# THE CLINICAL APPLICATION OF HYPNOSIS

---

A Senior Honors Thesis

Presented to

the Faculty of the Department of Psychology

University of Houston

---

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Science

---

By

Janice Greco Forlano

December, 1973

December 22, 1973

# THE CLINICAL APPLICATION OF HYPNOSIS

---

An Abstract of a Thesis

Presented to

the Faculty of the Department of Psychology

University of Houