; indeed, it was so "real" that he could feel emotion. (He had been fond of the dog, which was no longer alive.) After some more discussion, the experimenter again suggested that the subject's right arm was very heavy and could not be lifted. Asked how it felt, the subject said, "Dead." The experimenter said, "And now it can lift." The dialogue between the experimenter and the subject continued as follows:

- Experimenter: "When you have these experiences of your arm feeling heavy and dead, d'you think you could break out of it if you wanted to?"
- Subject: "I suppose if I put sufficient effort into it, I may. I don't know."
- Experimenter: "When you have these experiences, d'you feel as if you're in a different state of mind or d'you feel that it's just your normal state?"
- Subject: "No, I feel it's my normal state. The experiences with the dog and my experiences in my garden at home¹ - I appreciate that they are in a state of trance, in a state of the subconscious being brought out, of transporting an image through your vision. I can appreciate that. I don't know why it happens. I don't know. I have often thought to myself, do other people experience this?"

(When the subject and the present writer met on another occasion, the subject described an incident in which he had hallucinated the figure of a girl crossing the road in front of him while he was driving. It would appear, then, that this subject was relatively susceptible to hallucinatory and quasi-hallucinatory visual experiences, a characteristic that may be common among highly hypnotizable subjects².)

After some further conversation, the experimenter explained to the subject that he was going to do something and he wanted the subject to watch what happened to him (the subject) very carefully. The experimenter coughed and interrupted the subject as he went to scratch his ankle. Questioned by the experimenter, the subject said that he felt that he would like to scratch his ankle. Asked, "D'you feel anything else?" the subject said, "Very relaxed."

¹ A little earlier in the session, the subject mentioned occasions when he had been sitting in his garden and had been able to see dogs he had owned prior to moving to his present house. He acknowledged that these experiences were subjective and said, "I couldn't honestly say there was any depth in the vision."

² As indicated in Chapter II (pp. 64-66), Wilson and Barber (1982) found that hallucinatory experiences were common in a group of highly hypnotizable women they interviewed.

The conversation proceeded as follows:

Experimenter: "Do you feel as if you're in your normal state?"

Subject: "I feel that I'm in my normal state as has been my normal state for the last couple of months. I feel that I'm totally relaxed ..."

The experimenter coughed and the subject scratched his leg.

Experimenter: "Having scratched, d'you feel any different?"

Subject: "No, not really."

Experimenter: "D'you know why you scratched?"

Subject: (Laughing) "Because my ankle was itchy."

Experimenter: "Why did your ankle itch?"

Subject: "I don't know. I've noticed I've been scratching here for ... [The subject laughed and the tape-recording was not clear at this point]... just since the last 10 minutes or half an hour or so."

Experimenter: "Were you aware that I gave you a post-hypnotic suggestion that whenever I coughed you'd scratch your - ?"

Subject: (Laughing) "Is that why I'm scratching? ..."

The experimenter explained that he was going to cough again and that he did not know whether the subject would feel the same urge to scratch. He coughed but the subject reported that he did not feel an urge to scratch. Shortly after, the experimenter suggested that the subject's right arm had become heavy and he could not lift it. The subject reported that it felt hot and heavy. Asked whether he could lift it if he tried, the subject said, "I probably could but I would probably be exerting a terrific amount of pressure in doing so." The experimenter then said, "Could you just try a little bit? - I don't want you to injure yourself in any way, of course." The subject seemed to be unable to lift his arm until the experimenter said, "O.K., now you can."

Comments

When the subject attended for a Stage II Experiment he appeared to respond positively to a suggestion for a visual experience ("seeing" a cat) after he was interrupted in the execution of a post-hypnotic suggestion. In line with the arguments of Erickson and Erickson (1941) one could argue that he was able to have this

experience because he was arrested in a "post-hypnotic trance", a state that rendered him hypersuggestible. During the Stage III Experiment the subject again appeared to respond positively to suggestions for visual experiences after he was interrupted in performing a post-hypnotic act. However, as indicated above, he also appeared to respond positively to suggestions for visual experiences and heaviness of his right arm at other points in the session - at times when he was not interrupted in the execution of a post-hypnotic suggestion. These findings accord with those of Barber (1958, 1962), which were discussed in Chapter IV (pp. 174-179). It could be argued, therefore, that the subject's ability to respond to hypnotic-type suggestions during the "post-hypnotic" period reflected his high hypnotic susceptibility (a trait) rather than his entering a fundamentally altered state.

During the post-experimental inquiry conducted at the end of the Stage II Experiment, the subject made no mention of his having "seen" the suggested cat. Thus, he might have been amnesic for that experience¹. After the subject was prevented from scratching his ankle during the Stage III Experiment, he appeared to respond positively to suggestions that he would "see" a portrait of the Queen and a tank of tropical fish. He eventually scratched his leg (which, in terms of Erickson and Erickson's arguments, might have been expected to bring him out of the postulated "spontaneous post-hypnotic trance") but from his comments it was evident that he had not developed an amnesia for his experience of the fish tank. The experimenter asked him what had transpired earlier during the session but the subject did not mention his experience of the portrait of the Queen.

Subject 2

This subject was invited to participate in a Stage III Experiment after exhibiting interesting responses in the picture

¹ As indicated above, at the start of the Stage III Experiment, the subject was asked about his recollections of the Stage II Experiment. He said: "Something rings in my mind that there was a bowl of fruit - and a cat ..."

positioning tasks in a Stage II Experiment (see pp. 267-270). (She had been Subject 9 of the Stage II Experiment group and prior to that she had participated in a Stage I Experiment as Subject 13 of the Normal/Live/Scriptless Group.)

Procedure and Responses

When the subject attended for the Stage III Experiment, the setting was the same as during the Stage II Experiment (see Figure 2a, p.270): the bowl of fruit was present, positioned on a radiator under a window; the experimenter's wife was sitting in a chair with a window behind her; and the photograph of a man was positioned on top of a low cupboard in such a way that the background to it was a corner of the room.

After making some introductory remarks, the experimenter read some material from a prepared sheet, asking the subject to cast her mind back to the second part of the Stage II Experiment and give him an account of her recollections of it. She recalled having been in the room longer than she thought she had been and she recollected that she had been asked what she thought the aim of the experiment was. She recalled that at the beginning of the session she lay down on a "couch" (it was actually a bed) and that at the end of the session she was sitting in a chair and she could not remember how she had got to the chair. She seemed unable to recall further details. However, it was about two months previously that she had attended for a Stage II Experiment, so it cannot be stated with certainty whether or to what extent her inability to recall more stemmed from ordinary mechanisms of forgetting as opposed to persisting post-hypnotic amnesia. (Of course, another possibility is that for some reason the subject was pretending to have little recall of the events of the Stage II Experiment.)

Reading from a prepared sheet, the experimenter asked, "Since that session have you had any further thoughts or ideas about what you did then and experienced?" The subject reported that for one or more days after the Stage II Experiment she had had a feeling that memories were about to come to her - as if they were on the tip of her tongue and ready to come out.

Again reading from a prepared script, the experimenter asked the subject, "Have you had any further ideas about the aim of this study - what I'm trying to find out?" The subject said that the

thought had crossed her mind that the experimenter was going to perform on stage, but she gave the impression of not having taken that idea seriously. She also mentioned having read about pain relief in an article.

The experimenter administered a hand levitation hypnotic induction procedure without the use of a script. The subject was asked to focus her gaze on a spot on the back of one of her hands. The experimenter suggested that as he spoke to her, she would be able to go into "hypnosis" again quite easily. It was suggested that she would probably find her eyes beginning to get heavy and a hand beginning to get light and that as the "hypnosis" developed, her hand would start floating up towards her cheek or chin. Further suggestions to facilitate a hand levitation were given for a few minutes and then the experimenter commented:

That's it, left hand beginning to lift ... fingers spreading apart ... And in fact, you can go into hypnosis so deeply and so quickly that you can reach a very deep state of hypnosis very soon and the hand doesn't have to reach right up to the face ... The hand can lift just an inch or two as you continue going deeper and deeper into the state of hypnosis ... In fact, it's not even necessary for the hand to lift much at all if it doesn't want to, because you can still go into very deep hypnosis ... and yet the hand is coming up now ... as you continue enjoying this hypnosis ... I'd like you to close the eyes as you enjoy this relaxation. That's it, keeping those eyes pleasantly closed ... Keeping those eyes pleasantly closed as you enjoy this state of relaxation and hypnosis, allowing it to get deeper and deeper ... And I'm going to slowly count from one to 20 and as I do so the hypnosis will get very very deep, and when I get to 20 you will be in a very very deep state of hypnosis, very very very deep hypnosis.

The experimenter counted to 20 and then said to the subject: "You're now very very deeply hypnotized ... And I'd like you to open your eyes, remaining very very deeply hypnotized."

The experimenter asked the subject to stand up and he directed her to a position in front of his wife, Dr. E.C. McCue.

The subject was asked where, if she had a three by four foot picture of Dr. McCue, where in the room would she hang it¹. She selected a "reasonable" position. She was then directed to a position in front of the photograph and was asked where she would hang a three by four foot picture of the man in the photograph. She selected a position more or less in the same area as she had chosen for the hypothetical picture of Dr. McCue, i.e. a "reasonable" position. She was then directed to a position in front of the bowl of fruit, which was located on a radiator under a window. Asked where she would hang a three by four foot picture of the bowl of fruit, she indicated a position in the vicinity of it. As will be seen on pp. 303-304, the experimenter subsequently sought clarification about the position the subject had selected - it was apparently above (and presumably behind) the bowl of fruit. She was questioned about what she saw. She appeared to be misperceiving the region of the window as an alcove with a mirrored wall. (It should be noted that the experiment was conducted on a winter's evening. Accordingly, electric lights were on in the room and it was dark outside, although by looking through the window behind the bowl of fruit one could see some light coming from another room in the building.) The subject was again asked where she would place a three by four foot picture of Dr. McCue². The subject selected the same "reasonable" position that she had chosen before for this hypothetical picture. She was asked to look at the bowl of fruit again and tell the experimenter more about what she saw. Unfortunately, the tape-recording of her comments was not very clear.

The subject was asked to sit down and close her eyes and after a short interval (about 84 secs) the experimenter read the following from a prepared sheet:

I'd like you to imagine a vase containing three well-known flowers - three flowers you know the names of. Imagine

¹ Erickson (1967) reports that in his study of "somnambulistic" hypnotic subjects' picture positioning choices, the questions about hypothetical pictures were read from cards. To make his procedure similar to Erickson's, the present writer used cards during the Stage II Experiments (with one probable exception - that of Subject 1). Unfortunately, at the time of the Stage III Experiment presently under discussion the present writer did not make a written note of whether he used cards in asking the questions about pictures. Since he was very familiar with the questions, it would have been possible for him to ask them without using cards.

² From the experimenter's wife's notes, taken during the session, it seems that she (Dr. McCue) had temporarily moved to another chair at this stage in the experiment.

that on the stem of each flower there is a tag bearing a letter. One flower is labelled A; one is labelled B; and the other is labelled C. Look at the flowers carefully so that you know which is which ... What's A?

The subject replied, "Pink carnation." She was then asked, "What's B?" and she replied, "Dandelion." As will be seen, the experimenter deferred asking, "What's C?" until after the subject had been "dehypnotized".

The subject was asked to open her eyes, remain "in hypnosis", and stand up. She stood up and she was asked again where she would place a three by four foot picture of the bowl of fruit. This time she selected a position on a piece of wall to the right of the bowl of fruit (see Figure 3.).

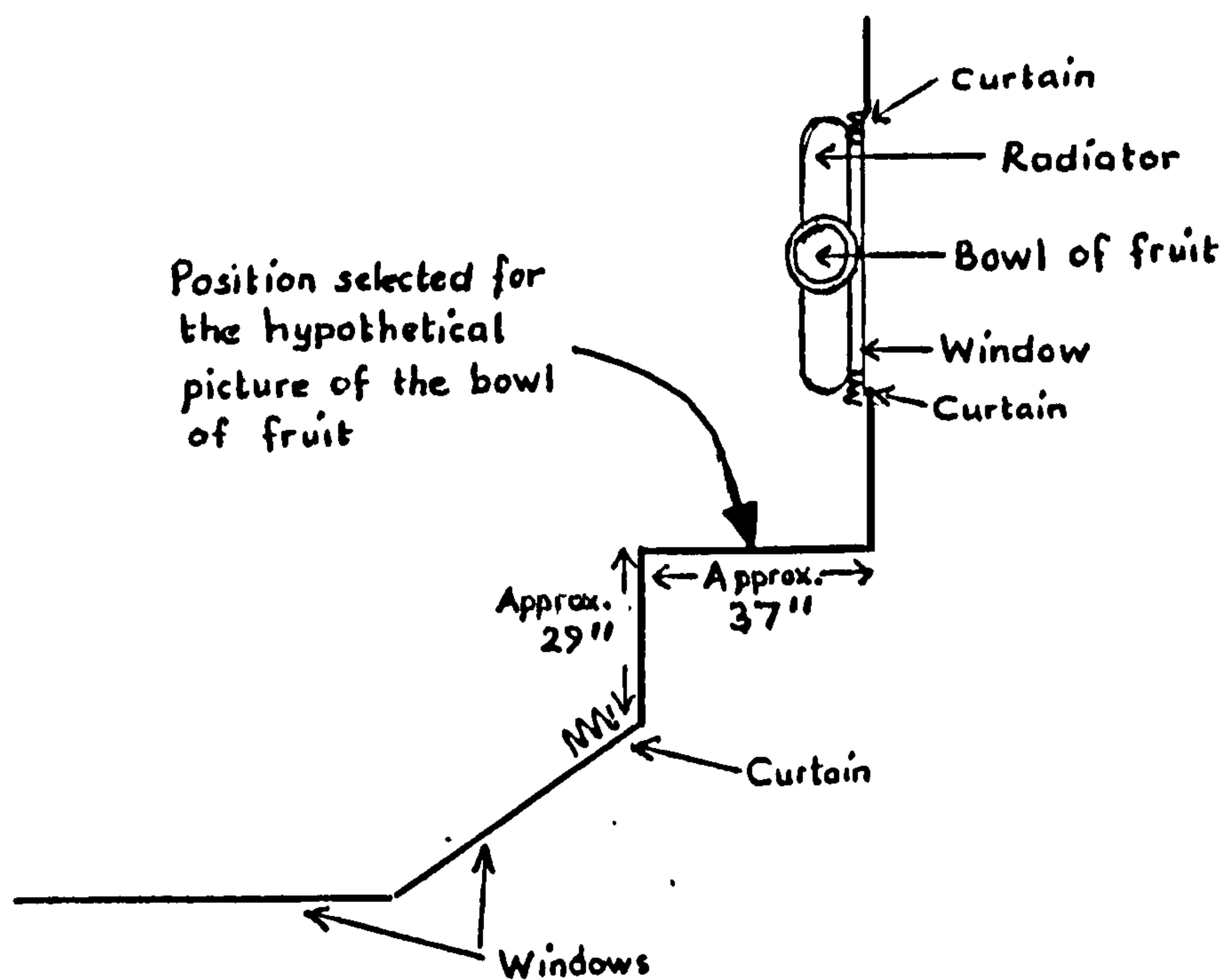


FIGURE 3. Position selected for hypothetical picture of bowl of fruit

The experimenter commented on the subject's having earlier chosen somewhere else for the hypothetical picture and she recalled that it was "in the alcove". She was asked to specify where "in the alcove" she would have placed the picture. The position she indicated is illustrated in Figure 4 .

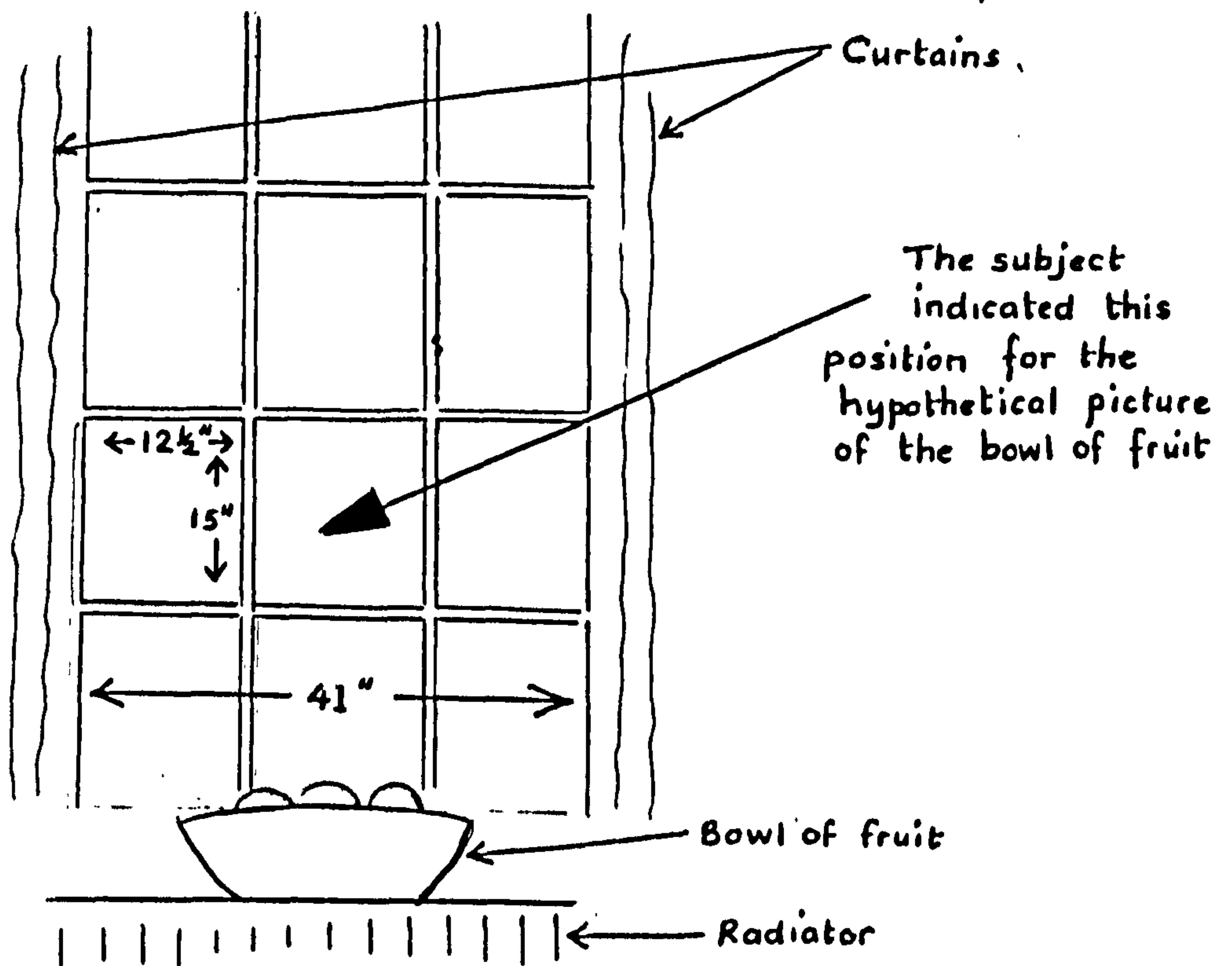


FIGURE 4. Position indicated for hypothetical picture of bowl of fruit

The subject was asked to sit down and close her eyes, and the experimenter said the following:

Shortly I am going to wake you up from this state of hypnosis and when you wake up it will be like waking from a deep, dreamless sleep - you will not remember what happened during the hypnosis; you will be awake, comfortable and relaxed, but unable to recall what you did or said while you were hypnotized. It can be comfortable and pleasant to forget things you don't need to remember.

The experimenter repeated the above suggestions for post-hypnotic amnesia and explained to the subject that he would count back from 20 to one whereupon her eyes would open and she would be wide awake, relaxed and refreshed.

After counting back to one, the experimenter engaged the subject in some casual conversation (unrelated to the experiment) for about a minute. The following dialogue then ensued:

Experimenter: "What's C?"
Subject: "Pardon?"
Experimenter: "What's C?"
Subject: (After a pause) "What's C?" (or "What's sea?")¹
Experimenter: "Yes."

The subject said something about "the river" but her statement was not clear on the tape-recording. She sounded puzzled.

Experimenter: "D'you not know what I mean?"
Subject: "Did you say, 'What's C?' [or 'What's sea?']?"
Experimenter: "What - what is C?"
Subject: "Oh, what is C?! ... Daisy."
Experimenter: "Why did you say that?"

After a pause the subject answered. Her response was not very clear on the tape-recording but was probably: "I felt I had to say it. I like daisies."

Experimenter: "Yes. D'you know why you said that?"
Subject: "Did you tell me to say a daisy?"
Experimenter: "When?"
Subject: "You talking about daisies?"
Experimenter: "When would I have been talking about daisies?"
Subject: (After a pause) "Talking about gardening? No?"
Experimenter: "When do you think we might have been talking about gardening?"
Subject: "Well I know from past experiences that the time lapses when I'm not aware of it. D'you remember I told you that before? That's why I didn't like coming the first time². So I'm putting two and two together. I think we're talking about gardening."

As indicated earlier in this chapter (pp. 276-277), Erickson et al. (1961) claim that if a "hypnotized" subject is engaged in some conversation around the time that he is given a post-hypnotic

¹ It is likely that the subject thought that the experimenter was referring to the "sea" rather than the letter C at this point. She lived in a village by the Firth of Clyde and during the preceding casual conversation she had referred to its being "beside the sea".

² The subject was presumably referring to her second attendance (for a Stage II Experiment) and not her first attendance (for a Stage I Experiment), since when she attended the first time she would not have known that she was going to experience a "lapse of time".

suggestion, he can be re-oriented to the time of that conversation by being interrupted in the execution of the post-hypnotic suggestion. This is so, they claim, because (1) around the time of executing a post-hypnotic suggestion a subject temporarily goes into a trance which is essentially identical with the trance in which the post-hypnotic suggestion was given, and (2) this brief trance is prolonged if the subject is interrupted at the moment that he tries to carry out the post-hypnotic suggestion. The behaviour of the subject presently under consideration does not seem to accord with these assertions. Her response to the question, "What's C?" was clearly related to the experimenter's mentioning flowers prior to the "dehypnotization" ritual, but she was able to answer the question (by saying, "Daisy") even though she had not been interrupted in the execution of a post-hypnotic suggestion.

It will be recalled that part of the Stage III Experiment with the previous subject entailed the experimenter's describing the procedure of a Stage II Experiment and asking the subject how he thought he (the subject) and a typical good hypnotic subject would respond to the test items. Following a little casual conversation (unrelated to the experiment), the experimenter pursued a similar inquiry with the present subject (although he omitted mention of the post-hypnotic suggestion employed during the Stage II Experiment, i.e. the suggestion that the subject would lift a pen from the floor when the experimenter jingled his keys). The interesting finding from this inquiry was that the subject did not seem to think that she (in a state of "hypnosis" or in the "waking state") or a typical good hypnotic subject (in a state of "hypnosis" or in the "waking state") would select markedly unusual positions for any of the hypothetical pictures¹.

The subject was asked to sit down and the experimenter said that he would like her "to go into hypnosis again for a short period". Shortly after, the experimenter launched into the following hypnotic induction procedure (without using a script):

And I'd like you to start by relaxing your whole body.
So, would you like to close your eyes? And relax the
muscles of your eyelids. I'd like you to imagine now that
the eyelid muscles are very very relaxed already. I'd like
you to imagine that you've already achieved tremendous

¹For footnote, see p.307.

relaxations there. Feel it happen, make it happen ...
I'd like you to imagine now that you've already achieved
tremendous relaxation in your arms, your legs and your back
... And as you imagine that relaxation, it will happen, and
you can already start going into hypnosis ... And I'm going
to slowly count from one to 20. As I do so, you'll start
going into a very very deep state of hypnosis and your left
hand will start to get light and will start to lift up by
itself.

The experimenter started counting slowly but stopped after he reached seven since the subject did not appear to be responding properly. (From the experimenter's wife's notes, it seems that the subject had opened her eyes.) The subject was asked, "What's happening?" Her reply was not very clear on the tape-recording but was probably, "Sorry, I couldn't concentrate." Questioned further, she said, "I wasn't relaxing. I don't think I could feel relaxed." The experimenter therefore employed a different technique: He instructed her to close her eyes and he asked her to imagine that she was wearing a bobble hat and that she had "a sort of X-ray vision" and was rolling her eyes up to look at the bobble through the top of her head. The experimenter continued: "And as you

Footnote from p.306:

According to the notes of Dr. McCue (the experimenter's wife), the subject thought that under hypnosis both she (the subject) and a typical good hypnotic subject would select the wall immediately to Dr. McCue's right as a place to hang a picture of the latter. It can be seen from Figure 3 (p.303) that the relevant piece of wall was only about 29 inches in breadth and was therefore unsuitable for a three by four foot picture. (As commented earlier in respect of the picture positioning tasks in the Stage II Experiments [p.269], subjects did not always take sufficient account of the large size [3' x 4'] of the hypothetical pictures.) It is possible that the subject misunderstood the experimenter and thought that he was referring to small pictures - the experimenter's wife recalled that the subject marked out, by gesture, a square on the wall, this shape being much smaller than a three by four foot rectangle; moreover, when the subject went on to specify the position that she thought she and a typical good hypnotic subject (under hypnosis) would select for a picture of the man depicted in the photograph, it became evident that she was thinking of a three by four inch picture.

do that and imagine vividly, you can go into hypnosis, and you'll probably notice already that your eyelids are so heavily stuck down that if you try to open them, they'll resist opening and remain stuck down. Notice if you try to open the eyes now, they're stuck. That's it. Now stop trying to open them; enjoy having them stuck down at the moment, and stop looking at the bobble and just let your eyes return to normal as you continue in this hypnotic state." (This procedure capitalizes on the fact that if the eyelids are closed and one rolls one's eyes up, as if looking through the top of the skull, it is hard to open the eyes at the same time.) Noticing that the subject's fingers were interlocked, the experimenter gave the suggestion: "And notice now that you're so deeply hypnotized that if you try to pull your hands apart, they're stuck. You can imagine they're stuck together, so when you try to pull them apart they do get stuck - the more you try and pull them apart, the more stuck they've become ... But now you can release them quite easily, but remain comfortably hypnotized."

The experimenter went on to suggest that the subject would be able to remember what had happened when she was "hypnotized" earlier during the session. She was asked to signal by lifting her left hand a couple of inches when the memories started to come back. The following dialogue ensued:

Experimenter: "And I'd now like you to open your eyes, remaining hypnotized, so I can discuss your experiences earlier ... D'you remember we were talking about where you would place some pictures?"

Subject: "Mm hm."

Experimenter: "Could you just remind me where you said you would place the pictures?"

Subject: "Placed No.1 on the wall. I would place No.2 on the wall. I would place No.3 in the alcove."¹

Experimenter: "Yes, can you tell me about the alcove?"

Subject: "It's an arched alcove and it's got curtains on each side, and it's got mirror tiles on plaster-board. Plain colours."¹

¹ It is noteworthy that this was a non-literal reply to the experimenter's question.

Experimenter: "And what d'you think's behind those tiles?"
Subject: "They're glued onto the plaster-board."
Experimenter: "Would you like to look at me for a moment?
What d'you see? D'you see me sitting here?"¹
Subject: "I see you sitting in a chair."
Experimenter: "Yes. What do you see behind me?"
Subject: "Mirror tiles in an archway - two archways, and
curtains." (As in the case of the window behind
the bowl of fruit, the subject appeared to be
misperceiving the windows behind the experimenter
and his wife as consisting of mirror tiles.)

After a little more conversation, the experimenter asked the subject to accompany him to a position by one of the windows and she soon recognized that it was a window. She went on to comment, "They're all windows." She was asked, "What made you think they were tiles before?" Her reply was not very clear on the tape-recording of the session but might have been, "Because I couldn't see out ... and we had something like this at home." The experimenter said, "You had something like this at home. Could you tell me about that?" The subject's response was not clear on the tape-recording but it included reference to "an alcove", "tiles" and what sounded like "two rows of books".

The experimenter asked the subject whether she thought she was "awake" or "hypnotized". She replied, "Awake." Asked, "Why d'you say that?" she said, "I'm standing up."

The subject was asked whether she could remember the previous session and the experimenter mentioned her lying on the bed, being asked to get up from it, and being asked where she would place some pictures². In the course of this inquiry, the subject

¹ This line of inquiry was aimed at ascertaining whether the subject was experiencing a linear stoppage of vision of the type described by Erickson (1967) as occurring in "somnambulistic" hypnotic subjects (see pp. 147-150 of the present thesis).

² The experimenter asked the subject, "D'you remember where you said you would place them [the pictures]?" The tape-recording was not very clear, but it seems that after a pause the subject replied with, "Uh huh" or something similar. Thus, she gave a rather literal response. However, it could be argued that the experimenter's question was ambiguous and that, quite reasonably, the subject might have assumed that he merely wanted to know whether she recalled her previous picture positioning choices and that he did not expect her to state what they were. Interpreted in this way, the subject's response would not be "counter-expectational".

discovered that she was misperceiving a curtain as an area of wall (see Figure 3 , p.303). If she also experienced this illusion during the first round of questions about pictures in the Stage II Experiment, that might help to explain her unusual picture positioning choices at the time. (It will be recalled that she indicated a position vaguely in the direction of the experimenter's wife for all three of the hypothetical pictures but after the "dehypnotization" ritual she selected a different, and "reasonable", position for all three of them - see pp. 269-270 .)

The subject was asked to sit down and after questioning her a little more about the placement of hypothetical pictures, the experimenter said:

I'd now like you to close your eyes just for a moment. I'm going to slowly count back from five to one. When I get to one, your eyes will be open, you'll be wide awake, relaxed and refreshed and you'll have a very clear memory of your hypnotic sessions this afternoon and you'll also remember the hypnosis you experienced the last time you were here. So when you wake up, you're going to be able to remember the two hypnotic sessions you've had today and you're also going to be able to remember clearly your session here the last time.

The experimenter counted back from five to one and the following is some of the dialogue that ensued:

Subject: "What was it I was going to hang in the window - was it the bowl of fruit?"

Experimenter: "I think it was, yes." (The experimenter was mistaken in saying this, since it was a hypothetical picture and not the actual bowl of fruit that the subject was asked to select a position for.)

Subject: "I think it's because it was over there."

Experimenter: "Can you remember why you thought, while you were hypnotized, that that might be a reasonable position?"

Subject: "I think it's because the bowl of fruit was there to begin with."

Experimenter: "Because it was there to begin with?"

Subject: "And I didn't think I wanted to move it."
Experimenter: "The question was, where would you place a picture, a three by four foot picture of a bowl of fruit? Did you understand the question? If you had a three by four foot picture of a bowl of fruit - that bowl of fruit - where in this room would you place it?"
Subject: "I wouldn't hang a picture up there."
Experimenter: "No."
Subject: "I wouldn't want to hang a picture up there."

The experimenter commented that when the subject was "hypnotized" she thought she would. The subject indicated that she remembered this and went on to say: "I think it must have been because if you wanted to put a bowl of fruit over there, I wouldn't've been bad mannered to move it. I would consider it bad manners to go against somebody else's judgement in-. D'you know what I mean? No?"

Experimenter: "Yes, yes. [Laughs] Did you understand what the questions meant? It did mean a picture. It didn't mean where would you move the bowl of fruit itself."
Subject: "Yeah, I know it's a picture."
Experimenter: "You knew that?"
Subject: "Uh huh."
Experimenter: "But you're saying that if I'd put the bowl of fruit there you would want to place the -"
Subject: "A picture of it there as well."
Experimenter: "Because?"
Subject: "Because if that's where you wanted to place a bowl of fruit, then I would have wanted to hang a picture of it there as well."

When the experimenter directed the subject's thoughts back to the position she had selected for a picture of his wife during the first round of questions about hypothetical pictures in the Stage II Experiment, she indicated that she had mistaken the curtain near the experimenter's wife as a wall.

Near the end of the session, the following interchange occurred between the experimenter and the subject:

Experimenter: "Notice that your left arm has become heavy
- you can't lift it at all."
Subject: "It's frozen."
Experimenter: "But notice that it's heavy and you can't
lift it."
Subject: "I can move my fingers. It feels [word(s)
not clear on tape-recording]. From there
to there it feels weighted - and cold, like
pins and needles."
Experimenter: "Mm. I don't think you can lift it. Why
don't you try?"

The tape-recording of this part of the session was not very clear but it seems that the subject was able to lift her arm, at least to some extent, whereupon the experimenter said, "Now it's O.K. - you can lift it now, I think, yes."

Comments

The main points of interest in the above session can be summarized as follows:

- (1) During the session there were two "hypnosis" episodes, i.e. periods beginning with a hypnotic induction procedure and ending with a "dehypnotization" ritual. During the first of these, the subject selected an unusual position for a hypothetical picture of the bowl of fruit - a three by four foot picture placed in the location she indicated would have obscured part of the window behind the bowl of fruit. She was apparently misperceiving the window as an alcove with a mirrored wall and she was presumably thinking that the hypothetical picture should be placed on the wall of the alcove. The position that she selected for this hypothetical picture was of the type that, according to Erickson (1967), "somnambulistic" hypnotic subjects choose when they are "hypnotized". However, the present subject did not apparently experience a spontaneous negative hallucination of aspects of her surroundings; rather, she seems to have misperceived aspects of the room¹.
- (2) When the subject (in the "waking state") was asked how she thought she would respond and how she thought a typical good hypnotic subject would respond to the questions about

¹ As pointed out in Chapter IV (p.147), Erickson (1967) does not state whether he believes that all "somnambulistic" hypnotic subjects experience a linear stoppage of their vision when they are "hypnotized".

hypothetical pictures, she indicated a belief that essentially "reasonable" positions would be selected in both the "hypnosis" condition and the "waking" condition¹. As has been indicated, however, during the previous session (the Stage II Experiment) she exhibited unusual picture placement choices following the administration of a hypnotic induction procedure; and following the administration of a hypnotic induction procedure earlier in the present session, she selected a markedly unusual position for a hypothetical picture of the bowl of fruit.

- (3) During the second "hypnosis" episode in the present session, the subject was asked about her picture positioning choices following the hypnotic induction procedure in the second part of the Stage II Experiment. In the course of this inquiry, she discovered that she was misperceiving a curtain as an area of wall. If she experienced this illusion following the hypnotic induction procedure in the second part of the Stage II Experiment, that might help to explain her unusual picture positioning choices at the time.
- (4) During the first episode of "hypnosis" within the session, the subject was asked to imagine a vase containing three well-known flowers. She was asked about two of them and later, following a "dehypnotization" ritual, she was asked about the third. After a little delay, she was able to tell the experimenter the name of the third flower, even though she appeared to be amnesic for what had been said about flowers prior to the "dehypnotization" ritual. It is noteworthy that the subject had not been interrupted in the execution of a post-hypnotic suggestion around the time that she told the experimenter the name of the third flower. Thus, it would seem to be unnecessary to import the concept of a "spontaneous post-hypnotic trance" to explain the subject's ability to tell the experimenter the name of the third flower. (See pp. 305-306.)
- (5) From the subject's testimony during the present session it seems that the application of hypnotic induction procedures somehow caused her to misperceive aspects of her surroundings and that it might have been this that led her to choose unusual

¹ See footnote, p.307.

positions for the hanging of hypothetical pictures. However, towards the end of the present session she advanced a different sort of explanation of why she might have selected the unusual position for the hypothetical picture of the bowl of fruit while she was "hypnotized" earlier in the session: "... if that's where you wanted to place a bowl of fruit, then I would have wanted to hang a picture of it there as well." It is, of course, impossible to say whether such thinking was operative at the time that the subject selected the unusual position for the hypothetical picture of the bowl of fruit. Such thinking would not readily account for her unusual picture placement choices following the hypnotic induction procedure in the second part of the Stage II Experiment: at that time she seemed to select more or less the same ("unreasonable") position for all three of the hypothetical pictures, and in the case of the man depicted in the photograph this was a considerable distance away from the photograph (see Figure 2a, p.270).

RESULTS OF THE NON-EXPERIMENTS

As explained in the last chapter (pp.228-235), a number of subjects were taken through the procedure of the second part of the Stage II Experiment, without being exposed to the hypnotic induction procedure, and were asked how they thought a typical good hypnotic subject would respond to the various test items. The aim of these Non-Experiments was to ascertain whether the phenomena under investigation (literalness, unusual picture placement choices, and renewed hypnotic-type behaviour following the interruption of the execution of a post-hypnotic suggestion) could arise from cues in the experimental situation or from subjects' knowledge and expectations regarding the behaviour of "hypnotized" persons.

As in the last chapter, in describing the Non-Experiments, the present writer will use the abbreviations S and E to refer to the hypothetical subject and experimenter in the experiment described to the Non-Experiment subjects.

The Non-Experiment subjects' judgements about the likely responses of the S are summarized in Table X in Appendix III.

Literalness

Subjects generally thought that the S in the experiment described would respond in a normal, non-literal way. Thus, most subjects thought that in response to the E's saying, "Do you mind reading this to me?" (after the S had been handed a card bearing a sentence stating the month and the year) the S would simply read the card. Subject 6, however, thought that the S would say that he did not mind reading the card and would read it. This "mixed" response (i.e. response including both a literal answer and compliance with the implicit request) is not what Erickson described as typical of "hypnotized" subjects¹. This subject thought that in response to the E's saying, "D'you mind coming over here?" the S would say "No" and get off the bed and accompany the E - another "mixed" response. It should be noted that Subject 6 appeared to be trying to give well thought-out answers to the experimenter's questions and it may be that his judgements about the likely behaviour of an S were influenced by the inquiry procedure itself. That is, the inquiry procedure might have induced him to be specially attentive to the exact wording of the statements made during the hypothetical experiment.

Subject 9 thought that the S's response to the question, "Do you mind reading this to me?" would be, "Yes. This is the summer of 1983." The "Yes" part of this response indicated agreement with the statement on the card. Asked how an S would respond to, "Would you mind coming over here?" the subject said that he did not know whether the S would be "aware". Puzzled by this response, the experimenter went over the item again, rephrasing the question/request as: "Would you like to come over here?" Unfortunately, the tape-recording of this point in the proceedings was not clear and the experimenter's wife's notes of what transpired at this juncture were not entirely clear.

¹ Later in this chapter (pp. 319-320) the present writer reports some findings with "unhypnotized" adults and adolescents to whom requests/questions were put in order to test for literalness. None of these subjects exhibited purely literal responses but three of them included what might be regarded as a literal element in their responses. For example, in response to, "Would you like to come through [to my office]?" one subject said "Yes" and came through to the office. However, it could be that saying "Yes" in such a situation merely indicates a willingness to respond to the other's request and is not specifically related to the actual wording of the request/question.

Subject 12 thought that the S would respond to the question/request, "Do you mind reading this to me?" with, "Yes, it is." This was no doubt a response of affirmation to the statement on the card, i.e. agreement that it was the summer of 1983. With regard to, "Would you like to come over here?" the experimenter's wife's notes indicated that the subject said, "Certainly"; the notes did not specify whether the subject indicated that the S would get off the bed and accompany the E across the room without further verbal prompting. However, the present writer does not recall the subject's expressing a belief that the S would behave in a peculiarly literal manner.

Picture Placement Choices

With the exception of Subject 11, whose responses are discussed below, none of the Non-Experiment subjects expressed the view that the S would behave in the unusual manner that Erickson (1967) described as characteristic of "somnambulistic" hypnotic subjects in the picture positioning task.

Asked what positions the hypnotized S would select for a three by four foot picture of the experimenter's wife, the man depicted in the photograph, and a small ornament, Subject 11, a 20 year-old student nurse, indicated positions above and behind these "target objects"¹. Since the background to each of the "target objects" was a region of window, three by four foot pictures hung in the selected locations would have shut out a lot of light! The subject expressed the view that the S would select the same positions in the "waking" part of the hypothetical experiment. Asked what her own choices would be for the picture positionings, she indicated that they would be the same as she had already specified with regard to the hypothetical S. Asked why, she said that "it looks as if they should be there." She was asked what position she would have selected for a picture of the ornament if the latter had been placed on a grey cabinet that was present in the room. She said, "Probably behind the ornament, just above it, on that wall." Asked whether the picture could be placed elsewhere, she said, "It would be where the object is, or it just wouldn't look right - if you've seen the object ..."

¹During the Non-Experiment the subject did not appear to be entirely clear about the course of events in the hypothetical experiment. It is possible that when she was asked about the S's responses to the first round of questions about pictures, she mistakenly assumed that the S was "out of hypnosis".

Erickson (1967) indicates that in his study none of the subjects who were tested in the "waking state" selected markedly unusual positions for hypothetical pictures.

Renewed Hypnotic-Type Behaviour Following Interruption
of the Execution of the Post-Hypnotic Suggestion

Subjects 7, 11 and 12 did not appear to believe that the S would try to pick up the pen when the E jingled keys. Subject 4 initially indicated that she thought that the S would respond to the cue for the execution of the post-hypnotic suggestion by trying to pick up the pen. However, when she was asked what the S would recall at the end of the hypothetical experiment, it became apparent that she had misunderstood the situation: she thought that the S was still hypnotized at the time of giving his or her recollections. When corrected on that point, she expressed the view that the S would not respond to the jingling of the keys: "I would imagine there wouldn't be a response if they've been woken up from hypnosis and forget all that has gone before ..."

Subject 6 said that he was not sure what the S's response would be to the jingling of the keys. He speculated that there might be no specific response or there might be some "residual association" to the jingling keys. Taking the latter possibility, the experimenter questioned the subject further about the S's possible response. The subject thought that if the residual association were strong, the idea of a pen might enter the S's mind or he might find himself making a movement to pick up the pen. The subject appeared to believe that if the S were a good subject and if the E were a good experimenter, the S would be freed from hypnotic-type responses on being woken up. He thought that if there were some residual response, it would perhaps be temporary. The experimenter asked the subject to speculate on what would happen if there were a residual response "of the strongest kind". In response to this line of inquiry, the subject eventually speculated that with regard to E's suggestion that the S would see a cat: "We can't assume perhaps that he has been, if you like, properly woken up; if he's still responding towards the jangling keys, then he might still be responsive to a suggestion ..." It must be stressed that this comment by the subject was by no means a spontaneous or immediate one and was quite possibly stimulated by the experimenter's line of questioning. Accordingly, its evidential

status must be regarded as questionable. (The experimenter did not pursue such a persistent and "leading" inquiry with the other Non-Experiment subjects.)

Some Non-Experiment subjects displayed a degree of misunderstanding or confusion about aspects of the hypothetical experiment described to them. In the case of Subject 8, this was such that the present writer has drawn no conclusion as to whether the subject would have expected an S to report seeing the suggested cat after the interruption of the execution of the post-hypnotic suggestion. Of the other 12 subjects, four did not seem to believe that the S would try to execute the post-hypnotic suggestion when the E jingled keys and another subject (Subject 6) was doubtful whether there would be a specific response to the jingling keys. Of the remaining subjects, none expressed a clear belief that the S would report seeing the suggested cat. (As already indicated, Subject 6 speculated that the S in the circumstances described "might still be responsive to a suggestion" but, as pointed out, the subject's judgement might have been shaped by the experimenter's line of questioning.)

Comments

To the extent that one can generalize, the data from the Non-Experiments indicate that members of the public would not regard literalness, unusual picture positioning choices, and renewed hypnotic-type responsiveness following the interruption of the execution of post-hypnotic suggestions as characteristic of persons who are or have been "hypnotized"¹. Thus, if subjects display literalness and the other effects under investigation after exposure to hypnotic induction procedures, these effects would not be readily explicable in terms of the subjects' knowledge of or expectations about the behaviour of "hypnotized" persons.

During his attendance for a Non-Experiment, Subject 1 related that some years previously he had acted as a hypnotic subject a number of times for a psychiatrist colleague. He said that he had been a "deep trance" subject. He accepted the present writer's invitation to participate in a Stage II Experiment.

¹ Subject 11 thought that the S would select positions above and behind the "target objects" for the hypothetical pictures. However, as already indicated, she did not relate such choices specifically to a period of "hypnosis" - she thought that the S in the "waking state" would choose the same positions, as would she herself.

On the SHSS:C, administered during the first part of the session, the subject scored at least 10. (His responses to the "Dream" and "Anosmia to Ammonia" items were regarded as "borderline".) During the second part of the Stage II Experiment he was not observed to respond literally to test items. His picture placement choices during both the "hypnosis" and "waking" parts of the proceedings were "reasonable" and when he was interrupted in the execution of the post-hypnotic suggestion he did not appear to experience the suggested cat. Since he participated in a Non-Experiment prior to taking part in a Stage II Experiment, he is not included among the main body of Stage II Experiment subjects whose responses have already been discussed (pp.266-285).

RESULTS OF TESTS FOR LITERALNESS WITH "UNHYPNOTIZED"
ADULTS, ADOLESCENTS AND CHILDREN

Results of Informal Tests for Literalness
with "Unhypnotized" Adults and Adolescents

As indicated in the last chapter, informal tests for literalness were conducted with 24 adult and two adolescent subjects. Without being told that their responses were under study, casual questions were put to the subjects such as, "Do you mind telling me your [telephone] number?" and "Would you like to take a seat over there?"¹ Details of the subjects, the questions employed and the subjects' responses are given in Table XI in Appendix III.

None of the subjects exhibited a purely literal response of the type described by Erickson as typical of "hypnotized" subjects. They all responded to the implication of the question/request put to them. The responses of three subjects, however, included what could be regarded as a literal verbal component: in response to, "Would you like to come through [to my office]?" Subject 5 said "Yes" and Subject 8 said "Right"; in response to, "Would you like to take a seat over there?" Subject 9 said "Yeah" (or "Yes"). Of course, it may be that these affirmative verbal responses were not actually literal replies but merely indications of a willingness to do as the experimenter wished. Some support for this interpretation comes from the verbal responses of four other subjects: in response to, "Would you mind passing me a biscuit?" Subject 10 said

¹ Understood in a normal, non-literal way, a "question" such as, "Would you like to take a seat over there?" is, of course, a request for an action - in this case, sitting in a designated chair.

"Surely"; in response to, "Would you mind passing me an elastic band?" Subject 13 said "Yes"; in response to, "Do you mind taking a seat?" Subject 19 said "Right"; in response to, "Would you mind sitting here?" Subject 21 said "Yes". Understood literally, these verbal statements would indicate that the subjects did mind carrying out the requested activities, which does not seem to be the case since they responded readily to the requests.

So far as head movement responses are concerned, it is possible that Subject 7 nodded his head after being asked, "Would you like to come through [to my office]?" but the experimenter was not sure of this observation. In the case of Subject 4 it was not possible to observe head movements since the conversation between the experimenter and the subject took place by telephone. In the case of Subject 15, the experimenter's wife (who asked the test-question) did not see whether the subject exhibited a head movement response.

In summary, the data from these informal tests for literalness with "unhypnotized" adult and adolescent subjects are supportive of Erickson's observation that purely literal responses are rare in everyday life.

Results of Tests for Literalness with "Unhypnotized" Primary School Children

As explained in the previous chapter, 32 primary school children were seen individually and were shown plates from the Ishihara colour blindness test. In asking the children what numbers they saw on the plates, the experimenter used questions that could have been responded to literally - in most cases he alternated between, "Do you mind telling me what number you see there?" and "Would you like to tell me what number you see there?" Details of the subjects and their responses are given in Table XII in Appendix III. No literal responses were noted and in most cases subjects told the experimenter what number they saw. The exceptions were as follows: when Subject 1 was presented with the third plate, he indicated that he did not know what the number was; Subject 3 gave no response when she was presented with the fourth plate (perhaps because she did not see a number?); Subject 6 said "Nothing" when presented with the fourth plate.

At least two subjects (Subjects 9 and 31) started their reply to a test-question before the experimenter had completed asking it.

The experimenter did not keep a note of head movement responses (if any) when he was testing the primary school children. (It would have been difficult to make notes about head movements at the same time as administering the test procedure and noting the subjects' verbal responses.) However, as indicated above, non-literal verbal answers were given to nearly all of the test-questions. Thus, the children did not behave in the manner described by Erickson as typical of "hypnotized" subjects.

In his paper Literalness: An Experimental Study, Erickson states that "literalness of response is decidedly infrequent in everyday living - when it does occur then is suspect of being a deliberate play, as it often is" (Rossi, 1980c, p.92). Interestingly, such a thing happened at one point when a subject was asked to come into the room for testing. When the experimenter said, casually, "Would you like to come through?" or something similar (this was not part of the formal experiment and a note was not taken of the actual words used), another child in the waiting area said, presumably in an attempt at humour, "No" or something similar (again, a note was not taken of the actual word[s] used).

RESULTS OF THE SUPPLEMENTARY EXPERIMENTS CONCERNED WITH LITERALNESS

As indicated in the last chapter, four subjects participated in experiments where the present writer's wife acted as the hypnotist and asked some questions that could have been answered in a literal fashion. The hypnotic induction procedure and test-questions were not read from a script. The present writer was present during these experiments.

Subject 1

Subject 1 had previously participated in a Stage I and a Stage II Experiment. During the latter she scored 10 on the SHSS:C. She was nearly 27 years-old at the time of her participation in the present experiment.

The present writer's wife (the hypnotist) administered a hypnotic induction procedure similar to that employed with Stage I Experiment subjects. Thus, the subject was asked to close her eyes and she was given instructions and suggestions for muscular relaxation and then suggestions for hand levitation. Her right hand lifted to her face. The hypnotist suggested that it would start to feel heavy as the subject went deeper into hypnosis, and that it would lower.

The subject was asked to picture a bowl of flowers and think of herself walking towards it. She was asked to take one of the (imagined) flowers and the following test-questions were asked:

Do you mind telling me what colour it is?

Would you mind telling me what type of flower it is?

The subject was told that she could replace the (imagined) flower in the bowl. Shortly after, she was asked to think of a foreign country and the hypnotist asked:

Do you mind telling me the name of that country?¹

The subject gave normal, non-literal verbal responses to each of these questions, viz. "Pink", "Carnation" and "Italy" respectively. The present writer watched for head movements and only noted a very slight shake of the subject's head after she was asked the third test-question. (Since she gave a normal, non-literal verbal response to that question, she did not respond in the manner described by Erickson as typical of "hypnotized" subjects.)

The hypnotist explained that the present writer was going to speak to her (the subject). (Although the main purpose of these supplementary experiments was to test for literalness, the present writer used the opportunity to try to ascertain whether the subjects experienced limitations to their visual perception of the type described by Erickson [1967] in respect of "somnambulistic" hypnotic subjects.) The present writer explained to the subject that when he counted to three he wanted her to open her eyes, "remaining very comfortably and deeply hypnotized." After the subject opened her eyes the present writer pointed to a coffee table and said, "What d'you think of that little ornament just there?"² (There was in fact no ornament

¹ In asking this, the hypnotist hesitated or stuttered slightly but the form of the question was more or less as indicated.

² This was a brief, informal test to ascertain whether, at this juncture, the subject was capable of an experience of the type traditionally subsumed under the term "deep hypnosis" or "hypnotic somnambulism".

on the table.) She did not appear to experience this suggested hallucination. Shortly after, she was asked to accompany the present writer to a position by a window. Asked what she could see as she looked out, she mentioned a "garden" - a somewhat surprising response since the window looked out over part of the grounds of Ravenscraig Hospital, where the subject had been working for some years. The tape-recording of this part of the session was not clear but the subject probably also mentioned buildings since the present writer asked, "D'you recognize the buildings?" It is not clear from the tape-recording whether the subject replied. The present writer then asked the subject whether she knew where she was. Her reply was not very clear on the tape-recording but might have been "No." During some brief conversation that followed she indicated that she felt frightened because she did not know where she was. (She looked upset around this time.) The present writer asked her to sit down and he informed her that she was in the Psychology Department in the hospital and was taking part in an experiment. Shortly after, she was invited to look through the window again. She was asked, "D'you recognize it now?" The tape-recording was not very clear but the subject probably murmured "Mm hm."

Shortly after, the subject was asked to sit down again and following a little conversation the present writer explained that shortly he would count back from 10 to one and she would "wake up". She was asked whether she wanted to remember her experience. She indicated that she did not. Therefore, before counting back from 10 to one (the "dehypnotization" ritual), the present writer suggested that she would not remember "what happened during the hypnosis." After the "dehypnotization" ritual she recalled that she had been spoken to. Asked, "D'you remember what was said to you?" she said that it was like "relaxation therapy". She did not appear to remember anything else.

Subject 2

This subject had previously participated in a Stage I and a Stage II Experiment. During the latter she scored 5 on the SHSS:C. She was 42 years-old at the time of the present experiment.

When the subject participated in a Stage I Experiment she was slow to respond to suggestions for hand levitation. Therefore, to save time in the present experiment, the instructions and suggestions for muscular relaxation that were given at the beginning of the hypnotic induction

procedures employed with Subjects 1, 3 and 4 were omitted. Instead, the induction procedure began with the subject's focusing on the back of one of her hands and being given suggestions for hand levitation. After the subject's right hand had lifted about two thirds of the way towards her face, the hypnotist (the present writer's wife) suggested that the hand would feel heavy and would sink back while the subject went into a pleasant, relaxed state of hypnosis.

The hypnotist asked the subject to picture herself in a room with a bowl of flowers and "pick one out." The following test-questions were then asked:

Do you mind telling me what colour it is?

Would you mind telling me what type it is?

The hypnotist requested the subject to think about a foreign country and asked:

Do you mind telling me the name of it?

No verbal responses to any of these questions were evident on the tape-recording of the session and the present writer does not recall the subject as having given any verbal or head movement responses. The hypnotist explained to the subject that the present writer was going to speak to her (the subject). The present writer suggested that the subject could picture herself sitting in a garden in the spring or early summer. He explained that his wife wished to ask her about flowers in the garden. (This was to create another opportunity for the present writer's wife to ask test-questions.) Four test-questions were asked (e.g. "Do you mind telling me what type of flowers there are in the garden?"). The subject's responses were not clear on the tape-recording of the session, but the present writer's recollection is that normal, non-literal replies were given to each of the questions.

The present writer asked the subject to "stay hypnotized" but slowly open her eyes. He asked her what she saw in front of her. He then got her to walk over to a window and he asked what she saw as she looked out. Her responses suggested that she was not experiencing any obvious limitation to her visual perception.

The subject was asked to sit down and close her eyes and the present writer explained that he would count back from 10 to one whereupon the subject's eyes would open and she would be wide awake,

relaxed and refreshed. After counting the subject back to one, the present writer asked about her recollections of the session. She seemed to have moderately good recall. She indicated that she did not have any clear idea of the purpose of the experiment.

Subject 3

Subject 3 had not previously participated in the present writer's research. She was 25 years-old at the time of the present experiment and she was working at a health centre as a trainee in general practice, having previously done a six months' placement in psychiatry at Ravenscraig Hospital, Greenock.

The present writer inquired whether the subject knew about his research. She related that a previous subject (Subject 1 of the present group, who had also participated in a Stage I and a Stage II Experiment) had mentioned acting as a subject. However, the present subject could not recall being told details of the nature of the study by that previous subject. The present subject said that one of the present writer's colleagues had probably mentioned the present writer's research but she (the present subject) could not recall clearly what was said.

The present writer informed the subject that his wife would be acting as the hypnotist and that nothing would be done to cause embarrassment and there would be no probing into anything private. It was explained that hypnotic responsiveness is very much a skill of the subject and therefore in the experiment she would not and could not be made to do anything she would object to.

The hypnotist employed an induction procedure of the type used with Subject 1. In response to suggestions for hand levitation, the subject's right hand eventually lifted to her right cheek. The hypnotist suggested that as it touched her cheek it would begin to feel heavier and would go down.

The subject was asked to picture herself in a room with a bowl of flowers; she was asked to think of herself going across to the bowl and picking a flower. The hypnotist then asked the following test-questions:

Do you mind telling me what colour it is?

Would you mind telling me what type it is?

Do you mind telling me what kind of vase it is?

The hypnotist requested the subject to think of a foreign country and asked:

Do you mind telling me the name of it?

The subject did not respond to the first of these test-questions. She gave normal, non-literal responses to the others. No shakes or nods of her head were observed after she was asked the test-questions.

The hypnotist explained that the present writer would like to speak to her (the subject). The present writer asked the subject to remain in hypnosis but open her eyes slowly when he counted to three. He counted to three and then asked the subject what she saw in front of her. He then asked her to come over to a window and look out and he asked her what she saw. She did not give the impression that she was experiencing any obvious limitation to her visual perception. The present writer asked her to sit down again and close her eyes. He explained that he would count back from 20 to one, whereupon her eyes would open and she would be wide awake, relaxed and refreshed.

After counting back from 20 to one, the present writer asked the subject about her recollections of the session. She exhibited a good degree of recall. Regarding the hand levitation, she did not seem to think that she had deliberately lifted her hand. She explained that she had not answered the hypnotist's first question because she had not been sure what it was. Asked what she thought was the purpose of the experiment, she indicated that she had no clear idea.

Subject 4

Subject 4 had not previously participated in the present writer's research. She was 26 years-old at the time of the present experiment and she was working at a health centre as a trainee in general practice, having previously done a six months' placement in psychiatry at Ravenscraig Hospital, Greenock.

The subject indicated that she had no knowledge of the present writer's research.

She was told that the experiment would involve no probing into private matters and that nothing would be done to cause embarrassment. The present writer explained that hypnosis depends very much on the subject rather than on something imposed from without. The subject was informed that the present writer's wife would be acting as the hypnotist.

The hypnotist employed an induction procedure of the type used with Subjects 1 and 3. In response to suggestions for hand levitation, the subject's left hand lifted to her face. The hypnotist suggested that as the hand touched the subject's face, it would begin to feel heavier and heavier and would return to her lap as she went "into a deeper state of hypnosis".

The subject was asked to think of herself walking towards a bowl of flowers and picking one of them. The hypnotist then asked the following test-questions:

Do you mind telling me what colour it is?

Would you mind telling me what type it is?

The hypnotist asked the subject to think of a foreign country and asked:

Do you mind telling me the name of it?

The subject gave normal, non-literal responses to these test-questions. No shaking or nodding of her head was observed.

The hypnotist explained that the present writer would like to speak to her (the subject). The present writer indicated that he was going to count to three, whereupon he wanted the subject to open her eyes and "remain in hypnosis". He counted to three and then asked the subject what she saw in front of her. She reported seeing the present writer, his wife and a window. She also reported: "I can still see my flowers - vaguely." The present writer asked the subject to look in a different direction in the room and he asked her what she saw. From what she said, the present writer did not get the impression that she was experiencing a linear stoppage of her vision.

The present writer asked the subject to close her eyes and he explained that he would count back from 20 to one, whereupon she would be wide awake, relaxed and refreshed. After counting back to one, the present writer asked the subject about her recollections of the session. She seemed to have quite good recall. She said that she had experienced the hand levitation as involuntary. Asked what she thought was the purpose of the experiment, she said that she did not know, but she speculated that it might be about relaxation or whether she could be hypnotized.

Comments

All four of the subjects in the present group exhibited a positive response to suggestions for hand levitation and Subject 1, who was told that she would not remember what had happened "during the hypnosis", appeared to be largely amnesic for that period. In traditional hypnotic state terms, Subject 1 might be described as having been in a medium or deep trance, and the other subjects might be described as having been in a light trance. None of these subjects was observed to respond to the test-questions in the literal manner said by Erickson to be typical of "hypnotized" persons. This negative finding regarding literalness is consistent with the findings reported earlier in this chapter, and it suggests that the lack of literal responses from the subjects in the Normal/Live/Other Hypnotists Group was not simply a consequence of the hypnotic induction procedure and test-questions being read from a script. (The rationale of the Supplementary Experiments concerned with Literalness is explained on pp. 237-238.)

As indicated in the foregoing description of the Supplementary Experiments concerned with Literalness, the present writer also tried to ascertain whether the subjects experienced a limitation to their vision of the type described by Erickson (1967) (see pp. 146-150 of this thesis). Since Subjects 3 and 4 had not previously participated in the present writer's research and had not been tested with the SHSS:C, it was not known how hypnotizable they were. Hence the fact that they did not appear to experience an unsuggested limitation to their visual perception does not necessarily contradict Erickson's observations regarding "somnambulistic" hypnotic subjects. Since Subject 2 scored only 5 on the SHSS:C when she attended for a Stage II Experiment, one could argue that she was not sufficiently hypnotically susceptible to be regarded a "somnambulistic" subject and therefore her failure to exhibit evidence of a limitation to her visual perception during the experiment presently under consideration does not contradict Erickson's observations. Subject 1, on the other hand, had scored 10 on the SHSS:C when she participated in a Stage II Experiment. So far as the present writer could tell, she did not experience a linear stoppage of her vision during the experiment presently under consideration. It is interesting, however, that after she was asked to open her eyes (while "remaining very comfortably and deeply hypnotized"), and look out of a window, she looked upset and reported that she felt frightened - apparently

because she did not know where she was. It cannot be stated with certainty, however, whether this was a spontaneous (unsuggested) manifestation, or something inadvertently suggested by the present writer's line of inquiry at the time (see p.323).

SUMMARY OF THE EXPERIMENTAL FINDINGS¹

Evidence Regarding Literalness

Findings with "Unhypnotized" Adults, Adolescents and Children

Questions that could have been answered literally were put to 32 primary school children. No literal responses were observed.

Without being told that their responses were under study, casual questions/requests were put to 24 adults and two adolescents. These communications could have been responded to literally but no purely literal responses were given.

Evidence from the Stage I Experiments

Thirty of the 84 Stage I Experiment subjects were asked test-questions in a deliberately "distorted" fashion to see whether that would cue literal responses. The majority of these subjects responded non-literally. Taking verbal responses (which are less ambiguous than head movements), four subjects were observed to give some literal responses and in two other cases it is probable that literal responses were given. (As indicated in the last chapter, subjects' responses were not always heard clearly.)

Among the 54 subjects who were asked test-questions in a normal fashion, no clear-cut literal responses of the type described by Erickson as typical of "hypnotized" subjects were noted. Twelve subjects were observed to give no verbal response to one or more of the test-questions. In some of these cases, head movements were noticed but, as indicated earlier in this chapter (pp. 256-258), there is little reason to believe that these were non-verbal literal communications.

¹ This summary pertains to findings from experiments with individuals who were included in the "final subject pool". Findings from experiments with individuals who were excluded from the "final subject pool" are discussed briefly later in this chapter.

Evidence from the Stage II Experiments

Subjects participating in the Stage II Experiments tended to be high on hypnotic responsiveness as measured by the SHSS:C. If Erickson was right about literalness, one would have expected them to be more inclined to respond literally to questions/requests following a hypnotic induction procedure than less hypnotizable subjects. However, none of them was observed to give literal responses of the type described by Erickson as typical of "hypnotized" subjects.

Evidence from the Stage III Experiments

Two subjects participated in Stage III Experiments. As when they attended for previous experiments, they did not respond to questions in a peculiarly literal manner. However, see footnote 2 on p.309.

Evidence from the Supplementary Experiments concerned with Literalness

Four subjects participated in experiments where the present writer's wife, Dr. E.C. McCue, acted as the hypnotist and asked test-questions that could have been answered in a literal fashion. The hypnotic induction procedure and test-questions were administered without the reading of a script. Although all four subjects gave evidence of some degree of hypnotic responsiveness (all four exhibited a positive response to suggestions for hand levitation), none responded to the test-questions with literal responses of the type described by Erickson as typical of "hypnotized" subjects.

Evidence from the Non-Experiments

The data from the Non-Experiments suggest that literalness is not generally seen as an attribute of the behaviour of "hypnotized" persons and that the procedure of the second part of the Stage II Experiment was not likely to cue subjects to respond literally to questions/requests. (Thus, if Stage II Experiment subjects had displayed literalness, that finding would not have been readily explicable in terms of "demand characteristics" in the experimental situation.)

Evidence regarding "Somnambulistic"
Subjects' Picture Placement Choices

The Stage II Experiments incorporated procedures to test Erickson's (1967) assertion that "somnambulistic" hypnotic subjects make unusual

choices when they are asked where in the room they would place hypothetical pictures of persons or objects present. Only one of the subjects who participated in Stage II Experiments selected markedly unusual positions for hypothetical pictures (see pp. 267-270). She participated in a Stage III Experiment where this aspect of her behaviour was investigated further (see pp. 299-314). Although she made some unusual picture placement choices during these experiments, her behaviour and reported experience were somewhat different from that described by Erickson (1967) with regard to subjects in a "somnambulistic hypnotic trance". Erickson (1967) reports that "somnambulistic" hypnotic subjects usually select positions above and behind the persons or objects specified, but the present subject's responses were more variable: "under hypnosis" during the second part of the Stage II Experiment she appeared to select the same unusual position for all three of the hypothetical pictures. It seems that after exposure to hypnotic induction procedures the subject did not experience a mysterious linear stoppage of her vision resulting in a negative hallucination of aspects of her surroundings; rather, on the basis of what she said during the Stage III Experiment, it seems that she misperceived aspects of her surroundings while she was "hypnotized". Judged in terms of her apparent misperception of aspects of her surroundings, her unusual picture placement choices could be seen as understandable. However, it is not clear whether misperceptions of her surroundings were responsible (or entirely responsible) for her unusual picture placement choices: towards the end of the Stage III Experiment she indicated that her choice of an unusual position for a hypothetical picture of the bowl of fruit earlier in the session might have been based on the thought that to choose a position elsewhere would have been "bad mannered" (see pp. 310-311). Of course, this might have been a post hoc rationalization rather than a true explanation of her previous behaviour. It is noteworthy that her unusual picture placement choices were confined to periods of "hypnosis" (i.e. periods beginning with a hypnotic induction procedure and ending with a "dehypnotization" procedure). It is also noteworthy that her unusual picture positioning choices when she was "hypnotized" appeared to be contrary to her "waking state" judgement as to how she would behave as a hypnotic subject (see p. 306).

Thirteen subjects participated in Non-Experiments aimed at ascertaining whether the alleged phenomena under investigation¹ could arise from subjects' knowledge or expectations or from cues in the experimental situation. Somewhat to the present writer's surprise, one of these Non-Experiment subjects expressed the view that the hypothetical S would select picture positions above and behind the "target objects" - even though the background to each of the "target objects" was a region of window. This subject indicated a belief that the S would select the same positions in the "waking state", and when she was asked what her own choices would be for positioning the hypothetical pictures, she said that they would be the same as she had indicated for the hypothetical S. (See footnote 1, p.316.)

Evidence regarding Renewed Hypnotic-type
Behaviour following the Interruption of the
Execution of a Post-Hypnotic Suggestion

Two subjects who participated in Stage II Experiments (Subjects 7 and 10) reported seeing a suggested cat after they were interrupted in the execution of the post-hypnotic suggestion. (The post-hypnotic suggestion was that they would lift a pen off the floor and pass it to the experimenter when the latter jingled his keys.)

While these subjects were apparently "seeing" a cat, they were asked questions that could have been answered in a literal fashion. Their responses were, however, non-literal.

During the post- experimental inquiry conducted towards the end of the Stage II Experiment, Subject 7 appeared to have only limited recall of what had happened during the period of the interruption of the execution of the post-hypnotic suggestion (see pp. 271-273) and Subject 10 appeared to be amnesic for the interruption (see pp. 274-276). Subject 7 subsequently participated in a Stage III Experiment and again appeared to be responsive to suggestions

¹Literalness and unusual picture placement choices exhibited by subjects exposed to hypnotic induction procedures, and renewed hypnotic-type responses by subjects interrupted in the execution of post-hypnotic suggestions.

for visual experiences after he was interrupted in the execution of a post-hypnotic suggestion (see pp.292-295)¹. However, he also appeared to respond positively to suggestions for visual experiences and heaviness of his right arm at other points in the session - at times when he was not interrupted in the execution of a post-hypnotic suggestion (see pp.295-298).

FINDINGS FROM EXPERIMENTS WITH SUBJECTS WHO WERE
EXCLUDED FROM THE "FINAL SUBJECT POOL"

Brief mention will be made of findings from experiments with subjects who were excluded from the "final subject pool". The exact number of such subjects is not known but it exceeded 40.

Some 18 subjects who were recruited via Dr. S.J.T. Robertson of Woodside Health Centre, Glasgow, participated in early experiments concerned with literalness, the positioning of hypothetical pictures, and renewed hypnotic-type behaviour following the interruption of the execution of post-hypnotic suggestions. Unfortunately, these experiments were procedurally complicated and unwieldy. Also, prior to their participation in the experiments, some or all of the subjects were informed that the research was concerned with aspects of thinking and memory both in and out of hypnosis. Conceivably, this information could have influenced their responses.

None of these early subjects was observed to respond to test-questions or requests in the literal manner described by Erickson as typical of "hypnotized" persons, and none of them made unusual picture placement choices of the type described by Erickson as typical of "somnambulistic" hypnotic subjects. However, at least two of the subjects appeared to "see" a suggested cat after they were interrupted in the execution of a post-hypnotic suggestion. After being told that a cat had replaced the bowl of fruit that was present, one of these subjects exhibited a response of the "trance logic" type: she described what she saw as being like a photograph that had been taken on top of another one and she reported seeing the cat through the bowl of fruit. (For a discussion of "trance logic", see Chapter III, pp. 98-101.)

¹ He did not develop a complete amnesia for what happened during the interruption.

At least 13 subjects who attended for sessions of the Stage I Experiment type were excluded from the "final subject pool". In some cases, this was because the present writer was dissatisfied with aspects of the way the experiments had been conducted. Two subjects were excluded from the final subject pool because, accidentally, tape-recordings were not made of the sessions; this prevented the present writer from checking the subjects' responses afterwards. In some cases, sessions were not completed; in at least one case, this was because the subject felt anxious. None of these subjects was observed to give any clear-cut literal responses of the type said by Erickson to be typical of "hypnotized" persons.

In the case of some 13 subjects who participated in sessions of the Non-Experiment type, the present writer was dissatisfied with aspects of the experimental procedure and these individuals have been excluded from the "final subject pool". However, their responses were broadly in line with those of the subjects who were included. They did not appear to believe that the "hypnotized" S in the hypothetical experiment would display literalness of the type described by Erickson. In the case of one subject, however, it was not clear from the notes taken during the session whether the subject thought that the S would have given a literal response at one point in the hypothetical experiment. One subject gave an interesting response when she was asked what she thought the S would do in response to, "Would you like to sit down and close your eyes?" She said, "The subject would do that ... But it might not be on the chair; it might be on the floor." If someone acted in that manner (i.e. sat on the floor), one could say that his or her behaviour constituted a somewhat literal response to the words "sit down", which were not followed by reference to a chair. None of the subjects appeared to believe that the S would select picture positions of the type described by Erickson (1967) as typical of "somnambulistic" hypnotic subjects. Nearly all of the subjects appeared to believe that the S would try to lift the pen from the floor when the E jingled keys; with regard to "seeing" a suggested cat following the interruption of the execution of the post-hypnotic suggestion, they seemed to believe that the S would not have that experience. However, when the experimenter (the present writer) sought clarification about one subject's response, the latter

expressed the view that the S might see the cat. (It is possible that the experimenter's further inquiry about this matter induced the subject to entertain the possibility that the S would see the suggested cat.)

CHAPTER VII

CONCLUSIONS

The findings reported in the last chapter seriously question some of Erickson's assertions bearing on the state—non-state issue and, in general, run counter to the strongly state-oriented approach to hypnosis that he espoused in many of his writings. The results of the experiments do not, however, unequivocally support a non-state interpretation of hypnosis. These matters will be discussed at greater length later in this chapter but first some comments will be made on the present writer's research strategy and on the validity of the experimental findings.

COMMENTS ON THE RESEARCH STRATEGY AND THE
VALIDITY OF THE EXPERIMENTAL FINDINGS

In order to test Erickson's assertion about "somnambulistic" hypnotic subjects' picture positioning choices and his claims about a renewed trance state associated with the execution of post-hypnotic suggestions, it was necessary to select highly responsive subjects. The Stage I Experiments provided an opportunity to identify highly hypnotizable subjects for further testing in Stage II Experiments, but this was a very time-consuming process since the subjects were seen individually for sessions lasting approximately 50 minutes and, as would be expected, only a minority of them appeared to be high on hypnotic responsiveness. An alternative approach would have been to employ large-scale group screening with the HGSHS:A or the CIS followed by individual testing of selected subjects with the SHSS:C. Some group screening with the HGSHS:A and the CIS was conducted and a few subjects were recruited in that way for Stage II Experiments. (see pp. 218-210). However, the Stage I Experiments were valuable in that a considerable number of subjects were exposed to a hypnotic induction procedure and then tested for literalness. (Since Erickson claimed that literalness is exhibited by the large majority of "hypnotized" subjects, including those in "light" and "medium" trances, it was not essential that all of the subjects tested for this phenomenon be highly hypnotizable.)

According to Erickson's paper Literalness: An Experimental Study (Rossi, 1980c), more than 80 per cent of "hypnotized" subjects respond literally to questions such as, "Do you mind telling me your name?" In the present writer's research, a minority of the subjects who were asked test-questions in a deliberately "distorted" manner gave clear-cut literal responses. Among the subjects who were asked test-questions in a normal (i.e. "undistorted") manner, none was observed to give clear-cut literal responses of the type described by Erickson as typical of "hypnotized" persons. Steps were taken to exclude factors that might, conceivably, have militated against the expression of literal responses. Thus, while some subjects were asked test-questions via a tape-recording, others were asked them "live". Where the procedure was administered "live", the hypnotic induction and test procedure was sometimes read from a script and sometimes it was administered without a written script. In order to control for the possibility that some peculiarity of his voice, pronunciation or rate of speech was precluding literal responses from subjects, the present writer recruited the assistance of some colleagues who read a hypnotic induction and test sequence to subjects. No clear-cut literal responses were noted. In some subsequent experiments, the present writer's wife administered a hypnotic induction procedure and asked test-questions without reading a script. Once again, no clear-cut literal responses were noted.

Given that his research involved a considerable number of subjects and given that the above precautions were taken, the present writer believes that his negative findings regarding literalness are valid.

Only one of the Stage II Experiment subjects chose markedly unusual positions for hypothetical pictures after exposure to the lengthy tape-recorded hypnotic induction procedure. Her behaviour was not, however, identical with that of the "somnambulistic" hypnotic subjects described by Erickson (1967). The subject returned for a Stage III Experiment and, following a hypnotic induction procedure, she selected an unusual position for a hypothetical picture of a bowl of fruit that was present.

Given that the overall results with the Stage II Experiment subjects differ strikingly from those reported by Erickson (1967) in respect of "somnambulistic" hypnotic subjects, it is relevant to ask whether the present writer's subjects were as hypnotically susceptible as those discussed by Erickson and whether the hypnotic induction procedure employed with the Stage II Experiment subjects was adequate. Erickson's (1967) paper indicates that he found it relatively easy to identify "somnambulistic" subjects; in other words, it seems that for Erickson, quite a substantial proportion of the general population are potential "somnambulistic" hypnotic subjects. Unfortunately, it appears that Erickson did not make use of a scale such as the SHSS:C, so it is not possible to compare his and the present writer's subjects in terms of susceptibility scores. However, as indicated in Chapter IV (p. 152), Erickson (1967) does specify, albeit rather vaguely, some criteria for a "deep trance"¹. These include "ideosensory activity such as visual and auditory hallucinations" and "complete posthypnotic amnesia for trance experiences". The SHSS:C includes a visual hallucination item ("Negative Visual Hallucination") and an auditory hallucination item ("Hallucinated Voice")². Nine of the 16 Stage II Experiment subjects passed the former and two of these subjects also passed the "Hallucinated Voice" item. Fourteen subjects passed the "Post-Hypnotic Amnesia" item of the SHSS:C, although not all of these subjects were completely amnesic for what they experienced in the period between the induction procedure and the "dehypnotization" procedure. The present writer would speculate that relatively few subjects experience complete amnesia for hypnosis sessions. If this is so, it may be that some of Erickson's "somnambulistic" subjects were less amnesic for their "trance experiences" than he judged them to be. During the post-experimental inquiry conducted at the end of the second part of the Stage II Experiment, the majority of the subjects seemed to recall only one round of questions about hypothetical pictures (see pp. 280-284). (The subjects were asked about pictures on two occasions. The first of these was during a period of "hypnosis", i.e. during the period that

¹ In this context Erickson appears to be using the term "deep trance" synonymously with "somnambulistic state" or "somnambulistic trance".

² For a description of the SHSS:C, see pp. 9-14.

began with the administration of a lengthy tape-recorded hypnotic induction procedure and which ended with a "dehypnotization" ritual.) During the post-experimental inquiry, the majority of the Stage II Experiment subjects appeared to be amnesic for, or forgetful of, the present writer's giving them a post-hypnotic suggestion that when he jingled his keys they would lift a pen off the floor and hand it to him.

In his paper concerned with the picture positioning choices of "somnambulistic" hypnotic subjects, Erickson (1967) reports that training subjects for "deep hypnosis" entailed ritualistic verbalizations continued for several hours at a time and often repeated for several days (see p.151 of this thesis). In the present writer's Stage II Experiments, such lengthy "training" was not employed, although the second part of the Stage II Experiment began with a tape-recorded hypnotic induction procedure which lasted approximately 52 minutes. It could be objected, therefore, that since the present writer did not employ the very lengthy procedures that Erickson reportedly used, the Stage II Experiments do not constitute a fair test of his findings regarding picture placement choices. Such an objection would be based on the assumption that very lengthy training procedures are necessary to produce the so-called somnambulistic state. However, Erickson (1967) mentions parenthetically that "When the author now wishes somnambulistic trances, much briefer, more effortless methods are employed" (Rossi, 1980a, p.49) and later in his article (Rossi, 1980a, pp.57-60) Erickson reports that he hypnotized volunteer subjects at a medical meeting and secured unusual picture positioning choices from them. These individuals had not previously acted as hypnotic subjects. Erickson does not state how long he spent hypnotizing them, but since he was at a meeting one might presume that he did not spend a great deal of time on this.

Taking the above considerations into account, the present writer believes that in the case of at least six of his subjects (Subjects 1, 2, 4, 7, 9 and 10) the Stage II Experiments constituted a fair test of Erickson's (1967) assertions about "somnambulistic" hypnotic subjects' picture positioning choices¹.

¹ For footnote, see p.340.

THE RELEVANCE OF THE EXPERIMENTAL FINDINGS
TO THE STATE—NON-STATE ISSUE

Literalness

The present writer's findings contrast sharply with those of Erickson and suggest that marked literalness of response to questions and requests is not a spontaneous (unsuggested) effect displayed by responsive subjects following the administration of hypnotic induction procedures. In other words, if there is such a thing as a "hypnotic state", literalness does not appear to be one of its hallmarks.

It will be recalled that in the Stage II Experiments the present writer interrupted subjects when they tried to execute a post-hypnotic suggestion by lifting a pen from the floor. During this interruption, the present writer induced the subjects to look away briefly (see pp.225-226). In most cases, this was accomplished by making a request in the form of a question that could have been answered literally, e.g. "Would you mind looking at the lampstand in the corner of the room?" None of the subjects was observed to respond in a peculiarly literal manner to these requests. Two of the Stage II Experiment subjects reported seeing a suggested cat after they were interrupted in the execution of the post-hypnotic suggestion. In asking them about the "cat",

Footnote from p.339:

Subjects 1, 2, 4, 7, 9 and 10 scored 10 or more on the SHSS:C and during the post-experimental inquiry conducted at the end of the second part of the Stage II Experiment they appeared to recall only one round of questions about hypothetical pictures; they also appeared to be amnesic for the post-hypnotic suggestion pertaining to lifting a pen (although in the case of Subject 7 the record of the experiment suggested that he was not specifically asked why he had lifted the pen). Although these subjects appeared to experience considerable post-hypnotic amnesia, it would not be true to say that they were all completely amnesic for their "hypnotic" experiences: Subject 2, for instance, reported having experienced various sensations and feelings, and Subject 7 recalled subjective experiences, at least some of which were related to the content of the tape-recorded hypnotic induction sequence (see p.273). However, as indicated above, the present writer would question whether all of Erickson's "somnambulistic" subjects experienced complete post-hypnotic amnesia.

the present writer employed questions that could have been answered literally but they gave non-literal replies. Thus, if there is an altered state associated with the execution of post-hypnotic suggestions, it would seem that literalness is not a salient characteristic of it.

The Picture Positioning Choices of
"Somnambulistic" Hypnotic Subjects

As indicated in the last chapter, only one of the Stage II Experiment subjects chose markedly unusual positions for hypothetical pictures after exposure to the lengthy tape-recorded hypnotic induction procedure. Her behaviour was not, however, identical with that of the "somnambulistic" hypnotic subjects described by Erickson (1967): instead of choosing positions above and behind each of the "target objects", she seemed to select more or less the same "unreasonable" position for all three of the hypothetical pictures. She went on to participate in a Stage III Experiment and following the administration of a relatively brief hypnotic induction procedure she selected an unusual position for a hypothetical picture of a bowl of fruit that was present - a position that appeared to be of the type described by Erickson (1967) in respect of "somnambulistic" hypnotic subjects. The subject's unusual picture placement choices in these experiments were confined to periods of "hypnosis" (i.e. periods beginning with a hypnotic induction procedure and ending with a "dehypnotization" procedure). When she was asked, in the "waking state", how she thought she and a typical good hypnotic subject would respond in the picture positioning tasks, she indicated a belief that essentially "reasonable" positions would be selected in both the "hypnosis" and the "waking" condition. On the assumption that the subject was not trying to deceive the present writer during the second part of the Stage II Experiment¹ and during the Stage III Experiment, it is apparent that the application of hypnotic induction procedures during those sessions resulted

¹ As explained in Chapter V, the Stage II Experiments were in two parts, the first of which was mainly taken up with the administration of the SHSS:C.

in her misperceiving aspects of her surroundings¹. For instance, during the Stage III Experiment she misperceived the window behind the bowl of fruit as an alcove with mirror tiles.

In terms of Shor's theory of hypnosis (see Chapter II, pp. 45-49), one could say that the subject experienced a degree of fading of her "generalized reality orientation" (GRO) as a result of exposure to the hypnotic induction procedure in the second part of the Stage II Experiment and then again during the periods of "hypnosis" in the Stage III Experiment. (It is, of course, possible that she also experienced some fading of her GRO as a result of exposure to the hypnotic induction procedure administered when she attended for a Stage I Experiment and in response to the hypnotic induction procedure administered during the first part of the Stage II Experiment.) Shor (1979) writes:

In normal everyday life the GRO is always intact as a background context to our conscious experience, and so we take it for granted. There are times, however, when for various reasons it can be temporarily eliminated from the immediate background of consciousness, leaving the ongoing conscious experiences isolated, devoid of both perspective and wide abstract interpretative significance. (p. 123)

It would appear that at the time of her unusual picture positioning choices, the subject was not fully aware of her overall circumstances and she was therefore able to interpret visual sense data idiosyncratically². It seems reasonable to describe her condition at those times as an altered state³. However, given

¹ It does not seem likely that the subject understood the purpose of the experiments and gave deliberately contrived performances. For one thing, it is improbable that she had read Erickson's (1967) paper concerned with "somnambulistic" hypnotic subjects' picture positioning choices; and the findings from the Non-Experiments suggest that members of the public would not expect the application of a hypnotic induction procedure to result in subjects displaying unusual picture positioning choices in a Stage II Experiment.

² One of the subjects who participated in Supplementary Experiments concerned with Literalness (Subject 1) manifested an apparent fading of her GRO: at one point in the experiment she reported that she felt frightened because she did not know where she was (see p.323).

³ For footnote, see p.343.

that none of the other Stage II Experiment subjects selected markedly unusual positions for hypothetical pictures, the experimental findings do not permit one to conclude that such a state is common in responsive subjects who have been exposed to hypnotic induction procedures.

Renewed Hypnotic-type Responses following
the Interruption of the Execution of Post-
Hypnotic Suggestions

Two of the Stage II Experiment subjects reported seeing a suggested cat after they were interrupted in the execution of a post-hypnotic suggestion. In itself, this is not convincing evidence for Erickson and Erickson's (1941) contention that subjects executing post-hypnotic suggestions enter a special state (a "spontaneous post-hypnotic trance"): given that the subjects were high on hypnotic responsiveness, it is possible that they would have "seen" a suggested cat even if they had not been interrupted in the execution of a post-hypnotic suggestion. Indeed, when one of them (Subject 7) returned for a Stage III Experiment, he was responsive to some suggestions for visual experiences at times when he was not interrupted in the execution of a post-hypnotic suggestion. (Unfortunately, the other subject - Subject 10 - did not return for a Stage III Experiment.)

As already noted, neither of these subjects who reported seeing a suggested cat, responded literally to questions during the period of the interruption of the post-hypnotic act. When Subject 7 returned for a Stage III Experiment, he again failed to display literalness after being interrupted in the execution of a post-hypnotic suggestion.

Erickson and Erickson (1941) claim that if subjects are allowed to complete the execution of a post-hypnotic suggestion after being interrupted, "a spontaneous awakening will ensue in due course, permitting an immediate and direct contrast of

Footnote 3 from p.342:

Recently (May 1985) the present writer telephoned the subject and asked her whether, in her everyday life, she had had experiences of misperceiving her surroundings as she did when she was "hypnotized" during the Stage III Experiment. She said that she did not think that was so, which lends support to the contention that when she was "hypnotized" during the second part of the Stage II Experiment and during the Stage III Experiment, she was in an unusual (i.e. altered) state.

waking and hypnotic behavior as well as a demonstration of an amnesia for the posthypnotic act, the interference, and the events of the trance state" (Rossi, 1980a, p.392). (For a fuller discussion of Erickson and Erickson's assertions in this area, see Chapter IV, pp. 169-170.) During the post-experimental inquiry conducted at the end of the Stage II Experiment, Subject 7 appeared to have only partial recall of what transpired during the interruption of the execution of the post-hypnotic suggestion, which lasted some four minutes (see pp. 271-273): he mentioned the present writer's taking hold of his wrist but he did not seem to recollect his experience of the suggested cat. Subject 10 appeared to be completely amnesic for the interruption of the execution of the post-hypnotic suggestion, which in her case lasted for over three minutes (see pp. 274-275) but she did recall picking up a pen and giving it to the present writer¹. Thus, these subjects exhibited some apparent amnesia associated with the "post-hypnotic act" but it was not as extensive as that described by Erickson and Erickson (1941).

It is, of course, impossible to say with any certainty what mechanisms were responsible for the apparent amnesia these two Stage II Experiment subjects experienced with regard to the interruption of the execution of the post-hypnotic suggestion. As indicated in Chapter III (p. 97; pp. 104-112), controversy surrounds the topics of spontaneous and suggested post-hypnotic

¹ After completing the post-experimental inquiry, the present writer again suggested that the subject would see a cat and she indicated that she did. The present writer did not make notes of what he and the subject did during this ad hoc addition to the Stage II Experiment. However, the tape-recording of the session indicated that the course of events was probably as follows: (1) the present writer jingled some keys and spoke with the subject, who did not immediately execute the post-hypnotic suggestion again by picking up the pen, which had presumably been returned to the floor; (2) the present writer made some more noise with the keys, whereupon the subject tried to pick up the pen; (3) the post-hypnotic act was interrupted and the subject was told that if she looked round she would see her cat on a chair; (4) during some brief conversation, she indicated that she could see the cat; (5) she was allowed to complete the interrupted post-hypnotic act; (6) when she was asked what had happened, she seemed to be amnesic for her experience of the cat (see pp. 275-276).

amnesia. While some - perhaps most - investigators believe that post-hypnotic amnesia often occurs as a genuine phenomenon (i.e. the subjects concerned experience their "forgetfulness" as involuntary and personally convincing), others take a more sceptical view. Thus, Wagstaff (1977a), discussing an experiment of his own concerned with post-hypnotic amnesia, writes: "The results of this experiment appear to demonstrate that the traditional way of estimating post-hypnotic amnesia may be significantly biased by compliance and thus existing estimates probably exaggerate the amount of 'true' hypnotic amnesia that occurs" (p.227). (Wagstaff's study is discussed in Chapter III, pp.108-110.) In the case of the subjects presently under consideration, it is conceivable that they inferred that the present writer expected them or wanted them to display amnesia for the interruption of the post-hypnotic act; if so, they might have pretended to be amnesic (or, in Subject 7's case, partially amnesic) for the interruption. On balance, however, the present writer doubts whether that happened. For one thing, the subjects were not given any explicit suggestion pertaining to forgetting the interruption of the post-hypnotic act, and it is unlikely that either of them had read Erickson and Erickson's (1941) paper. Both of these subjects gave up a considerable amount of time to assist the present writer in his investigations and during his contact with them he gained the impression that they were honest informants. If their amnesia is regarded as genuine, a possible explanation might be couched in terms of shifts of attention leading to disruption of chains of association. It will be recalled that following the "dehypnotization" procedure in the second part of the Stage II Experiment, the subjects were engaged in some casual conversation and then a stimulus unrelated to that conversation - the jingling of keys (the cue for the execution of the post-hypnotic suggestion) - was applied. When they went to pick up the pen, they were interrupted. The present writer shifted their attention again by asking them to look at a lampstand in the corner of the room and he then suggested that if they looked round they would see a cat instead of the bowl of fruit that was present. Eventually the present writer cued them to complete the interrupted post-hypnotic act and he resumed the casual conversation he had been having with them before the keys were jingled¹. Thus, their

¹For footnote, see p.346.

amnesia might have arisen from the breaking of associations between items of their experience, a process that might have been facilitated by the contrast between the imaginal or hallucinatory activity involved in "seeing" a suggested cat and the more commonplace activity of having a social conversation with someone. It may also be the case that these subjects were unusually predisposed to "dissociative" processes. It can be seen that this hypothesis places emphasis on situational factors and a possible trait variable (proneness to "dissociative" processes) without positing the existence of a "spontaneous post-hypnotic trance" (cf. p.71).

SOME COMMENTS ON THE DISPARITY BETWEEN ERICKSON'S
REPORTED FINDINGS AND THOSE OF THE PRESENT WRITER

In Chapter IV (p.145) it was speculated that Erickson and his colleagues might have obtained literal responses to questions by inadvertent cueing (e.g. by emphasizing the word "mind" in questions such as, "Do you mind telling me your name?"). However, in the present writer's investigations, only a minority of the subjects who were asked deliberately "distorted" questions were observed to give clear-cut literal responses (see pp.249-255). The present writer therefore remains puzzled as to how Erickson obtained the results reported in his paper Literalness: An Experimental Study (Rossi, 1980c). It is interesting that this paper - which is described in Rossi (1980c) as an unpublished manuscript, circa 1940s - was not published until 1980. The present writer wonders whether Erickson did not publish it before because of some doubts about the validity of his findings. Another possibility, of course, is that the paper was submitted to one or more journals but was not accepted for publication.

Footnote from p. 345:

During the period of the interruption of the post-hypnotic act in the Stage II Experiment with Subject 7, the present writer suggested that the subject's arms were so heavy that he could not lift them. The subject mentioned a tingling sensation in his arms. After he completed the post-hypnotic act, the subject commented, "Strange sensation" (or "Strange sensations"). Possibly he was referring to the sensations he had felt in his arms. Thus, it may be that if an inquiry had been conducted at that point, the subject would have exhibited fuller recall of what happened during the interruption of the post-hypnotic act.

The present writer was largely unsuccessful in his attempts to replicate Erickson's (1967) findings regarding the picture positioning choices of "somnambulistic" hypnotic subjects, and, as indicated in Chapter IV (pp.157-158), K.S. Bowers tried to replicate Erickson's findings with five highly hypnotizable subjects, but with negative results. These findings clearly raise questions about Erickson's data. One might ask whether his reporting of his investigations in this area was accurate and whether his findings were contaminated by some unrecognized or unacknowledged source(s) of bias¹. Unfortunately, the present writer is unable to give definite answers to these questions, although he would agree with Bowers (see Chapter IV, p.158) when he states that "Complex psychological phenomena virtually never provide such unequivocal data as he [Erickson, 1967] reports, and the revelation that all 750 somnambulists ignored realistic considerations, and that none of the even more numerous waking subjects did so, should awaken our profound skepticism."

In his paper, Erickson (1967) indicates that when he was a student, there were strained relations between him and one of his professors - Clark L. Hull (author of Hypnosis and Suggestibility: An Experimental Approach, which was published in 1933). Erickson writes:

Hull was emphatic in his statement, even emotionally so, that a somnambulistic hypnotic subject who was told to look, for example, at Person A (actually present, not a hallucination), saw Person A in exactly the same way as he did in the ordinary state of awareness. The author, for reasons he had not clearly formulated at that time but which he related to the hypnotized subject's different attitudinal behaviors in the trance state, disagreed with Hull, but was puzzled by the question of how one's waking apprehension of a person might differ from one's trance state apprehension of the same person. (Rossi, 1980a, p.37)

¹ As indicated in Chapter IV (pp.182-191), Erickson's case reports are not entirely accurate, which raises doubts about the accuracy of his reporting of experimental work.

A little later, Erickson continues:

Hull strongly contended that all sensory stimuli continued to be constant in effect or conditional upon the degree of attention, but that a blocking occurred in hypnosis which affected only the communication of experience on the part of the subject to the experimenter but did not alter the subject's actual perception of reality experiences. In this same connection the author had done considerable work upon hypnotic deafness and conditioned responses in which an auditory stimulus was involved. The results of this study ... had made the author doubtful of the identity of hypnotic with waking realities. Discussion on this matter led to considerable estrangement between Hull and the author, since Hull regarded the author's views as unappreciative disloyalty and willful oversight of Hull's views. (Rossi, 1980a, pp. 38-39)

Given this alleged background of disharmony between Erickson and Hull, the present writer wonders whether Erickson, influenced by a strong desire to adduce evidence in support of his own views on this matter, misreported his experimental findings. It must be stressed, however, that this is only speculation.

Erickson and Erickson (1941) claim that subjects executing post-hypnotic suggestions develop a "hypnotic trance". Although they claim to have witnessed this "repeatedly, under varying circumstances and in a great variety of situations", they do not specify the number of subjects they so observed. As indicated in Chapter IV (pp.166-167), they fail to specify exactly what criteria they use to infer the existence of a spontaneous post-hypnotic trance at any given point; and they do not discuss the possibility that subjects who show high responsiveness to suggestions following the interruption of the execution of a post-hypnotic act, might also be highly responsive to suggestions at other times. Only two of the 16 Stage II Experiment subjects reported seeing a suggested cat after being interrupted in the execution of a post-hypnotic suggestion. One of these subjects returned for a Stage III Experiment and responded to some suggestions for visual experiences even when he was not interrupted in the execution of a post-hypnotic suggestion. Of course, these findings do not entirely exclude the possibility

that there is some sort of altered state associated with the execution of post-hypnotic suggestions: it may be that the manifestations of such a state are exceedingly subtle and hard to detect, or that, contrary to the assertions of Erickson and Erickson (1941), such a state arises only occasionally and in special circumstances.

RÉSUMÉ AND CONCLUDING COMMENTS

Many people working in the fields of experimental and clinical hypnosis believe that when responsive subjects are exposed to hypnotic induction procedures they enter a state that is qualitatively different from their normal waking state. As indicated in Chapters II and III, however, "state" theorists differ in their formulations of this presumed condition.

The value of "hypnotic state" concepts has been challenged by a number of prominent hypnosis researchers (e.g. Barber, Coe, Sarbin, Wagstaff - see Chapter III) and, despite numerous studies, there is still division on this issue. A major problem is that research data are often open to different interpretations. For instance, there is evidence that the application of hypnotic induction procedures tends to increase subjects' responsiveness to suggestions (see Chapter III, p.118). This finding is consistent with the view that hypnotic induction procedures bring about, in responsive subjects, a special state that renders them hyper-suggestible. However, the finding may be explicable in terms that do not require the concept of a special altered state; for example, increased suggestibility following the administration of hypnotic induction procedures may result from subjects' expectations.

The late Milton H. Erickson, whose views on the nature of hypnosis are discussed in Chapter IV, reported a number of interesting observations and experimental findings bearing directly on the state—non-state issue and it was to test some of Erickson's assertions in this area that the present writer carried out the research reported in Chapters V and VI. If the present writer's findings had borne out Erickson's assertions about literalness and the other phenomena under investigation, they would have lent at least prima facie support to the view that hypnotic induction procedures often bring about, in responsive subjects, a special

state that has spontaneous (unsuggested) manifestations. However, as indicated, the present writer has been largely unsuccessful in replicating the findings reported by Erickson.

In conclusion, the present writer will briefly outline his own views on the nature of hypnosis - views that inevitably have been coloured by the research findings reported in Chapter VI. He believes that: (1) There are individual differences in the capacity of subjects for hypnotic-type behaviour and experiences. (2) Although individuals in hypnosis settings may sometimes give contrived performances and/or deliberately misreport their private experiences, many subjects respond positively to suggestions in a way that they experience as involuntary, surprising or even frightening. (3) The majority of subjects who respond to suggestions in hypnosis settings are not in a state that is fundamentally different from their normal, waking state. Their positive response to suggestions arises from an interaction between a trait variable (what might be called their "hypnotic susceptibility", "hypnotic talent" or simply "hypnotic responsiveness") and situational factors (e.g. their willingness to co-operate, their feeling comfortable, and their trusting the hypnotist). (4) Occasionally, subjects in hypnosis settings become so oblivious of their true circumstances (i.e. they experience a significant fading of their "generalized reality orientation") that their condition can be appropriately described as an altered state of consciousness.

APPENDIX I

DETAILS OF SUBJECTS

STAGE I EXPERIMENT SUBJECTS¹

The Normal/Tape Group

<u>Subjects</u>	<u>Age (years)</u>	<u>Sex</u>	<u>Occupation</u>
1	27	F	Medical practitioner
2 *	24	F	Nurse
3	24	F	Nurse
4	28	F	Singer
5	32	F	Medical practitioner
6	27	F	Housewife
7	41	F	Nursing officer
8	30	F	P/t Nurse
9	28	F	?
10	21	F	Student
11	22	M	Trainee nurse
12	22	M	Nurse
13	22	M	Nurse
14	39	M	Nurse
15	31	M	Nurse

The Normal/Live Group

1	51	F	Nurse
2	18	F	Trainee nurse
3	51	F	Nurse
4	21	F	Trainee nurse
5	36	F	Trainee nurse
6	42	F	Nurse
7	46	M	Driving instructor
8	43	F	Not known
9	38	F	P/t Nurse
10	41	F	P/t Nurse
11 *	45	M	Blacksmith
12	27	F	Nurse
13	29	F	Nurse
14	25	F	Nurse
15	32	F	Nurse

¹ Subjects who participated in Stage II Experiments are identified with an asterisk.

² This subject, who had received treatment from Dr. S.J.T. Robertson, requested that her occupation not be identified in the reporting of this research.

The Normal/Live/Scriptless Group

<u>Subject</u>	<u>Age (years)</u>	<u>Sex</u>	<u>Occupation</u>
1	45	F	Auxiliary nurse
2	21	F	Nurse
3 *	32	F	Hairdresser
4	26	F	Nurse
5	20	F	Trainee nurse
6	29	F	Nurse
7	34	F	Nurse
8	31	F	Auxiliary nurse
9	33	M	Lorry driver
10	24	F	Nurse
11	58	F	Nurse
12	47	F	Auxiliary nurse
13 *	28	F	Nurse
14	44	F	Nurse
15	30	F	Care officer

The Normal/Live/Other Hypnotists Group

1	51	M	Lecturer
2	38	F	Lecturer
3	37	F	Housewife
4 *	24	F	Student
5	34	M	Trainee nurse
6	19	F	Trainee nurse
7	50	F	Nursing officer

The Distorted/Tape Group A

1	18	F	Trainee nurse
2	30	F	P/t Nurse
3	22	F	Trainee nurse
4	23	F	Nurse

The Distorted/Tape Group B

<u>Subject</u>	<u>Age (years)</u>	<u>Sex</u>	<u>Occupation</u>
1 *	18	F	Trainee nurse
2	45	F	Auxiliary nurse
3 *	24	F	Nurse
4	19	F	Trainee nurse
5	21	F	Nurse
6	21	F	Auxiliary nurse
7	21	F	Trainee nurse
8	29	F	Nurse
9 *	33	M	Nurse
10 *	37	F	Housewife
11	25	M	Nurse
12	55	F	Nurse
13	23	F	Nurse
14	20	F	Trainee nurse
15	42	F	Nurse

The Distorted/Live Group

1	27	F	Nurse
2 *	27	F	Nurse
3	40	F	Nurse
4	21	F	Unemployed
5	34	F	Clerical officer
6	49	F	Clerical officer
7	28	F	Trainee nurse
8	34	F	Advertising executive
9	48	M	Engineering manager
10	31	M	Civil servant

The Miscellaneous Group

1 *	21	F	Nurse
2	31	F	Trainee nurse
3 *	39	F	Nurse

STAGE II EXPERIMENT SUBJECTS

<u>Subjects</u>	<u>Age (years)</u>	<u>Sex</u>	<u>Occupation</u>	<u>Comments</u>
1	24	F	Nurse	Former Stage I Experiment subject (Subject 2, Normal/Tape Group)
2	21	F	Nurse	Former Stage I Experiment subject (Subject 1, Miscellaneous Group)
3	19	F	Trainee nurse	Former Stage I Experiment subject (Subject 1, Distorted/ Tape Group B)
4	33	M	Nurse	Former Stage I Experiment subject (Subject 9, Distorted/ Tape Group B)
5	40	F	Nurse	Former Stage I Experiment subject (Subject 3, Miscellaneous Group)
6	37	F	Housewife	Former Stage I Experiment subject (Subject 10, Distorted/ Tape Group B)
7	45	M	Blacksmith	Former Stage I Experiment subject (Subject 11, Normal/ Live Group)
8	32	F	Hairdresser	Former Stage I Experiment subject (Subject 3, Normal/ Live/Scriptless Group)
9	28	F	Nurse	Former Stage I Experiment subject (Subject 13, Normal/Live/ Scriptless Group)
10	27	F	Nurse	Former Stage I Experiment subject (Subject 2, Distorted/ Live Group)
11	24	F	Student	Former Stage I Experiment subject (Subject 4, Normal/Live/ Other Hypnotists Group)

<u>Subjects</u>	<u>Age (years)</u>	<u>Sex</u>	<u>Occupation</u>	<u>Comments</u>
12	25	F	Nurse	Former Stage I Experiment subject (Subject 3, Distorted/Tape Group B)
13	19	F	Trainee nurse	Obtained score of 10 on HGSHS:A during group screening
14	61	F	Probably a housewife	Invited to participate in Stage II Experiment after giving appearance of high hypnotizability in a clinical setting
15	24	F	Trainee nurse	Obtained score of 10 on HGSHS:A during group screening
16	44	F	Restaurant proprietress	Obtained score of 11 on HGSHS:A during group screening

STAGE III EXPERIMENT SUBJECTS

1	45	M	Blacksmith	Former Stage I Experiment subject (Subject 11, Normal/Live Group and former Stage II Experiment subject (Subject 7)
2	28	F	Nurse	Former Stage I Experiment subject (Subject 13, Normal/Live/Scriptless Group) and former Stage II Experiment subject (Subject 9)

NON-EXPERIMENT SUBJECTS

<u>Subjects</u>	<u>Age (years)</u>	<u>Sex</u>	<u>Occupation</u>
1	39	M	Nursing officer
2	24	F	Nurse
3	43	F	Clerkess
4	43	F	Nurse
5	27	M	Motor mechanic
6	35	M	Medical practitioner
7	23	F	Nurse
8	19	F	Trainee nurse
9	52	M	Nursing officer
10	21	F	Trainee nurse
11	20	F	Trainee nurse
12	25	F	Trainee nurse
13	20	F	Trainee nurse

SUBJECTS WHO PARTICIPATED IN SUPPLEMENTARY
EXPERIMENTS CONCERNED WITH LITERALNESS

<u>Subjects</u>	<u>Age (years)</u>	<u>Sex</u>	<u>Occupation</u>	<u>Comments</u>
1	26	F	Nurse	Former Stage I Experiment subject (Subject 2, Normal/Tape Group) and former Stage II Experiment subject (Subject 1)
2	42	F	Nurse	Former Stage I Experiment subject (Subject 3, Miscellaneous Group) and former Stage II Experiment subject (Subject 5)
3	25	F	Medical practitioner	-
4	26	F	Medical practitioner	-

SUBJECTS WHO WERE TESTED WITH THE HARVARD GROUP SCALE
OF HYPNOTIC SUSCEPTIBILITY, FORM A (HGSHS:A)¹

<u>Subjects</u>	<u>Age (years)</u>	<u>Sex</u>	<u>Occupation</u>	<u>Score on HGSHS:A</u>
1	24	M	Trainee nurse	9
2*	19	F	Trainee nurse	10
3	43	M	Trainee nurse	5 or 6 ²
4	23	M	Trainee nurse	9
5	28	M	Trainee nurse	5
6	28	M	Trainee nurse	3 or 4 ²
7	30	M	Trainee nurse	3
8*	24	F	Trainee nurse	10
9	46	M	Trainee nurse	4
10	19	F	Trainee nurse	7
11	46	F	Sales woman	2 or 3 ³
12	39	F	Telephonist	7
13	67	F	Housewife	4
14	30	F	Town planner	7
15	51	F	Clerical assistant	5 or 6 ²
16	68	F	Retired	5 ⁴
17	48	F	Teacher	4
18	52	F	Teacher	1
19	63	F	Housewife	6
20	55	F	Clerk	8
21	34	F	Teacher	7
22	42	F	Not known	7
23	37	F	Civil servant	3
24	53	F	School auxiliary	Approx. 7 ⁵
25*	44	F	Restaurant proprietress	11
26* ⁶	40	F	Housewife	9
27	43	F	Teacher	1

¹ Subjects who participated in Stage II Experiments are identified with an asterisk.

² On the basis of their entries in the HGSHS:A self-report booklet, it was not possible to state whether these subjects passed the post-hypnotic amnesia item.

³ This subject failed to make an endorsement against one of the items in the self-report booklet.

⁴ During the session this subject did not follow the instruction regarding the "Hand Lowering" item, so it was not scored.

⁵ This subject's entries in the self-report booklet did not permit a precise score to be recorded.

⁶ When this subject attended for a Stage II Experiment, she scored only 2 on the SHSS:C, so the rest of the session was abandoned.

SUBJECTS WHO WERE TESTED WITH THE
CREATIVE IMAGINATION SCALE

<u>Subjects</u>	<u>Age (years)</u>	<u>Sex</u>	<u>Occupation</u>	<u>Score on CIS</u>
1	34	M	Teacher	12
2	34	F	Teacher	17
3	40	F	Physiotherapist	21
4	21	M)	These subjects (who were tested along with Subject 3 at Gartnavel Royal Hospital, Glasgow) were probably all or predominantly nursing staff.	13
5	28 or 29	F)		25
6	24	M)		36
7	20	M)		10
8	33	M)		0
9	25	F)		26
10	37	M)		12 or 15 ²
11	28	F)		24
12	29	F)		23
13	20	F)		24

¹ This subject attended for a Stage II Experiment but it was not completed (see pp. 219-220).

² On the self-scoring form, this subject made two endorsements for one of the test items, making his overall score either 12 or 15.

APPENDIX II

TRANSCRIPT OF THE LENGTHY TAPE-RECORDED HYPNOTIC INDUCTION
PROCEDURE USED WITH STAGE II EXPERIMENT SUBJECTS

Settle back comfortably. Close your eyes and relax. Relax to the best of your ability. And as you continue relaxing like that, I want you to think of your eyelids. In your eyelids there are thousands of tiny muscle fibres, each like a tiny strand of elastic. And throughout so much of the day those little muscle fibres are tense and taut. Whenever your eyes are open and you are looking at things, there's tension in those muscle fibres. But as you sit there with your eyes comfortably closed, I want you to relax those muscle fibres. I want you to relax those muscle fibres by imagining that you've already achieved tremendous relaxation there. Believe your pretence with all your heart and soul and make it happen. Feel how those muscle fibres give out their tension and become slack, loose, limp, and relaxed - wonderfully deeply relaxed. Feel it happen, make it happen. Feel how they literally respond to your own, disciplined, relaxation by becoming slack, loose, limp and relaxed - so wonderfully deeply relaxed you could scarcely drag one weary eyelid apart from the other. Enjoy that developing and deepening relaxation. You can picture the tension draining out of those eyelid muscles just like water trickling out of a leaking bucket. And as those eyelid muscle fibres relax so deeply, you can imagine that your eyelids have been stuck down with a powerful glue, comfortably and heavily closed and stuck down so completely that as you try to open them, they resist and remain stuck down, unable to open
←Approx. 3 sec.→
..... But now stop trying to open them. Enjoy having them comfortably and heavily closed, knowing that when I ask you to open them in due course, they will open easily. And now continue relaxing those eyelids, and I want you to spread that relaxation to your facial muscles, to the muscles around your head and to your throat and neck. And I want you to relax those muscles by imagining that you've already achieved tremendous relaxations there. Believe your pretence with all your heart and soul and feel how your muscles literally respond to your own disciplined relaxation and imagination by becoming slack, loose,

limp and comfortably relaxed. Let that relaxation deepen and develop. \leftarrow Approx. 3 sec. \rightarrow . And now I want you to spread the relaxation to the muscles of your back. Right along your back, there's a powerful group of rugged, strong muscles that are involved in every act of stooping, bending, kneeling, crouching, reaching forward and leaning back, and whenever you do any of those things you have to do so against a background of taut, tight back muscles. But now I'd like you to relax those muscles, and I'd like you to relax those muscles by imagining that you've already achieved tremendous relaxations there. Feel it happen, make it happen. Feel those powerful muscles give out their tension and become slack, loose, limp, and relaxed, in response to your own, disciplined, relaxation. You can picture a sack of grain in a barn or granary, a sack that's nearly bursting at the seams with grain. You can imagine the farmer coming along and snipping the corner of the sack at the bottom. All the grain comes pouring out and the taut tight sack loses its tension and becomes loose, limp and floppy, just as your muscles can become relaxed as all that tension and strain drains away and is replaced by relaxation \leftarrow Approx. 2 sec. \rightarrow . And now spread the relaxation to your arms and legs. Let all the powerful muscles of your arms relax, and all the muscles in the legs, the muscles of the shins, thighs, buttocks and calves, and all the little muscles of your hands and feet. Let them all relax. Imagine that you've already achieved tremendous relaxations there. Believe your pretence with all your heart and soul. Feel it happen, make it happen. Feel how all those muscles literally respond to your own disciplined relaxation by becoming wonderfully, deeply, relaxed, loose, limp and slack \leftarrow Approx. 4 sec. \rightarrow . And as you continue relaxing in this comfortable hypnotic state, it will be interesting to see which of your hands gets light first. It could be your left hand or it could be your right. I don't know and my subconscious mind doesn't know. But your subconscious mind does know, even though your conscious mind probably doesn't know yet. Of course, it would be possible for you to lift one or other hand deliberately, but that would be a deliberate action by your conscious mind. Instead, I'd like you to leave it to your subconscious mind. In its own time, at its own pace, your subconscious mind can cause one of your hands to get light and float upwards. The lightness may begin in the little finger, or it may start in the thumb. It may develop in the palm of your hand and one of the fingers

at the same time, or maybe in two different fingers at the same time. The really important thing is to simply let it happen in its own time, at its own pace, without any rushing. It's good to leave it to the subconscious mind and wait patiently and comfortably as the subconscious mind starts to make it happen
.....<Approx. 3 sec.>..... It's good to feel the hand floating up by itself, knowing that when it touches your cheek or chin you will enter an even deeper state of hypnosis with your hand then becoming heavier and returning to your lap. But first enjoy the lightness as it builds up in your hand and arm<Approx. 2 sec.>.....

It's good just to let it happen in its own time, at its own pace
.....<Approx. 185 sec.>..... And as you continue going deeper and deeper into this comfortable hypnotic state, you can picture yourself in a large country garden in the spring or early summer. In the distance you can see the country house with its brick or stone reflecting the morning sun. There's a blue sky overhead with a few puffs of white cloud. The sun is shining down warmly and there's a slight breeze which stops you getting too hot. You can hear the chirping of the birds and there are colourful flower beds surrounded by neatly mown grass. The grass is like green velvet and soft and springy underfoot. Here and there it glistens as the sun catches beads of dew<Approx. 2 sec.>.....

In the flower beds there are rich arrays of colour - strong reds, blues and yellows and a variety of gentle pastel shades in between. I want you to see yourself walking along a stone path in the garden, approaching the top of a flight of 12 stone steps that go down into a lower section of the garden where the plant life is even richer and where there is a splendid oak tree. As I slowly count from 1 to 12 you can see yourself going down the stone steps into the lower section of the garden. 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12<Approx. 2 sec.>..... And positioned in the shade of the oak tree there is a deck-chair. Picture yourself flopping down in the deck-chair, relaxing and enjoying the peace of the garden. The branches and leaves of the tree protect you from the direct glare of the sun. Enjoy the relaxation and peace.<Approx. 6 sec.>..... I want you to continue enjoying that relaxation and peace<Approx. 4 sec.>..... And as you enjoy this scene you can go deeper and deeper and deeper into hypnosis. And it's not necessary for me to speak to you all the time because you can continue going deeper and deeper and deeper into this hypnotic state as you continue enjoying the

imagery of the garden, as you continue seeing the garden and enjoying it ← Approx. 4 sec. → And when I speak to you next, you will be even more deeply hypnotized ← Approx. 3 sec. → And I want you to continue becoming more and more comfortable, more and more relaxed, as you go deeper and deeper into the hypnotic state ← Approx. 180 sec. → And as you continue enjoying the garden, you can go into deeper and deeper hypnosis ← Approx. 5 sec. → Going deeper and deeper into this comfortable state of hypnosis. Becoming more deeply hypnotized than you've been before and enjoying it ← Approx. 3 sec. → And there is no need for me to talk to you all the time. You can continue going deeper and deeper into this hypnotic state ← Approx. 3 sec. → It can be so pleasant ← Approx. 5 sec. → enjoying the garden, going into deeper and deeper hypnosis, becoming more and more deeply hypnotized all the time ← Approx. 82 sec. → And as you continue relaxing in this comfortable and deep hypnotic state, you now think of yourself being back in this room remaining very deeply hypnotized. Even though you are comfortably and deeply hypnotized, you can hear me clearly when I speak to you ← Approx. 7 sec. → And it's good to relax in this very very deep hypnotic state ← Approx. 9 sec. → This state of hypnosis is so pleasant ← Approx. 3 sec. → It can be so pleasant, like sleeping soundly and restfully, as soundly asleep as if you were in a deep sleep in the middle of the night when awfully tired. I want you to sleep as deeply and soundly as a log, going deeper and deeper into this wonderful relaxed state ← Approx. 2 sec. → I want you to sleep as deeply and soundly as a log ← Approx. 160 sec. → Continue going deeper and deeper and deeper into this wonderful hypnotic state. I want you to sleep as deeply and soundly as a log ← Approx. 151 sec. → Very very deeply hypnotized, very very relaxed ← Approx. 4 sec. → Sleeping as deeply and soundly as a log, wonderfully, deeply relaxed. Becoming more and more relaxed ← Approx. 4 sec. → more and more deeply hypnotized ← Approx. 138 sec. → Continuing to go deeper and deeper into this comfortable state of deep hypnosis, becoming more deeply hypnotized than you've been before and enjoying it so much ← Approx. 3 sec. → And there's no need for me to talk all the time because you can continue going deeper and deeper into this hypnotic state. It can be so pleasant, like sleeping soundly and restfully, as soundly asleep as if you were in a deep sleep in the middle of the night when awfully tired. I want you to

sleep as deeply and soundly as a log, enjoying this deepening and developing hypnotic state ← Approx. 154 sec. → Going deeper and deeper and deeper into this hypnotic state ← Approx. 4 sec. → And even though you are very deeply hypnotized now, you can go even deeper in your hypnosis. I'm going to slowly count from 1 to 50 ← Approx. 2 sec. → And as I count from 1 to 50 you'll slowly and gradually go into an even deeper state of hypnosis, so by the time I reach 50 you will be exceedingly deeply hypnotized, extremely deeply hypnotized, hypnotized and very very profoundly relaxed, very very very deeply hypnotized and it can be so pleasant and comfortable. As I count from 1 to 50 you'll find yourself going into an even deeper state of hypnosis, with the pleasure and comfort increasing ← Approx. 2 sec. → 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20 - 21 - 22 - 23 - 24 - 25. Half-way there. 26 - 27 - 28 - 29 - 30 - 31 - 32 - 33 - 34 - 35 - 36 - 37 - 38 - 39 - 40 - 41 - 42 - 43 - 44 - 45 - 46 - 47 - 48 - 49 - 50. Very very very, very deeply hypnotized. Profoundly hypnotized. Tremendously relaxed ← Approx. 5 sec. → And I want you to remain very very deeply hypnotized, so very deeply hypnotized, as if you were sleeping like a log, very very very relaxed ← Approx. 4 sec. → Deeply deeply hypnotized ← Approx. 106 sec. → Very very very deeply hypnotized. ← Approx. 3 sec. → Wonderfully deeply hypnotized, enjoying this deep hypnosis and relaxation ← Approx. 4 sec. → letting it deepen and develop even further ← Approx. 2 sec. → Becoming more deeply hypnotized than you've ever been, and enjoying it so much ← Approx. 14 sec. → Enjoying this very very deep, peaceful hypnosis ← Approx. 8 sec. → Really enjoying the hypnosis ← Approx. 2 sec. → Going deeper and deeper and deeper into the hypnosis, enjoying it, letting it deepen and develop even further ← Approx. 3 sec. → Very very comfortably hypnotized ← Approx. 8 sec. → Just like being asleep very very deeply, sleeping as deeply and soundly as if you were a log ← Approx. 3 sec. → as if you were awfully tired in the middle of the night, and sound asleep ← Approx. 7 sec. → Enjoying that deepening and developing relaxation and hypnosis ← Approx. 12 sec. → Allowing the hypnosis to deepen and develop even further ← Approx. 2 sec. → and you can continue going deeper and deeper into this comfortable state of hypnosis, becoming more deeply hypnotized than you've been before, and enjoying it.

And there's no need for me to talk to you all the time since you can continue going deeper and deeper into this hypnotic state
 ← Approx. 4 sec. → All the time, you can continue going deeper and deeper into this state of hypnosis ← Approx. 3 sec. → becoming very very comfortable ← Approx. 2 sec. → as if you were sleeping as deeply and soundly as a log ← Approx. 12 sec. → really enjoying this deepening and developing hypnosis ← Approx. 155 sec. → Continuing to go deeper and deeper and deeper into this wonderful state of deep, profound hypnosis ← Approx. 4 sec. → I want you to sleep as deeply and soundly as a log ← Approx. 4 sec. → becoming more and more profoundly hypnotized and comfortable ← Approx. 4 sec. → very very very comfortably and deeply hypnotized, sleeping as deeply and soundly as a log ← Approx. 185 sec. → Continuing to go deeper and deeper into this comfortable state of hypnosis, becoming ever more deeply hypnotized ← Approx. 2 sec. → more deeply hypnotized than you've been before, and enjoying it ← Approx. 2 sec. → I want you to sleep as deeply and soundly as a log ← Approx. 3 sec. → enjoying this wonderful depth of hypnosis ← Approx. 155 sec. → And as I count from 51 to 100 you can go into even deeper hypnosis; your hypnosis can develop and deepen even more ← Approx. 4 sec. → so you achieve an extremely deep level of hypnosis ← Approx. 2 sec. → extremely comfortable, wonderfully deep hypnosis, very very comfortable, extremely deeply hypnotized ← Approx. 2 sec. → As I slowly count from 51 to 100 you can enter an even deeper state of hypnosis. With every count, with every number, going deeper and deeper, into hypnosis.
 51 - 52 - 53 - 54 - 55 - 56 - 57 - 58 - 59 - 60 - 61 - 62 - 63
 - 64 - 65 - 67¹ - 68 - 69 - 70 - 71 - 72 - 73 - 74 - 75 - 76 -
 77 - 78 - 79 - 80 - 81 - 82 - 83 - 84 - 85 - 86 - 87 - 88 - 89
 - 90 - 91 - 92 - 93 - 94 - 95 - 96 - 97 - 98 - 99 - 100. Extremely deeply hypnotized, very very very comfortably and deeply hypnotized ← Approx. 7 sec. → And now as you remain very very very deeply hypnotized, I'd like you to slowly open your eyes, remaining very very deeply hypnotized ← Approx. 5 sec. → Slowly opening your eyes now but remaining very very very deeply hypnotized.

¹ The number "66" was accidentally omitted during the recording of this sequence.

APPENDIX III

TABLE I

STAGE I EXPERIMENT SUBJECTS: RESPONSES
OF THE NORMAL/TAPE GROUP

	Subjects	1	2	3	4	5	6	7	8
Age		27	24	24	28	32	27	41	30
Sex		F	F	F	F	F	F	F	F
<u>Hand levitation</u>	Slight or none Partial lifting Hand lifts to face				x			x	x
<u>"Butterfly" suggestion</u>	No response Uncertain Clear response	x						x	
<u>"Bells" suggestion</u>	No response Uncertain Clear response			x		x ³	x	x	
<u>Verbal response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	d	d	d	d	d	d	d	d
a = none b = "mixed" ¹ c = literal d = normal e = uncertain									
<u>Head movement response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	f	f	f	f	f	f	f	f
f = none g = uncertain h = nod(s) i = shake(s)									f ⁵
<u>Response to post-hypnotic suggestion</u>	None Uncertain Lifts book	x		x			x		
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall Little recall	x		x	x	x		x	x
<u>Subject invited to participate in Stage II Experiment?</u>	No Yes	x		x	x	x	x ⁴	x	x

Notes

¹ A normal response prefaced with "Yes" or "No" or equivalent words.

² Shortly before the "bells" suggestion was given, the experimenter heard an outside sound which was possibly from an ice-cream van. It is conceivable that this induced the subject to give a positive response to the "bells" suggestion.

Notes continued on next page.

TABLE I CONTINUED

	Subjects	9	10	11	12	13	14	15
Age		28	21	22	22	22	39	31
Sex		F	F	M	M	M	M	M
<u>Hand levitation</u>	Slight or none Partial lifting Hand lifts to face		x		x		x	x
<u>"Butterfly" suggestion</u>	No response Uncertain Clear response		x		x	x		x
<u>"Bells" suggestion</u>	No response Uncertain Clear response				x	x	x	x
<u>Verbal response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	d d d d d	e d d d d	d d a e d	e d d d d	d e d d d	d e d d d	d d d d d
a = none c = literal e = uncertain	b = "mixed" ¹ d = normal							
<u>Head movement response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	f f f f f	f f f f f	f f i f f	f f f f f	f f f f f	f f f f f	g f f f f
f = none h = nod(s)	g = uncertain i = shake(s)							
<u>Response to post-hypnotic suggestion</u>	None Uncertain Lifts book	x	x	x	x ⁶	x	x	x
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall Little recall	x	x	x	x	x	x	x
<u>Subject invited to participate in Stage II Experiment?</u>	No Yes	x	x	x	x	x	x	x

Notes continued

³ This subject's right hand was still near her chin at the time of the "bells" suggestion.

⁴ This subject eventually declined to return for another experimental session.

⁵ Unfortunately the record of the experiment with this subject did not specify the nature of this observed head movement. The subject's verbal response was, "Don't know."

⁶ Unfortunately the record of the experiment with this subject did not specify his response to the experimenter's jingling keys (the cue for execution of the post-hypnotic suggestion).

TABLE II

STAGE I EXPERIMENT SUBJECTS: RESPONSES
OF THE NORMAL/LIVE GROUP

	Subjects	1	2	3	4	5	6	7	8
Age		51	18	51	21	36	42	46	43
Sex		F	F	F	F	F	F	M	F
<u>Hand levitation</u>	Slight or none	x		x	x				
	Partial lifting								
	Hand lifts to face		x			x	x	x	x ¹¹
<u>"Butterfly" suggestion</u>	No response	x	x						
	Uncertain			x ⁷					x ¹²
	Clear response				x	x	x	x	
<u>"Bells" suggestion</u>	No response	x						x	
	Uncertain			x ⁸					
	Clear response		x		x	x	x		x
<u>Verbal response to questions</u>	Q.1	d	a	d	d	d	d	a	a
	Q.2	d	a	d	d	d	d	a	d
a = none	Q.3	d	a	d	d	d	d	a	d
b = "mixed" ¹	Q.4	d	a	d	d	d	d	a	d
c = literal	Q.5	d	a	d	e ⁹	d	a	a	d
d = normal									
e = uncertain									
<u>Head movement response to questions</u>	Q.1	} See pp. 242-243.							
	Q.2								
f = none	Q.3								
g = uncertain	Q.4								
h = nod(s)	Q.5								
	i = shake(s)								
<u>Response to post-hypnotic suggestion</u>	None	x	x	x				x	
	Uncertain								
	Lifts book				x	x	x		x
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall	x	x	x	x			x	x
	Little recall					x	x		
<u>Subject invited to participate in Stage II Experiment?</u>	No	x	x	x	x	x	x ¹⁰	x	x
	Yes								

Notes

⁷ The present writer's wife noted that the subject's left hand "flopped and then moved up, stayed there for a minute and flopped down again".

⁸ It was not clear from the record of the experiment whether the subject exhibited a hand movement response to the "bells" suggestion. However, the subject said that she could not hear bells and she shook her head.

⁹ The present writer's wife thought that the subject might have said, "No, Louis", but what was said was not heard clearly and was unclear on the tape-recording of the session.

Notes continued on next page.

TABLE II CONTINUED

	Subjects	9	10	11	12	13	14	15
	Age	38	41	45	27	29	25	32
	Sex	F	F	M	F	F	F	F
<u>Hand levitation</u>	Slight or none		x	x				x
	Partial lifting				x			
	Hand lifts to face	x ¹³				x	x	
<u>"Butterfly" suggestion</u>	No response				x			x
	Uncertain							
	Clear response	x	x	x		x	x	
<u>"Bells" suggestion</u>	No response	x						x
	Uncertain		x					
	Clear response			x	x	x ¹⁵	x	
<u>Verbal response to questions</u>	Q.1	d	d	d	d	d	d	d
	Q.2	d	d	e	d	d	d	d
a = none	Q.3	d	d	d	d	d	d	d
b = "mixed" ¹	Q.4	d	d	e	d	d	d	d
c = literal	Q.5	d	d	d	d	d	d	d
d = normal								
e = uncertain								
<u>Head movement response to questions</u>	Q.1	↑	f	f	? ¹⁴	f	f	f
	Q.2	See p. 243	f	f	f	f	f	f
f = none	Q.3		f	i	i	f	f	f
g = uncertain	Q.4		f	f	f	f	f	f
h = nod(s)	Q.5	↓	f	f	f	f	h	f
i = shake(s)								
<u>Response to post-hypnotic suggestion</u>	None		x		x			x
	Uncertain							
	Lifts book	x		x		x	x	
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall	x	x		x		x	
	Little recall			x		x		x
<u>Subject invited to participate in Stage II Experiment?</u>	No	x	x		x	x	x	x
	Yes			x				

Notes continued

¹⁰ This subject would have been invited to return for a Stage II Experiment but she exhibited some emotional upset during the session and the present writer judged it safer not to involve her in further experimentation.

¹¹ See note 12.

¹² This subject's right hand lifted to her face around the time that the "butterfly" suggestion was given. (This was presumably a delayed response to the suggestions for hand levitation given earlier.) Accordingly, when the present writer gave the "bells" suggestion, he asked the subject to lift her left hand if she had the suggested experience.

Notes continued on next page.

TABLE II CONTINUED

Notes continued

13 This subject's hand movement looked, to the present writer's wife, like a voluntary lifting to support the subject's head, which was leaning to the side.

14 The present writer's wife noted that on being asked the first test-question ("Would you mind telling me your first name?"), the subject "nodded [her] head up and down a bit but opened [her] eyes and came round. Closed eyes on instruction and then answered [Brenda]."

15 Around the time that the subject was given the "bells" suggestion, the experimenter heard what was probably the chiming of an ice-cream van. It is conceivable that this induced the subject to give a positive response to the "bells" suggestion.

TABLE III

STAGE I EXPERIMENT SUBJECTS: RESPONSES OF THE
NORMAL/LIVE/SCRIPTLESS GROUP

	Subjects	1	2	3	4	5	6	7	8
	Age	45	21	32	26	20	29	34	31
	Sex	F	F	F	F	F	F	F	F
<u>Hand levitation</u>	Slight or none Partial lifting Hand lifts to face		x		x	x			x
<u>"Butterfly" suggestion</u>	No response Uncertain Clear response	x	x		x		x	x	x
<u>"Bells" suggestion</u>	No response Uncertain Clear response	x ¹⁶	x		x	x	x		x
<u>Verbal response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	e	a	a	a	a	e	d	d
a = none b = "mixed" ¹ c = literal d = normal e = uncertain			d	d	a	d	d	d	d
		d	a	e	a	a	e	e	d
		d	e	d	a	d	d	d	d
<u>Head movement response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	f	f	i	f	i	g	g	f
f = none g = uncertain h = nod(s) i = shake(s)		f	f	i	f	g	g	f	f
		f	f	g	f	f	g	f	f
		f	f	i	i	g	g	f	i
		h	f	i	f	f	g	f	f
<u>Response to post-hypnotic suggestion</u>	None Uncertain Lifts book	x	x		x	x	x		x
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall Little recall	x	x		x	x	x	x	x
<u>Subject invited to participate in Stage II Experiment?</u>	No Yes	x	x		x	x ¹⁷	x	x	x

Notes

¹⁶ Unfortunately the subject's response, if any, was not noted on the record sheet.

¹⁷ During the post-experimental inquiry, the subject indicated that she might have been somewhat resistant. The present writer thought that she might have proved to be a "good" subject, so he invited her to return for a Stage II Experiment. However, she declined this invitation after she was told how long the session would take.

Notes continued on next page.

TABLE III CONTINUED

	Subjects	9	10	11	12	13	14	15
Age		33	24	58	47	28	44	30
Sex		M	F	F	F	F	F	F
<u>Hand levitation</u>	Slight or none Partial lifting Hand lifts to face	x ¹⁸	x	x	x	x	x	x
<u>"Butterfly" suggestion</u>	No response Uncertain Clear response	x	x	x	x	x	x	x ²¹
<u>"Bells" suggestion</u>	No response Uncertain Clear response	x	x	x	x	x ¹⁶	x	x
<u>Verbal response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	d	a	d	d	d	d	d
a = none	b = "mixed" ¹	d	d	d	d	d ¹⁶	d	d
c = literal	d = normal	d	a	b ¹⁹	e	d	d	d
e = uncertain		d	a	d	e	d	e	b
<u>Head movement response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	f	f	g	f	f	g	g ²²
f = none	g = uncertain	g	f	i	f	i	f	g ²²
h = nod(s)	i = shake(s)	f	f	f	i	i	f	g ²²
		i	f	f	f	f	f	g ²²
		f	f	g	f	g	h	g ²²
<u>Response to post-hypnotic suggestion</u>	None Uncertain Lifts book	x ¹⁶	x	x	x	x	x	x
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall Little recall	x	x	x	x	x	x	x
<u>Subject invited to participate in Stage II Experiment?</u>	No Yes	x	x	x	x	x	x	x

Notes continued

¹⁸This subject's hand either reached his chin or very nearly did so.

¹⁹The subject said, "No ... can't hear it."

²⁰The subject gave the response "June" before the present writer had asked the test-question ("Would you like to say what the month is?"). Therefore, a different question was asked instead, viz. "Would you like to say what the picture is?" The subject's reply was, "I don't know."

²¹Only a slight movement of the subject's hand was observed. During the post-experimental inquiry she denied having felt the butterfly landing on her hand.

Notes continued on next page.

TABLE III CONTINUED

Notes continued

²²"Uncertain" responses have been coded here since the experimenter is unsure whether he observed and recorded possible head movements in the case of this subject. However, as indicated, she gave normal, non-literal verbal responses.

TABLE IV

STAGE I EXPERIMENT SUBJECTS: RESPONSES OF THE
NORMAL/LIVE/OTHER HYPNOTISTS GROUP

		Subjects	1	2	3	4	5	6	7
Age			51	38	37	24	34	19	50
Sex			M	F	F	F	M	F	F
<hr/>									
<u>Hand levitation</u>	Slight or none Partial lifting Hand lifts to face		x	x					
					x ²⁴	x	x	x	x
<u>"Butterfly" suggestion</u>	No response Uncertain Clear response		x	x ²³			x		
					x	x		x	x
<u>"Bells" suggestion</u>	No response Uncertain Clear response		x		x		x		
				x		x		x	x ²⁵
<u>Verbal response to questions</u>	Q.1	d	d	d	d	d	d	d	d
	Q.2	d	d	d	d	d	d	d	d
a = none	b = "mixed" ¹	Q.3	d	d	b	e	d	d	d
c = literal	d = normal	Q.4	d	d	e	d	d	d	d
e = uncertain		Q.5	d	d	e	d	d	d	d
<u>Head movement response to questions</u>	Q.1	f	f	h	f	f	f	f	f
	Q.2	f	g ¹⁶	g	f	f	f	f	f
f = none	g = uncertain	Q.3	f	f	g	f	f	f	f
h = nod(s)	i = shake(s)	Q.4	f	f	h	f	h	f	f
		Q.5	f	f	f	f	h	f	f
<u>Response to post-hypnotic suggestion</u>	None Uncertain Lifts book		x	x			x		
					x	x		x	x
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall Little recall		x	x	x		x	x	x
						x			
<u>Subject invited to participate in Stage II Experiment?</u>	No Yes		x	x	x		x	x	x
						x			
<hr/>									
<u>Notes</u>									

²³ Most probably this subject did not exhibit a response.

²⁴ During the post-experimental inquiry the subject said her left arm felt very light and she lifted it voluntarily.

²⁵ The present writer thought he heard a distant jingling, which might have been an ice-cream van or television set. Conceivably this sound could have induced the subject to give a positive response to this test item.

TABLE V

STAGE I EXPERIMENT SUBJECTS: RESPONSES OF THE
DISTORTED/TAPE GROUP A

	Subjects	1	2	3	4
	Age	18	30	22	23
	Sex	F	F	F	F
<u>Hand levitation</u>	Slight or none Partial lifting Hand lifts to face	x	x	x	x
<u>"Butterfly" suggestion</u>	No response Uncertain Clear response	x	x	x	x
<u>"Bells" suggestion</u>	No response Uncertain Clear response	x	x	x	x
<u>Verbal response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	d e e d d	d d d e e	d d d e d	d d a d d
a = none c = literal e = uncertain	b = "mixed" ¹ d = normal				
<u>Head movement response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	f h ₂₆ g i g	f f i f f	f f f f f	f f i f f
f = none h = nod(s)	g = uncertain i = shake(s)				
<u>Response to post-hypnotic suggestion</u>	None Uncertain Lifts book	x	x	x	x
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall Little recall	x	x	x	x
<u>Subject invited to participate in Stage II Experiment?</u>	No Yes	x	x	x	x

Notes

²⁶The record of the experiment indicated that the subject exhibited a nodding or shaking movement but unfortunately it did not specify which.

TABLE VI

STAGE I EXPERIMENT SUBJECTS: RESPONSES OF THE
DISTORTED/TAPE GROUP B

	Subjects	1	2	3	4	5	6	7	8
	Age	18	45	24	19	21	21	21	29
	Sex	F	F	F	F	F	F	F	F
<u>Hand levitation</u>	Slight or none Partial lifting Hand lifts to face	x	x	x	x	x	x	x	x
<u>"Butterfly" suggestion</u>	No response Uncertain Clear response	x	x	x	x ²⁸	x	x	x	x
<u>"Bells" suggestion</u>	No response Uncertain Clear response	x	x	x	x ²⁸	x	x	x	x
<u>Verbal response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	d	a	e	e	d	d	d	b
a = none	b = "mixed" ¹	d	d	c	a	a	d	b	d
c = literal	d = normal	d	e	c	d	d	d	b	b
e = uncertain		d	d	c	d	d	d	b	b
<u>Head movement response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	f	i	g ²⁷	f	f	f	f	g ²⁹
f = none	g = uncertain	f	i	f	f	f	f	f	i
h = nod(s)	i = shake(s)	f	i	g	f	f	f	f	i
		g	f	f	f	f	f	f	i
<u>Response to post-hypnotic suggestion</u>	None Uncertain Lifts book	x	x	x	x	x	x	x	x
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall Little recall	x	x	x	x	x	x	x	x
<u>Subject invited to participate in Stage II Experiment?</u>	No Yes	x	x	x	x	x	x	x	x

Notes

²⁷The subject exhibited slight nodding or shaking but the record of the experiment did not specify which.

²⁸The subject responded with the opposite hand to that specified by the experimenter (the present writer). Thus, after receiving the "butterfly" suggestion her right hand moved and after receiving the "bells" suggestion her left hand lifted.

Notes continued on next page.

TABLE VI CONTINUED

	Subjects	9	10	11	12	13	14	15
	Age	33	37	25	55	23	20	42
	Sex	M	F	M	F	F	F	F
<u>Hand levitation</u>	Slight or none		x				x	x
	Partial lifting							
	Hand lifts to face	x		x	x	x		
<u>"Butterfly" suggestion</u>	No response							x
	Uncertain			x		x		
	Clear response	x	x		x		x	
<u>"Bells" suggestion</u>	No response			x				x
	Uncertain				x	x ³²		
	Clear response	x	x,				x	
<u>Verbal response to questions</u>	Q.1	d	d	e	a	a	d	a
	Q.2	e	d	e	d	a	a	d ³⁴
	Q.3	e	d	e	d	a	a	e
	Q.4	e	e	e	d	a	d	d
	Q.5	e	d	d	d	a	d	d
	a = none	b = "mixed" ¹						
	c = literal	d = normal						
	e = uncertain							
<u>Head movement response to questions</u>	Q.1	f	f	f	g	f	f	f
	Q.2	f	f	g	g	f	f	f
	Q.3	f	f	i	f	f	g	f
	Q.4	f	f	g	f	f	f	g
	Q.5	f	f	f	f	f	f	g
	f = none	g = uncertain						
	h = nod(s)	i = shake(s)						
<u>Response to post-hypnotic suggestion</u>	None					x	x	x
	Uncertain			x ³⁰	x ³¹			
	Lifts book	x	x					
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall			x	x	x		x
	Little recall	x	x				x	
<u>Subject invited to participate in Stage II Experiment?</u>	No			x	x	x		x
	Yes	x	x				x ³³	

Notes continued

²⁹ The subject's head movement response, if any, was not observed.

³⁰ Unfortunately, it was not clear from the record of the experiment whether the subject executed the post-hypnotic suggestion. However, at the time, he said that he knew that he was supposed to lift the book.

³¹ This subject lifted the book without waiting for the experimenter (the present writer) to jingle keys.

Notes continued on next page.

TABLE VI CONTINUED

32 The subject's hand was levitated at the time that she was given the "bells" suggestion. It lifted further after the "bells" suggestion was given but possibly this had nothing to do with the "bells" suggestion.

33 Although she was invited to attend for a Stage II Experiment, this subject was not in fact seen again.

34 The subject said that she could answer "but I really don't feel hypnotized ...", and during the post-experimental inquiry she commented on this again: "I felt if I was answering it was false because I didn't really feel hypnotized ..."

TABLE VII

STAGE I EXPERIMENT SUBJECTS: RESPONSES OF THE
DISTORTED/LIVE GROUP

	Subjects	1	2	3	4	5
	Age	27	27	40	21	34
	Sex	F	F	F	F	F
<u>Hand levitation</u>	Slight or none					x
	Partial lifting		x			
	Hand lifts to face	x		x	x	
<u>"Butterfly" suggestion</u>	No response			x		x
	Uncertain					
	Clear response	x	x		x	
<u>"Bells" suggestion</u>	No response		x			x
	Uncertain					
	Clear response	x		x	x	
<u>Verbal response to questions</u>	Q.1	d	d	d ³⁶	d ³⁶	b
	Q.2	d	d	b	c	e
a = none	Q.3	d	d	b	c	d
b = "mixed" ³⁵	Q.4	d	e	b	e	? ³⁷
c = literal	Q.5	d	d	b	d	d
d = normal						
e = uncertain						
<u>Head movement response to questions</u>	Q.1	f	f	f	f	f
	Q.2	f	f	i	i	f
f = none	Q.3	f	f	h	h	i
g = uncertain	Q.4	f	f	i	f	f
h = nod(s)	Q.5	f	f	h	f	f
i = shake(s)						
<u>Response to post-hypnotic suggestion</u>	None	x	x	x	x	x
	Uncertain					
	Lifts book					
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall	x		x	x	x
	Little recall		x			
<u>Subject invited to participate in Stage II Experiment?</u>	No	x		x	x	x
	Yes		x			

Notes

³⁵ A normal response prefaced with "Yes" or "No" or some other indication that the subject did not mind giving or was willing to give the requested information, e.g. Subject 3 replied to the second question (Do you mind telling me where you were born?) with, "No. No, I don't mind. Stirling."

³⁶ This question was asked in a normal ("undistorted") fashion.

³⁷ The subject asked the experimenter (the present writer) whether he wanted to know her mother's maiden name.

Notes continued on next page.

TABLE VII CONTINUED

	Subjects	6	7	8	9	10
Age		49	28	34	48	31
Sex		F	F	F	M	M
<u>Hand levitation</u>	Slight or none Partial lifting Hand lifts to face	x	x	x	x	x
<u>"Butterfly" suggestion</u>	No response Uncertain Clear response	x	x	x	x	x
<u>"Bells" suggestion</u>	No response Uncertain Clear response	x	x	x ³⁸	x	x
<u>Verbal response to questions</u>	Q.1 b Q.2 d Q.3 d Q.4 e Q.5 d	b	d ³⁶	d	d ³⁶	d
a = none	b = "mixed" ³⁵		c	d	c ³⁹	d
c = literal	d = normal		c	d	c	d
e = uncertain			c	d	c	d
<u>Head movement response to questions</u>	Q.1 i Q.2 i Q.3 f Q.4 f Q.5 f	i	f	f	f	f
f = none	g = uncertain		g	i	i	f
h = nod(s)	i = shake(s)		f	f	i	f
			f	i	i	f
<u>Response to post-hypnotic suggestion</u>	None Uncertain Lifts book	x	x	x	x	x
<u>Subject's recall during post-experimental inquiry</u>	Moderate or good recall Little recall	x	x	x	x	x
<u>Subject invited to participate in Stage II Experiment?</u>	No Yes	x	x	x	x	x

Notes continued

³⁸ Real bells (church bells?) could be heard in the distance during this experiment, so instead of suggesting that the subject would hear bells, the experimenter suggested that she would hear a dog barking.

³⁹ After asking the subject the "Edinburgh" question (to which a literal response was given) the experimenter mistakenly asked the first test-question again, this time in a "distorted" fashion, whereupon the subject gave the literal response, "No." The experimenter then proceeded with the last two test-questions.

TABLE VIII

STAGE I EXPERIMENT SUBJECTS: RESPONSES OF THE

MISCELLANEOUS GROUP

		Subjects	1	2	3
		Age	21	31	39
		Sex	F	F	F
<u>Hand levitation</u>	Slight or none Partial lifting Hand lifts to face		x ⁴⁰	x	x
<u>"Butterfly" suggestion</u>	No response Uncertain Clear response		x	.	(suggestion (not (given
<u>"Bells" suggestion</u>	No response Uncertain Clear response		x	x	(suggestion (not (given
<u>Verbal response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	d d d d d	d d d d d	d d d d d	a a a d a
a = none b = "mixed" ¹ c = literal d = normal e = uncertain					
<u>Head movement response to questions</u>	Q.1 Q.2 Q.3 Q.4 Q.5	f g ⁴¹ f f f	f ⁴² f ⁴² f ⁴² f ⁴² f ⁴²	f ⁴² f ⁴² g ⁴² f ⁴² f ⁴²	f ⁴² f ⁴² g ⁴² f ⁴² f ⁴²
f = none g = uncertain h = nod(s) i = shake(s)					
<u>Response to post-hypnotic suggestion</u>	None Uncertain Lifts book		x	x	x
<u>Subject's recall during post-experimental inquiry</u>	Moderate or } good recall } Little recall		x		x
<u>Subject invited to participate in Stage II Experiment?</u>	No Yes		x		x

Notes

⁴⁰When the subject's hand was near her face, she was inadvertently given a suggestion that might have been interpreted as an instruction to complete the lifting voluntarily.

⁴¹The subject's head movement response, if any, might not have been observed.

⁴²In the case of Subjects 2 and 3, the present writer's wife, Dr. E.C. McCue, acted as an observer. These subjects were seen before the present writer discovered that he and his wife were adopting slightly different criteria for recording head movements (see pp. 242-243).

TABLE IX

RESPONSES OF THE STAGE II EXPERIMENT SUBJECTS

Subjects	1	2	3	4	5	6	7	8
Age	24	21	19	33	40	37	45	32
Sex	F	F	F	M	F	F	M	F
SHSS:C Score	10	10 or 11	8 ⁴⁵	10, 11 or 12	5	8 or 9	11	9
Literalness exhibited?	No	No	No	No	No	No	No	No
Picture positions chosen while subject was "under hypnosis": R = "reasonable" ⁴³ U = "unreasonable"	R	R	R	R	R	R	R	R
Subject executed post-hypnotic suggestion?	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Subject reported seeing suggested cat?	No	No	No	No	No	-	Yes	No
Picture positions chosen after subject had been "dehypnotized": R = "reasonable" ⁴³ U = "unreasonable"	R	R	R	R	R	R	R	R
Subject's recall of "hypnosis" period of second part of Stage II Experiment: M = moderate or good recall L = little recall ⁴⁴	L	L	M	L	L	L	L	L
Subject invited to participate in a Stage III Experiment?	No	No	No	No	No	No	Yes	No

Notes

⁴³The only subject who exhibited responses approximating to some extent to those described by Erickson (1967) as typical of "somnambulistic" hypnotic subjects was Subject 9. The choices of the other subjects were essentially "reasonable" except that some individuals failed to take adequate account of the large size (3' x 4') of the hypothetical pictures (see pp. 269-270).

Notes continued on next page.

TABLE IX CONTINUED

Subjects	9	10	11	12	13	14	15	16
Age	28	27	24	25	19	61	24	44
Sex	F	F	F	F	F	F	F	F
SHSS:C Score	10 or 11	10	8	9 or 10	6	7	8	5
Literalness exhibited?	No	No	No	No	No	No	No	No
Picture positions chosen while subject was "under hypnosis": R = "reasonable" ⁴³ U = "unreasonable"	U	R	R	R	R	R	R ⁴⁷	R
Subject executed post-hypnotic suggestion?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Subject reported seeing suggested cat?	No	Yes	No	No	No	No	No	No
Picture positions chosen after subject had been "dehypnotized": R = "reasonable" ⁴³ U = "unreasonable"	R	R	R	R	R	R	R ⁴⁷	R
Subject's recall of "hypnosis" period of second part of Stage II Experiment: M = moderate or good recall L = little recall ⁴⁴	L	L	M	L	M	M	M	M
Subject invited to participate in a Stage III Experiment?	Yes	Yes ⁴⁶	No	No	No	No	No	No

Notes continued

⁴⁴Some of the subjects who were judged to have exhibited "little recall" seemed to remember very little of the "hypnosis" period; others mentioned some of the experiences they had had while listening to the lengthy tape-recorded hypnotic induction sequence but they appeared to have no recall of the first round of questions about hypothetical pictures and their being given a post-hypnotic suggestion and suggestions for post-hypnotic amnesia.

⁴⁵In this subject's case, the SHSS:C was not administered correctly, so the score entered in the table should be regarded as approximate.

⁴⁶This subject declined to return for a Stage III Experiment.

⁴⁷See pp. 269-270.

TABLE X

NON-EXPERIMENT SUBJECTS' JUDGEMENTS ABOUT THE LIKELY BEHAVIOUR OF GOOD HYPNOTIC SUBJECTS⁴⁸

Subjects		1	2	3	4	5	6	7	8
Age		39	24	43	43	27	35	23	19
Sex		M	F	F	F	M	M	F	F
Literalness exhibited?		No	No	No	No	No	See P. 315	No	No
Picture positions chosen when <u>S</u> is "under hypnosis": R = "reasonable" U = "unreasonable" O = other or uncertain	Experimenter's wife	O ⁴⁹	R	R	R	R	R	R	R
	Photograph of man	O ⁴⁹	R	R	R	R	R	R	O ⁵³
	Bowl of fruit (or ornament)	R	R	R	R	R ⁵¹	R	R	R
<u>S</u> tries to execute post-hypnotic suggestion when <u>E</u> jingles keys?		Yes	Yes	Yes	No ⁵⁰	Yes	See P. 317	No	Yes
<u>S</u> reports seeing suggested cat?		No	No	No	-	No	See pp. 317-318	-	? ⁵⁴
Picture positions chosen after <u>S</u> has been "dehypnotized": R = "reasonable" U = "unreasonable" O = other or uncertain	Experimenter's wife	O ⁴⁹	R	R	R	R	R	R	R
	Photograph of man	R	R	R	R	R	R	R	O ⁵³
	Bowl of fruit (or ornament)	R	R	R	R	R ⁵²	R	R	O ⁵³

Notes

⁴⁸The abbreviations E and S in this table refer to the experimenter and subject in the hypothetical experiment that was discussed with the Non-Experiment subjects.

⁴⁹The subject thought that the S would have difficulty in selecting a suitable space for the hypothetical picture.

⁵⁰See p.317.

Notes continued on next page.

TABLE X CONTINUED

		Subjects	9	10	11	12	13
		Age	52	21	20	25	20
		Sex	M	F	F	F	F
		Literalness exhibited?	See	No	No	See	No
			P. 315			P. 316	
Picture positions chosen when <u>S</u> is "under hypnosis": R = "reasonable" U = "unreasonable" O = other or uncertain	Experi- menter's wife	R	R	U ⁵⁶	R	R	
	Photo- graph of man	R	O ⁵³	U ⁵⁶	R	R	
	Bowl of fruit (or ornament)	R	O ⁵³	U ⁵⁶	O ⁵⁷	R	
<u>S</u> tries to execute post-hypnotic suggestion when <u>E</u> jingles keys?		Yes	Yes	No	No	Yes ⁵⁸	
<u>S</u> reports seeing suggested cat?		? ⁵⁵	No	-	-	No	
Picture positions chosen after <u>S</u> has been "dehypnotized": R = "reasonable" U = "unreasonable" O = other or uncertain	Experi- menter's wife	R	R	U	R	R	
	Photo- graph of man	R	R	U	R	R	
	Bowl of fruit (or ornament)	R	R	U	R	R	

Notes continued

⁵¹ The space that the subject indicated might not have been large enough for a 3' x 4' picture; however, the position was a reasonable one for the hanging of a picture. (Some of the "reasonable" spaces chosen by other Non-Experiment subjects might also have been somewhat too small for 3' x 4' pictures.)

⁵² The subject mentioned a position but when he was asked where the picture would fit in, he inquired whether certain "things" (a ventilator, perhaps) would be present. An affirmative answer was given and he reverted to the position he had indicated during the previous round of questions about pictures.

⁵³ It was not entirely clear from the record of the session what position the subject thought the S would choose.

Notes continued on next page.

TABLE X CONTINUED

Notes continued

54 The subject misunderstood the course of events in the hypothetical experiment and no conclusion has been drawn as to whether she would have expected the S to report seeing the suggested cat.

55 This subject's comments during the session were somewhat inconsistent. He said that he was not sure whether, in "a post-hypnotic state" (sic), one would "agree" with the E (that the bowl of fruit was no longer in the room and there was a small ginger cat there instead). However, later in the session it appeared that he had misunderstood the situation and wrongly assumed that the S was still hypnotized when the E jingled his keys. After some discussion, the subject said that he doubted whether the S would see the suggested cat.

56 See footnote 1 on p.316.

57 The subject did not specify a position.

58 When she was asked what the S's response would be to the E's jingling keys, the subject indicated a misunderstanding: she thought that the E had said to the S, when bringing the latter out of "the sleep", "something about it's pleasant to remember some things ...". She thought that the S would pick the pen up. The experimenter (the present writer) explained again about the suggestions for post-hypnotic amnesia and asked the subject what she thought the S's response would be to the jingling keys. She was uncertain but when she was asked what, on balance, she thought would happen, she again expressed the view that the S would pick the pen up.

TABLE XI

RESPONSES OF "UNHYPNOTIZED" ADULTS AND ADOLESCENTS

TO QUESTIONS/REQUESTS THAT COULD HAVE BEEN

ANSWERED LITERALLY

<u>Subjects</u>	<u>Sex</u>	<u>Age (years)</u>	<u>Form of Question/ Request</u>	<u>Response</u>
1	F	31	Would you like to sit in that chair there?	The subject sat down in the designated chair.
2	F	39	Do you mind telling me your [telephone] number?	The subject told the questioner her telephone number.
3	F	Probably in 30s or early 40s	Do you mind telling me the time?	The subject looked at a clock and said the time.
4	M	Probably in 30s	Do you mind saying that time again? (This was said to the subject during a telephone conversation, so it was not possible to observe any head movements.)	The subject said the time again.
5	M	66	Would you like to come through [to my office]?	The subject said "Yes" and came through to the office.
6	F	About 65	Do you mind telling me the time?	The subject looked at her watch and said the time.
7	M	48	Would you like to come through [to my office]?	The subject might have nodded his head. He came through to the office.
8	M	33	Would you like to come through [to my office]?	The subject said "Right" and came through to the office.
9	M	58	Would you like to take a seat over there?	The subject said "Yeah" (or "Yes") and sat in the designated chair.

TABLE XI CONTINUED

<u>Subjects</u>	<u>Sex</u>	<u>Age (years)</u>	<u>Form of Question/ Request</u>	<u>Response</u>
10	M	Probably in mid- 20s	Would you mind passing me a biscuit?	The subject said "Surely" and passed a tin of biscuits to the questioner.
11	F	31	Do you mind taking a seat?	The subject sat down.
12	F	Probably in early 30s	Do you mind taking a seat?	The subject sat down.
13	F	Probably in 40s	Would you mind passing me an elastic band?	The subject said "Yes" and passed the questioner an elastic band.
14	F	Probably in early 30s	Do you mind taking a seat?	The subject sat down. (The questioner did not observe whether the subject exhibited any head movement response.)
15	F	Probably about 40	Do you mind taking a seat?	The subject sat down.
16	F	42	Do you mind taking a seat?	The subject said "Thanks" and sat down.
17	F	40	Do you mind taking a seat?	The subject sat down.
18	F	Probably in 30s	Do you mind taking a seat?	The subject said "Right" and sat down.
19	F	15	Do you mind taking a seat?	The subject sat down.
20	F	44	Would you mind sitting here?	The subject said "Yes" and sat down.
21	F	40	Would you mind sitting here?	The subject said "Thank you" and sat down.
22	F	48	Would you mind coming with me?	The subject accompanied the questioner.

TABLE XI CONTINUED

Subject	Sex	Age (years)	Form of Question/ Request	Response
23	F	15	Would you mind sitting there?	The subject sat down.
24	F	Late 30s	Would you mind sitting there?	The subject sat down.
25	F	Probably in mid-40s	Would you mind sitting there?	The subject sat down.
26	F	28	Would you like to take a seat?	The subject sat down.

TABLE XII

RESPONSES OF "UNHYPNOTIZED" PRIMARY SCHOOL CHILDREN
TO QUESTIONS THAT COULD HAVE BEEN ANSWERED LITERALLY

Subjects	Age (years)	Sex	Questions ⁵⁹				Responses ⁶⁰			
			A	B	A	B	N	N	O ⁶¹	N
1	4.9	M	A	B	A	B	N	N	O ⁶¹	N
2	4.9	M	A	B	A	B	N	N	N	N
3	4.8	F	A	B	A	B	N	N	N	O ⁶²
4	4.9	F	A	A	A	A	N	N	N	N
5	5.3	F	A	B	A	B	N	N	N	N
6	5.7	F	A	B	A	B	N	N	N	N ⁶³
7	5.3	M	A	B	A	B	N	N	N	N
8	5.7	M	A	B	A	B	N	N	N	N
9	6.2	F	A	B	A	B	N	N	N ⁶⁴	N
10	6.1	F	A	B	A	B	N	N	N	N
11	6.1	M	A	B	A	C ⁶⁵	N	N	N	N
12	6.1	M	A	A	B	A	N	N	N	N
13	7.5	M	A	B	A	B	N	N	N	N
14	7.6	M	C ⁶⁶	B	A	B	N	N	N	N
15	7.5	F	A	B	A	B	N	N	N	N
16	7.5	F	A	B	A	B	N	N	N	N
17	8.2	M	A	B	A	B	N	N	N	N
18	8.1	M	A	B	A	B	N	N	N	N
19	8.7	F	A	B	A	B	N	N	N	N
20	8.3	F	A	B	A	B	N	N	N	N
21	9.5	F	A	B	A	B	N	N	N	N
22	9.4	F	A	B	A	B	N	N	N	N
23	9.5	M	A	B	A	B	N	N	N	N
24	9.3	M	A	A	B	B	N	N	N	N
25	10.5	F	A	B	A	B	N	N	N	N
26	10.4	F	A	B	A	B	N	N	N	N
27	10.5	M	A	B	A	C ⁶⁵	N	N	N	N
28	10.6	M	A	B	A	B	N	N	N	N
29	11.2	M	A	B	C ⁶⁵	A	N	N	N	N
30	11.3	M	A	B	A	B	N	N	N	N
31	11.1	F	A	B	A	B	N	N	N ⁶⁴	N
32	11.3	F	A	B	A	B	N	N	N	N

Notes

⁵⁹ Form of question: A = "Do you mind telling me what number you see there?"
 B = "Would you like to tell me what number you see there?"
 C = Question asked or possibly asked in a different way.

⁶⁰ Response: N = Normal, non-literal response.
 O = No response or another type of response.

⁶¹ The subject said that he did not know what the number was.

⁶² The subject did not respond.

⁶³ The subject said, "Nothing."

Notes continued on next page.

TABLE XII CONTINUED

Notes continued

64The subject started her reply before the experimenter had finished asking the question.

65The experimenter's question was not clear on the tape-recording and might have been different from A or B.

66The question put to the subject was, "Do you mind telling me what you see there - what number you see there?"

BIBLIOGRAPHY

Some of the works referenced in this thesis have not been personally examined by the present writer. Where this is the case, an asterisk appears before the relevant references.

Where a reference pertains to a chapter in a book, the relevant page numbers are indicated. It should be borne in mind, however, that in some cases bibliographical information will be absent from the pages. This is because some compilations (e.g. Fromm & Shor, 1979) employ a common bibliography for their constituent chapters.

- * Archer, W. (1889). Masks or Faces? New York: Longmans, Green & Co.
- * Arnold, M.B. (1946). On the mechanism of suggestion and hypnosis. Journal of Abnormal and Social Psychology, 41, 107 - 128.
- * Bandler, R. & Grinder, J. (1975). Patterns of the Hypnotic Techniques of Milton H. Erickson, M.D., Vol. 1. Cupertino, California: Meta Publications.
- * Banyai, E. & Hilgard, E.R. (1976). A comparison of active-alert hypnotic induction with traditional relaxation induction. Journal of Abnormal Psychology, 85, 218 - 224.
- Barber, T.X. (1958). Hypnosis as a perceptual-cognitive restructuring: II. "Post"-hypnotic behavior. Journal of Clinical and Experimental Hypnosis, 6, 10 - 20.
- Barber, T.X. (1962). Toward a theory of hypnosis: Posthypnotic behavior. Archives of General Psychiatry, 7, 321 - 342.
- * Barber, T.X. (1965). Measuring "hypnotic-like" suggestibility with and without "hypnotic induction"; psychometric properties, norms, and variables influencing response to the Barber Suggestibility Scale (BSS). Psychological Reports, 16, 809 - 844.
- Barber, T.X. (1969a). Hypnosis: A Scientific Approach. New York: Van Nostrand.
- Barber, T.X. (1969b). Review of Advanced Techniques of Hypnosis and Therapy: Selected Papers by Milton H. Erickson, M.D. edited by J. Haley. Psychiatry, 32, 220 - 225.
- * Barber, T.X. (1970). LSD, Marijuana, Yoga, and Hypnosis. Chicago: Aldine.
- Barber, T.X. (1979). Suggested ("hypnotic") behavior: The trance paradigm versus an alternative paradigm. In E. Fromm & R.E. Shor (Eds) Hypnosis: Developments in Research and New Perspectives. New York: Aldine. 217 - 271.
- * Barber, T.X. & Calverley, D.S. (1964a). An experimental study of "hypnotic" (auditory and visual) hallucinations. Journal of Abnormal and Social Psychology, 63, 13 - 20.

- * Barber, T.X. & Calverley, D.S. (1964b). Experimental studies in "hypnotic" behaviour: Suggested deafness evaluated by delayed auditory feedback. British Journal of Psychology, 55, 439 - 446.
- * Barber, T.X., Dalal, A.S. & Calverley, D.S. (1968). The subjective reports of hypnotic subjects. American Journal of Clinical Hypnosis, 11, 74 - 88.
- * Barber, T.X., & Glass, L.B. (1962). Significant factors in hypnotic behavior. Journal of Abnormal and Social Psychology, 64, 222 - 228.
- Barber, T.X., Spanos, N.P. & Chaves, J.F. (1974). Hypnosis, Imagination, and Human Potentialities. New York: Pergamon Press.
- Barber, T.X. & Wilson, S.C. (1977). Hypnosis, suggestions, and altered states of consciousness: Experimental evaluation of the new cognitive-behavioral theory and the traditional trance-state theory of "hypnosis". In W.E. Edmonston (Ed.) Conceptual and Investigative Approaches to Hypnosis and Hypnotic Phenomena. Annals of the New York Academy of Sciences, 296, 34 - 47.
- * Bem, D.J. (1965). An experimental analysis of self-persuasion. Journal of Experimental Social Psychology, 1, 199 - 218.
- * Bem, D.J. (1972). Self-perception theory. In L. Berkowitz (Ed.) Advances in Experimental Social Psychology, Vol. 6. New York: Academic Press. 1 - 62.
- * Bodorik, H.L., Haddad, M.G. & Spanos, N.P. (1978). Amnesia and disorganized recall as a function of instructional conditions. Paper presented at 30th Annual Scientific Meeting of the Society for Clinical and Experimental Hypnosis, Asheville, North Carolina. (Cited by Evans, 1980.)
- Bowers, K.S. (1966). Hypnotic behavior: The differentiation of trance and demand characteristic variables. Journal of Abnormal Psychology, 71, 42 - 51.
- * Bowers, K.S. (1967). The effect of demands for honesty on reports of visual and auditory hallucinations. International Journal of Clinical and Experimental Hypnosis, 15, 31 - 36.
- Bowers, K.S. (1976). Hypnosis for the Seriously Curious. Monterey, California: Brooks/Cole.
- * Bramwell, J. (1921). Hypnotism. London: Rider.
- * Brehm, J.W. & Cohen, A.P. (1962). Explorations in Cognitive Dissonance. New York: Wiley.
- * Charcot, J.M. (1893). The faith-cure. New Review, 8, 18 - 31.
- * Coe, W.C. (1964). Further norms on the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 12, 184 - 190.
- Coe, W.C. (1980). On defining altered states of consciousness. Bulletin of the British Society of Experimental and Clinical Hypnosis, 3, 8 - 10.

- Coe, W.C. & Sarbin, T.R. (1977). Hypnosis from the standpoint of a contextualist. In W.E. Edmonston (Ed.) Conceptual and Investigative Approaches to Hypnosis and Hypnotic Phenomena. Annals of the New York Academy of Sciences, 296, 2 - 13.
- * Coleman, T.R. (1976). A comparative study of certain behavioural, physiological and phenomenological effects of hypnotic induction and two progressive relaxation procedures. Ph.D. dissertation, Brigham Young University. Ann Arbor, Michigan: University Microfilms. (Cited by Edmonston, 1981.)
- * Comins, J.R., Fullam, F. & Barber, T.X. (1975). Effects of experimenter modeling, demands for honesty, and initial level of suggestibility on response to "hypnotic" suggestions. Journal of Consulting and Clinical Psychology, 43, 668 - 675.
- * Cooper, L.M. (1966). Spontaneous and suggested posthypnotic source amnesia. International Journal of Clinical and Experimental Hypnosis, 14, 180 - 193.
- Cooper, L.M. (1979). Hypnotic amnesia. In E. Fromm & R.E. Shor (Eds) Hypnosis: Developments in Research and New Perspectives. New York: Aldine. 305 - 349.
- Cooper, L.F. & Erickson, M.H. (1959). Time Distortion in Hypnosis. Baltimore: Williams & Wilkins.
- * Dengrove, E. (1973). The uses of hypnosis in behavior therapy. International Journal of Clinical and Experimental Hypnosis, 21, 13 - 17.
- * De Stefano, R. (1976). The "inoculation" effect in Think-With Instructions for "hypnotic-like" experiences. Doctoral dissertation, Temple University, Philadelphia, Pennsylvania. (Cited by Barber & Wilson, 1977.)
- Diamond, M.J. (1974). Modification of hypnotizability: A review. Psychological Bulletin, 81, 180 - 198.
- * Dorcus, R.M. (1937). Modification by suggestion of some vestibular and visual responses. American Journal of Psychology, 49, 82 - 87.
- * Dorcus, R.M., Brintnall, A.K. & Case, H.W. (1941). Control experiments and their relation to theories of hypnotism. Journal of General Psychology, 24, 217 - 221.
- * Dynes, J.B. (1932). An experimental study of hypnotic anaesthesia. Journal of Abnormal and Social Psychology, 27, 79 - 88.
- Edmonston, W.E. (1981). Hypnosis and Relaxation: Modern Verification of an Old Equation. New York: Wiley.
- Elman, D. (1968). Findings in Hypnosis. Printed by Pauline R. Elman, 56 Edgewood Avenue, Clifton, New Jersey.

- Erickson, E.M. (1962). Observations concerning alterations in hypnosis of visual perceptions. American Journal of Clinical Hypnosis, 5, 131 - 134. (Reproduced in Rossi, 1980b, 66 - 70.)
- Erickson, E.M. (1966). Further observations on hypnotic alteration of visual perception. American Journal of Clinical Hypnosis, 8, 187 - 188. (Reproduced in Rossi, 1980b, 71 - 72.)
- Erickson, M.H. (1934). A brief survey of hypnotism. Medical Record, 140, 609 - 613. (Reproduced in Rossi, 1980c, 3 - 12.)
- Erickson, M.H. (1938a). A study of clinical and experimental findings on hypnotic deafness: I. Clinical experimentation and findings. Journal of General Psychology, 19, 127 - 150. (Reproduced in Rossi, 1980b, 81 - 99.)
- Erickson, M.H. (1938b). A study of clinical and experimental findings on hypnotic deafness: II. Experimental findings with a conditioned response technique. Journal of General Psychology, 19, 151 - 167. (Reproduced in Rossi, 1980b, 100 - 113.)
- Erickson, M.H. (1941). Hypnosis: A general review. Diseases of the Nervous System, 2, 13 - 18. (Reproduced in Rossi, 1980c, 13 - 20.)
- Erickson, M.H. (1952). Deep hypnosis and its induction. In L.M. Le Cron (Ed.) Experimental Hypnosis. New York: Macmillan. 70 - 114. (Reproduced in Rossi, 1980a, 139 - 167.)
- Erickson, M.H. (1954). Hypnotism. In Encyclopaedia Britannica, 14th edition. (Reproduced in Rossi, 1980c, 21 - 25.)
- Erickson, M.H. (1958). Hypnosis in painful terminal illness. American Journal of Clinical Hypnosis, 1, 117 - 121. (Reproduced in Rossi, 1980d, 255 - 261.)
- Erickson, M.H. (1959a). The basis of hypnosis: Panel discussion on hypnosis. Northwest Medicine, 1404 - 1405. (Reproduced in Rossi, 1980c, 26 - 33.)
- Erickson, M.H. (1959b). Further clinical techniques of hypnosis: Utilization techniques. American Journal of Clinical Hypnosis, 2, 3 - 21. (Reproduced in Rossi, 1980a, 177 - 205.)
- Erickson, M.H. (1962). Quoted from a panel discussion reported in G.H. Estabrooks (Ed.) Hypnosis: Current Problems. New York: Harper & Row, 238 - 272.
- Erickson, M.H. (1963a). Hypnotically oriented psychotherapy in organic brain damage. American Journal of Clinical Hypnosis, 6, 92 - 112. (Reproduced in Rossi, 1980d, 283 - 311.)
- Erickson, M.H. (1963b). An application of implications of Lashley's researches in a circumscribed arteriosclerotic brain condition. Perceptual and Motor Skills, 16, 779 - 780. (Reproduced in Rossi, 1980d, 315 - 316.)

- Erickson, M.H. (1964a). The confusion technique in hypnosis. American Journal of Clinical Hypnosis, 6, 183 - 207. (Reproduced in Rossi, 1980a, 258 - 291.)
- Erickson, M.H. (1964b). An hypnotic technique for resistant patients: The patient, the technique, and its rationale and field experiments. American Journal of Clinical Hypnosis, 7, 8 - 32. (Reproduced in Rossi, 1980a, 299 - 330.)
- Erickson, M.H. (1964c). The "surprise" and "my-friend-John" techniques of hypnosis: Minimal cues and natural field experimentation. American Journal of Clinical Hypnosis, 6, 293 - 307. (Reproduced in Rossi, 1980a, 340 - 359.)
- Erickson, M.H. (1967). Further experimental investigation of hypnosis: Hypnotic and nonhypnotic realities. American Journal of Clinical Hypnosis, 10, 87 - 135. (Reproduced in Rossi, 1980a, 18 - 82.)
- Erickson, M.H. & Erickson, E.M. (1941). Concerning the nature and character of posthypnotic behavior. Journal of Genetic Psychology, 24, 95 - 133. (Reproduced in Rossi, 1980a, 381 - 411.)
- Erickson, M.H., Hershman, S. & Secter, I.I. (1961). The Practical Application of Medical and Dental Hypnosis. New York: Julian Press.
- Erickson, M.H. & Kubie, L.S. (1941). The successful treatment of a case of acute hysterical depression by a return under hypnosis to a critical phase of childhood. Psychoanalytic Quarterly, 10, 583 - 609. (Reproduced in Rossi, 1980c, 122 - 142.)
- Erickson, M.H. & Rossi, E.L. (1979). Hypnotherapy: An Exploratory Casebook. New York: Irvington.
- Erickson, M.H. & Rossi, E.L. (1981). Experiencing Hypnosis: Therapeutic Approaches to Altered States. New York: Irvington.
- Erickson, M.H., Rossi, E.L. & Rossi, S.I. (1976). Hypnotic Realities: The Induction of Clinical Hypnosis and Forms of Indirect Suggestion. New York: Irvington.
- * Estabrooks, G.H. (1943). Hypnotism. New York: Dutton.
- Estabrooks, G.H. (Ed.) (1962). Hypnosis: Current Problems. New York: Harper & Row.
- Evans, F.J. (1968). Recent trends in experimental hypnosis. Behavioral Science, 13, 477 - 487.
- Evans, F.J. (1979). Hypnosis and sleep: Techniques for exploring cognitive activity during sleep. In E. Fromm & R.E. Shor (Eds) Hypnosis: Developments in Research and New Perspectives. New York: Aldine. 139 - 183.
- Evans, F.J. (1980). Phenomena of hypnosis: 2. Posthypnotic amnesia. In G.D. Burrows & L. Dennerstein (Eds) Handbook of Hypnosis and Psychosomatic Medicine. Amsterdam: Elsevier/North-Holland Biomedical Press. 85 - 103.
- * Evans, F.J. & Kihlstrom, J.F. (1973). Posthypnotic amnesia as disrupted retrieval. Journal of Abnormal Psychology, 82, 317 - 323.

- * Evans, F.J. & Kihlstrom, J.F. (1975). Contextual and temporal disorganization during posthypnotic amnesia. Paper presented at a symposium "State-dependent learning: Implications for theories of memory" at the 83rd Annual Convention of the American Psychological Association, Chicago. (Cited by Evans, 1980.)
- Evans, F.J. & Orne, M.T. (1971). The disappearing hypnotist: The use of simulating subjects to evaluate how subjects perceive experimental procedures. International Journal of Clinical and Experimental Hypnosis, 19, 277 - 296.
- * Ferenczi, S. (1950). Introjection and transference. In Sex in Psychoanalysis. New York: Brunner . 35 - 93.
- Festinger, L. (1957). A Theory of Cognitive Dissonance. New York: Harper & Row.
- Festinger, L. (1962). Cognitive dissonance. Scientific American, 107, 4 (Offprint 472).
- Fisher, S. (1954). The role of expectancy in the performance of posthypnotic behavior. Journal of Abnormal and Social Psychology, 49, 503 - 507.
- * Forel, A. (1907). Hypnotism and Psychotherapy. New York: Medical Art Agency.
- * Friedlander, J.W. & Sarbin, T.R. (1938). The depth of hypnosis. Journal of Abnormal and Social Psychology, 33, 453 - 475.
- * Freud, S. (1900). The Interpretation of Dreams. Standard Edition of the Complete Psychological Works of Sigmund Freud, Vols. 4 and 5 (1953). London: Hogarth Press.
- * Freud, S. (1905). Three Essays on the Theory of Sexuality. Standard Edition of the Complete Psychological Works of Sigmund Freud, Vol. 7 (1953). London: Hogarth Press. 125 - 245.
- * Freud, S. (1953). A General Introduction to Psychoanalysis. Garden City, New York State: Doubleday & Co. Inc., PermaBooks. (Original date of publication in English, 1920.)
- Frischholz, E.J. & Spiegel, D. (1983). Hypnosis is not therapy. Bulletin of the British Society of Experimental and Clinical Hypnosis, 6, 3 - 8.
- Fromm, E. (1977). An ego-psychological theory of altered states of consciousness. International Journal of Clinical and Experimental Hypnosis, 25, 372 - 387.
- Fromm, E. & Shor, R.E. (Eds) (1979). Hypnosis: Developments in Research and New Perspectives. New York: Aldine.
- * Gardner, G.G. & Olness, K. (1981). Hypnosis and Hypnotherapy with Children. New York: Grune & Stratton.
- Geddie, W. (Ed.) (1964). Chambers's Twentieth Century Dictionary. Edinburgh: Chambers.
- Gibson, H.B. (1977). Hypnosis: Its Nature and Therapeutic Uses. London: Peter Owen.

- Gibson, M. (1984). Hypnosis with children. British Journal of Experimental and Clinical Hypnosis, 2, 1, 31 - 34.
- Gill, M.M. & Brenman, M. (1959). Hypnosis and Related States. New York : International Universities Press.
- * Gurney, E. (1887). Peculiarities of certain post-hypnotic states. Proceedings of the Society for Psychical Research, 4, 11, 268 - 323.
- Haley, J. (Ed.) (1967). Advanced Techniques of Hypnosis and Therapy: Selected Papers of Milton H. Erickson, M.D. New York: Grune & Stratton.
- Haley, J. (1973). Uncommon Therapy: The Psychiatric Techniques of Milton H. Erickson, M.D. New York: Norton.
- * Hamel, I.A. (1919). A study and analysis of the conditioned reflex. Psychological Monographs, 27, No. 118, 1 - 65.
- Hammer, A.G., Walker, W. & Diment, A.D. (1978). A nonsuggested effect of trance induction. In F.H. Frankel & H.S. Zamansky (Eds) Hypnosis at its Bicentennial: Selected Papers. New York: Plenum Press. 91 - 100.
- Hartland, J. (1971). Medical and Dental Hypnosis and its Clinical Applications. London: Baillière Tindall.
- * Hess, W.R. (1957). The Functional Organization of the Diencephalon. Edited by J.R. Hughes. New York: Grune & Stratton.
- Hilgard, E.R. (1965). Hypnotic Susceptibility. New York: Harcourt, Brace & World.
- * Hilgard, E.R. (1972). A critique of Johnson, Maher, and Barber's "Artifact in the 'essence of hypnosis': An evaluation of trance logic", with a recomputation of their findings. Journal of Abnormal Psychology, 79, 221 - 233.
- * Hilgard, E.R. (1973a). Review of Hypnosis: A Social Psychological Analysis of Influence Communication by T.R. Sarbin & W.C. Coe. American Journal of Clinical Hypnosis, 16, 67 - 69.
- * Hilgard, E.R. (1973b). A neodissociation interpretation of pain reduction in hypnosis. Psychological Review, 80, 396 - 411.
- Hilgard, E.R. (1975). Hypnosis. Annual Review of Psychology, 26, 19 - 44.
- Hilgard, E.R. (1977a). Divided Consciousness: Multiple Controls in Human Thought and Action. New York: Wiley.
- Hilgard, E.R. (1977b). The problem of divided consciousness: A neodissociation interpretation. In W.E. Edmonston (Ed.) Conceptual and Investigative Approaches to Hypnosis and Hypnotic Phenomena. Annals of the New York Academy of Sciences, 296, 48 - 59.
- Hilgard, E.R. (1979a). The measurement of hypnotic responsiveness: Purposes and available instruments. Bulletin of the British Society of Experimental and Clinical Hypnosis, 2, 6 - 10.

- Hilgard, E.R. (1979b). Divided consciousness in hypnosis: The implications of the hidden observer. In E. Fromm & R.E. Shor (Eds) Hypnosis: Developments in Research and New Perspectives. New York: Aldine. 45 - 79.
- Hilgard, E.R. (1984). Review of The Collected Papers of Milton H. Erickson on Hypnosis edited by E.L. Rossi. International Journal of Clinical and Experimental Hypnosis, 32, 257 - 265.
- * Hilgard, E.R., Hilgard, J.R., Macdonald, H., Morgan, A.H. & Johnson, L.S. (1978). (Referenced by Hilgard [1979b] as "In preparation"). Covert pain in hypnotic analgesia: Its reality as tested by the real-simulator design. Journal of Abnormal Psychology.
- * Hilgard, E.R., Lauer, L.W., & Morgan, A.H. (1963). Manual for Stanford Profile Scales of Hypnotic Susceptibility, Forms I and II. Palo Alto, California: Consulting Psychologists Press.
- * Hilgard, E.R. & Marquis, D.G. (1940). Conditioning and Learning. New York: Appleton-Century.
- * Hilgard, E.R., Morgan, A.H. & Macdonald, H. (1975). Pain and dissociation in the cold pressor test: A study of hypnotic analgesia with "hidden reports" through automatic key pressing and automatic talking. Journal of Abnormal Psychology, 84, 280 - 289.
- Hilgard, E.R., Sheehan, P.W., Monteiro, K.P. & Macdonald, H. (1981). Factorial structure of the Creative Imagination Scale as a measure of hypnotic responsiveness: An international comparative study. International Journal of Clinical and Experimental Hypnosis, 29, 66 - 76.
- Hilgard, E.R. & Tart, C.T. (1966). Responsiveness to suggestions following waking and imagination instructions and following induction of hypnosis. Journal of Abnormal Psychology, 71, 196 - 208.
- Hilgard, J.R. (1979). Imaginative and sensory-affective involvements: In everyday life and in hypnosis. In E. Fromm & R.E. Shor (Eds) Hypnosis: Developments in Research and New Perspectives. New York: Aldine. 483 - 517.
- * Hull, C.L. (1933). Hypnosis and Suggestibility: An Experimental Approach. New York: Appleton-Century - Crofts.
- Hunt, S.M. (1979). Hypnosis as obedience behaviour. British Journal of Social and Clinical Psychology, 18, 21 - 27.
- Ishihara, S. (1936). Tests for Colour Blindness. Tokyo: Kanehara.
- * Janet, P. (1889). L'Automatisme Psychologique. Paris: Felix Alcan.
- * Johnson, R.F. (1972). Trance logic revisited: A reply to Hilgard's critique. Journal of Abnormal Psychology, 79, 234 - 238.
- * Johnson, R.F., Maher, B.A., & Barber, T.X. (1972). Artifact in the "essence of hypnosis": An evaluation of trance logic. Journal of Abnormal Psychology, 79, 212 - 220.

- * Katkov, Y. (1941). Cited in Platonov, 1959, pp. 425 - 428.
- * Katz, N.W. (1975). Comparative efficacy of sleep/trance instructions and behavior modification procedures in enhancing hypnotic suggestibility. Doctoral dissertation, Washington University, St. Louis, Missouri. (Cited by Barber & Wilson, 1977.)
- Kihlstrom, J.F. (1977). Models of posthypnotic amnesia. In W.E. Edmonston (Ed.) Conceptual and Investigative Approaches to Hypnosis and Hypnotic Phenomena. Annals of the New York Academy of Sciences, 296, 284 - 301.
- * Kihlstrom, J.F. & Evans, F.J. (1979). Memory retrieval processes in posthypnotic amnesia. In J.F. Kihlstrom & F.J. Evans (Eds) Functional Disorders of Memory. Hillsdale, New Jersey: Lawrence Erlbaum Associates. 179 - 215.
- * Kinney, J.M. & Sachs, L.B. (1974). Increasing hypnotic susceptibility. Journal of Abnormal Psychology, 83, 145 - 150.
- * Kline, M.V., Guze, H. & Haggerty, A.D. (1954). An experimental study of the nature of hypnotic deafness: Effects of delayed speech feed-back. Journal of Clinical and Experimental Hypnosis, 2, 145 - 156.
- * Knox, V.J., Morgan, A.H. & Hilgard, E.R. (1974). Pain and suffering in ischemia. Archives of General Psychiatry, 30, 840 - 847.
- * Kramer, E. & Tucker, G.R. (1967). Hypnotically suggested deafness and delayed auditory feedback. International Journal of Clinical and Experimental Hypnosis, 15, 37 - 43.
- * Krauss, H.H., Katzell, R. & Krauss, B.J. (1974). Effect of hypnotic time distortion upon free-recall learning. Journal of Abnormal Psychology, 83, 140 - 144.
- Kroger, W.S. & Fezler, W.D. (1976). Hypnosis and Behavior Modification: Imagery Conditioning. Philadelphia: Lippincott.
- Kubie, L.S. & Margolin, S. (1944). The process of hypnotism and the nature of the hypnotic state. American Journal of Psychiatry, 100, 611 - 622.
- Le Cron, L.M. (Ed.) (1952). Experimental Hypnosis. New York: Macmillan.
- * London, P. (1962). Hypnosis in children: An experimental approach. International Journal of Clinical and Experimental Hypnosis, 10, 79 - 91.
- * Lundholm, H. (1928). An experimental study of functional anesthetics as induced by suggestion in hypnosis. Journal of Abnormal and Social Psychology, 23, 337 - 355.

- * McConkey, K.M. & Sheehan, P.W. (1981). The impact of videotape playback of hypnotic events on posthypnotic amnesia. Journal of Abnormal Psychology, 90, 46 - 54.
- * McConkey, K.M., Sheehan, P.W. & Cross, D.G. (1980). Posthypnotic amnesia: Seeing is not remembering. British Journal of Social and Clinical Psychology, 19, 99 - 107.
- * Meares, A. (1963). Theories of hypnosis. In J.M. Schneck (Ed.) Hypnosis in Modern Medicine. Springfield, Illinois: Thomas. 390 - 405.
- * Mesmer, F.A. (1779). Mémoire sur la Découverte du Magnétisme Animal. Par A. Mesmer, Docteur en Médecine de la Faculté de Vienne. A geneve; et se trouve à Paris, chez P. Fr. Didot le jeune, Libraire, - Imprimeur de Monsieur, quai des Augustins, 1779. In M.M. Tinterow (Ed.) (1970). Foundations of Hypnosis: From Mesmer to Freud. Springfield, Illinois: Thomas.
- * Milgram, S. (1974). Obedience to Authority: An Experimental View. London: Tavistock.
- * Miller, R.R. & Marlin, N.A. (1979). Amnesia following electroconvulsive shock. In J.F. Kihlstrom & F.J. Evans (Eds) Functional Disorders of Memory. Hillsdale, New Jersey: Lawrence Erlbaum Associates. 143 - 178.
- * Moll, A. (1958). The Study of Hypnosis. New York: Julian Press. (Original date of publication, 1889.)
- * Morgan, A.H. & Hilgard, E.R. (1973). Age differences in susceptibility to hypnosis. International Journal of Clinical and Experimental Hypnosis, 21, 78 - 85.
- * Morgan, A.H., Johnson, D.L. & Hilgard, E.R. (1974). The stability of hypnotic susceptibility: A longitudinal study. International Journal of Clinical and Experimental Hypnosis, 22, 249 - 257.
- Orne, M.T. (1959). The nature of hypnosis: Artifact and essence. Journal of Abnormal and Social Psychology, 58, 277 - 299.
- * Orne, M.T. (1962). On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. American Psychologist, 17, 776 - 783.
- Orne, M.T. (1970). Hypnosis, motivation, and the ecological validity of the psychological experiment. In W.J. Arnold & M.M. Page (Eds) Nebraska Symposium on Motivation. Lincoln, Nebraska: University of Nebraska Press. 187 - 265.
- Orne, M.T. (1971). The simulation of hypnosis: Why, how, and what it means. International Journal of Clinical and Experimental Hypnosis, 19, 183 - 210.

- Orne, M.T. (1977). The construct of hypnosis: Implications of the definition for research and practice. In W.E. Edmonston (Ed.) Conceptual and Investigative Approaches to Hypnosis and Hypnotic Phenomena. Annals of the New York Academy of Sciences, 296, 14 - 33.
- * Orne, M.T. & Evans, F.J. (1966). Inadvertent termination of hypnosis with hypnotized and simulating subjects. International Journal of Clinical and Experimental Hypnosis, 14, 61 - 78.
- Orne, M.T., Sheehan, P.W. & Evans, F.J. (1968). Occurrence of posthypnotic behavior outside the experimental setting. Journal of Personality and Social Psychology, 9, 189 - 196.
- * Overton, D.A. (1968). Dissociated learning in drug states (state-dependent learning). In D.H. Efron, J.O. Cole, J. Levine & R. Wittenborn (Eds) Psychopharmacology: A Review of Progress 1957 - 1967. Washington: Government Printing Office.
- * Pattie, F.A. (1935). A report of attempts to produce unocular blindness by hypnotic suggestion. British Journal of Medical Psychology, 15, 230 - 241.
- * Pattie, F.A. (1937). The genuineness of hypnotically produced anesthesia on the skin. American Journal of Psychology, 49, 435 - 443.
- * Pavlov, I.P. (1923). The identity of inhibition with sleep and hypnosis. Scientific Monthly, 17, 603 - 608.
- * Pavlov, I.P. (1927). Conditioned Reflexes, An Investigation of the Physiological Activity of the Cerebral Cortex. London: Oxford University Press.
- * Perry, C.W. (1964). A manual of procedures for analyzing manifest dream content into narrative elements and for classifying such elements with respect to distortion from reality. Unpublished manual, University of Sydney, Australia. (Cited by Hammer, Walker & Diment, 1978.)
- * Platonov, K.I. (Ed.) (1959). The Word as a Physiological and Therapeutic Factor: Problems of Theory and Practice of Psychotherapy on the Basis of the Theory of I.P. Pavlov. Translated from the 2nd Russian edition (1955) by D.A. Myshne. Moscow: Foreign Languages Publishing House.
- * Riecken, H.W. (1962). A program for research on experiments in social psychology. In N.F. Washburne (Ed.) Decisions, Values and Groups, Vol. 2. New York: Pergamon Press.¹

¹ Orne (1970, p.263) gives the page numbers for this reference as 28 - 42. The bibliography in Fromm and Shor (1979, p.756) gives the page numbers as 25 - 41.

- Robertson, S.J.T. (1979). The Dave Elman "Pretence" Technique in Hypnosis. Unpublished booklet partly based on a lecture given to the Scottish Group of the British Society of Experimental and Clinical Hypnosis in April, 1979.
- * Rosenow, C. (1928). Meaningful behavior in hypnosis. American Journal of Psychology, 40, 205 - 235.
- Rossi, E.L. (1973). Psychological shocks and creative moments in psychotherapy. American Journal of Clinical Hypnosis, 16, 9 - 22. (Reproduced in Rossi, 1980d, 447 - 464.)
- Rossi, E.L. (Ed.) (1980a). The Collected Papers of Milton H. Erickson on Hypnosis, Vol. I: The Nature of Hypnosis and Suggestion. New York: Irvington.
- Rossi, E.L. (Ed.) (1980b). The Collected Papers of Milton H. Erickson on Hypnosis, Vol. II: Hypnotic Alteration of Sensory, Perceptual and Psychophysiological Processes. New York: Irvington.
- Rossi, E.L. (Ed.) (1980c). The Collected Papers of Milton H. Erickson on Hypnosis, Vol. III: Hypnotic Investigation of Psychodynamic Processes. New York: Irvington.
- Rossi, E.L. (Ed.) (1980d). The Collected Papers of Milton H. Erickson on Hypnosis, Vol. IV: Innovative Hypnotherapy. New York: Irvington.
- * Rowland, L.W. (1939). Will hypnotized persons try to harm themselves or others? Journal of Abnormal and Social Psychology, 34, 114 - 117.
- Rycroft, C. (1972). A Critical Dictionary of Psychoanalysis. Harmondsworth, Middlesex: Penguin.
- Sarbin, T.R. (1950). Contributions to role-taking theory: I. Hypnotic behavior. Psychological Review, 57, 255 - 270.
- Sarbin, T.R. (1983). Review of Hypnosis and Relaxation: Modern Verification of an Old Equation by W.E. Edmonston. International Journal of Clinical and Experimental Hypnosis, 31, 57 - 58.
- Sarbin, T.R. & Coe, W.C. (1972). Hypnosis: A Social Psychological Analysis of Influence Communication. New York: Holt, Rinehart & Winston.
- * Sarbin, T.R. & Lim, D.T. (1963). Some evidence in support of the role taking hypothesis in hypnosis. International Journal of Clinical and Experimental Hypnosis, 11, 98 - 103.
- Sarbin, T.R. & Slagle, R.W. (1979). Hypnosis and psychophysiological outcomes. In E. Fromm & R.E. Shor (Eds) Hypnosis: Developments in Research and New Perspectives. New York: Aldine. 273 - 303.
- * Schachtel, E.G. (1947). On memory and childhood amnesia. Psychiatry, 10, 1 - 26.

- * Scheibe, K.E., Gray, A.L. & Keim, C.S. (1968). Hypnotically induced deafness and delayed auditory feedback: A comparison of real and simulating subjects. International Journal of Clinical and Experimental Hypnosis, 16, 158 - 164.

- * Schilder, P. & Kauders, O. (1927). Hypnosis. New York: Nervous and Mental Disease Publications.

- * Schilder, P. & Kauders, O. (1956). The Nature of Hypnosis and a Textbook of Hypnosis. New York: International Universities Press. (Original date of publication in English, 1927.)

- * Schwartz, W.S. (1978). Time and context during hypnotic involvement. International Journal of Clinical and Experimental Hypnosis, 26, 307 - 316.

- Secter, I.I. (1960). An investigation of hypnotizability as a function of attitude toward hypnosis. American Journal of Clinical Hypnosis, 3, 75 - 89.

- Sheehan, P.W. (1977). Incongruity in trance behavior: A defining property of hypnosis? In W.E. Edmonston (Ed.) Conceptual and Investigative Approaches to Hypnosis and Hypnotic Phenomena. Annals of the New York Academy of Sciences, 296, 194 - 207.

- Sheehan, P.W. (1979). Hypnosis and the processes of imagination. In E. Fromm & R.E. Shor (Eds) Hypnosis: Developments in Research and New Perspectives. New York: Aldine. 381 - 411.

- Sheehan, P.W. & McConkey, K.M. (1982). Hypnosis and Experience: The Exploration of Phenomena and Process. Hillsdale, New Jersey: Lawrence Erlbaum Associates.

- Sheehan, P.W., McConkey, K.M. & Cross, D. (1978). Experiential analysis of hypnosis: Some new observations on hypnotic phenomena. Journal of Abnormal Psychology, 87, 570 - 573.

- Sheehan, P.W. & Perry, C.W. (1976). Methodologies of Hypnosis: A Critical Appraisal of Contemporary Paradigms of Hypnosis. Hillsdale, New Jersey: Lawrence Erlbaum Associates.

- Shor, R.E. (1959). Hypnosis and the concept of the generalized reality-orientation. American Journal of Psychotherapy, 13, 582 - 602. (Reproduced in Tart, 1969, 233 - 250.)

- Shor, R.E. (1962). Three dimensions of hypnotic depth. International Journal of Clinical and Experimental Hypnosis, 10, 23 - 28. (Reproduced in Tart, 1969, 251 - 262.)

- * Shor, R.E. (1964). The accuracy of estimating the relative difficulty of typical hypnotic phenomena. International Journal of Clinical and Experimental Hypnosis, 12, 191 - 201.

- * Shor, R.E. (1970). The three-factor theory of hypnosis as applied to the book-reading fantasy and to the concept of suggestion. International Journal of Clinical and Experimental Hypnosis, 18, 89 - 98.

- Shor, R.E. (1979). A phenomenological method for the measurement of variables important to an understanding of the nature of hypnosis. In E. Fromm & R.E. Shor (Eds) Hypnosis: Developments in Research and New Perspectives. New York: Aldine. 105 - 135.
- Shor, R.E. & Orne, E.C. (1962). The Harvard Group Scale of Hypnotic Susceptibility, Form A. Palo Alto, California: Consulting Psychologists Press.
- * Shor, R.E. & Orne, E.C. (1963). Norms on the Harvard Group Scale of Hypnotic Susceptibility, Form A. International Journal of Clinical and Experimental Hypnosis, 11, 39 - 47.
- * Spanos, N.P. & Barber, T.X. (1968). "Hypnotic" experiences as inferred from subjective reports: Auditory and visual hallucinations. Journal of Experimental Research in Personality, 3, 136 - 150.
- Spanos, N.P. & Barber, T.X. (1974). Toward a convergence in hypnosis research. American Psychologist, 29, 500 - 511.
- * Spanos, N.P., Barber, T.X. & Lang, G. (1974). Cognition and self-control: Cognitive control of painful sensory input. In H. London & R.E. Nisbett (Eds) Thought and Feeling: Cognitive Alteration of Feeling States. Chicago, Illinois: Aldine.
- * Spanos, N.P. & Bodorik, H.L. (1977). Suggested amnesia and disorganized recall in hypnotic and task-motivated subjects. Journal of Abnormal Psychology, 86, 295 - 305.
- * St. Jean, R. & Coe, W.C. (1978). Disrupted retrieval in recognition recall. Paper presented at the Annual Meeting of the American Psychological Association, Toronto, Canada. (Cited by Evans, 1980.)
- * Stokvis, B. (1955). Medical psychology of the post-hypnotic state. British Journal of Medical Hypnosis, 7, 13 et seq.
- * Strosberg, I.M. & Vics, I.I. (1962). Physiologic changes in the eye during hypnosis. American Journal of Clinical Hypnosis, 4, 264 - 267.
- * Sutcliffe, J.P. (1960). "Credulous" and "skeptical" views of hypnotic phenomena: A review of certain evidence and methodology. International Journal of Clinical and Experimental Hypnosis, 8, 73 - 101.
- Sutcliffe, J.P. (1961). "Credulous" and "skeptical" views of hypnotic phenomena: Experiments in esthesia, hallucination, and delusion. Journal of Abnormal and Social Psychology, 62, 189 - 200.
- * Talland, G.A. (1965). Deranged Memory: A Psychonomic Study of the Amnesic Syndrome. New York: Academic Press.
- Tart, C.T. (Ed.) (1969). Altered States of Consciousness: A Book of Readings. New York: Wiley.
- Tart, C.T. (1975). States of Consciousness. New York: Dutton.

- * Tellegen, A. (1970). Some comments on Barber's "reconceptualization" of hypnosis. Journal of Experimental Research in Personality, 4, 259 - 267.
- * Thorn, W.A.F. (1960). A study of the correlates of dissociation as measured by hypnotic amnesia. Unpublished B.A. (Hons) thesis, University of Sydney, Australia. (Cited by Cooper [1979] and Evans [1980].)
- * Tulving, E. & Thomson, D.M. (1973). Encoding specificity and retrieval processes in episodic memory. Psychological Review, 80, 352 - 373.
- Vingoe, F.J. (1968). The development of a Group Alert-Trance scale. International Journal of Clinical and Experimental Hypnosis, 16, 120 - 132.
- Vingoe, F.J. (1973). Comparison of the Harvard Group Scale of Hypnotic Susceptibility, Form A and the Group Alert Trance scale in a university population. International Journal of Clinical and Experimental Hypnosis, 21, 169 - 179.
- Vingoe, F.J. (1981). Clinical hypnosis and behaviour therapy: A cognitive emphasis in the eighties? Bulletin of the British Society of Experimental and Clinical Hypnosis, 4, 6 - 10.
- Wagstaff, G.F. (1977a). An experimental study of compliance and post-hypnotic amnesia. British Journal of Social and Clinical Psychology, 16, 225 - 228.
- Wagstaff, G.F. (1977b). Post-hypnotic amnesia as disrupted retrieval: A role-playing paradigm. Quarterly Journal of Experimental Psychology, 29, 499 - 504.
- Wagstaff, G.F. (1981). Hypnosis, Compliance and Belief. Brighton, Sussex: Harvester Press.
- Wagstaff, G.F. (1982). A comment on Gibbons' "Hypnosis as a trance state: The future of a shared delusion". Bulletin of the British Society of Experimental and Clinical Hypnosis, 5, 5 - 7.
- * Walker, N.S., Garratt, J.B., & Wallace, B. (1976). Restoration of eidetic imagery via hypnotic age regression: A preliminary report. Journal of Abnormal Psychology, 85, 335 - 337.
- * Wallace, R.K., Benson, H. & Wilson, A.F. (1971). A wakeful hypometabolic physiologic state. American Journal of Physiology, 221, 797 - 799.
- * Watkins, J.G. (1972). Review of LSD, Marijuana, Yoga, and Hypnosis by T.X. Barber. International Journal of Clinical and Experimental Hypnosis, 20, 267 - 270.
- Weitzenhoffer, A.M. (1957). General Techniques of Hypnotism. New York: Grune & Stratton.

- * Weitzenhoffer, A.M. & Hilgard, E.R. (1959). Stanford Hypnotic Susceptibility Scale, Forms A and B. Palo Alto, California: Consulting Psychologists Press.
- Weitzenhoffer, A.M. & Hilgard, E.R. (1962). Stanford Hypnotic Susceptibility Scale, Form C. Palo Alto, California: Consulting Psychologists Press.
- * Weitzenhoffer, A.M. & Hilgard, E.R. (1963). Stanford Profile Scales of Hypnotic Susceptibility, Forms I and II. Palo Alto, California: Consulting Psychologists Press.
- * Weitzenhoffer, A.M. & Sjöberg, B.M. (1961). Suggestibility with and without "induction of hypnosis". Journal of Nervous and Mental Disease, 132, 204 - 220.
- Welch, L. (1947). A behavioristic explanation of the mechanism of suggestion and hypnosis. Journal of Abnormal and Social Psychology, 42, 359 - 364.
- White, R.W. (1941). A preface to the theory of hypnotism. Journal of Abnormal and Social Psychology, 36, 477 - 505.
- * Williams, G.W. (1953). Difficulty in dehypnotizing. Journal of Clinical and Experimental Hypnosis, 1, 3 - 12.
- Wilson, S.C. & Barber, T.X. (1978). The Creative Imagination Scale as a measure of hypnotic responsiveness: Applications to experimental and clinical hypnosis. American Journal of Clinical Hypnosis, 20, 235 - 249.
- Wilson, S.C. & Barber, T.X. (1982). The fantasy-prone personality: Implications for understanding imagery, hypnosis, and parapsychological phenomena. In A.A. Sheikh (Ed.) Imagery: Current Theory, Research and Application. New York: Wiley. 340 - 387.
- Wolberg, L.R. (1948a). Medical Hypnosis, Vol. I: The Principles of Hypnotherapy. New York: Grune & Stratton.
- Wolberg, L.R. (1948b). Medical Hypnosis, Vol. II: The Practice of Hypnotherapy. New York: Grune & Stratton.
- * Wolpe, J. & Lazarus, A.A. (1967). Behavior Therapy Techniques. New York: Pergamon Press.
- Zeig, J.K. (Ed.) (1980). A Teaching Seminar with Milton H. Erickson. New York: Brunner/Mazel.
- Zeig, J.K. (Ed.) (1982). Ericksonian Approaches to Hypnosis and Psychotherapy. New York: Brunner/Mazel.

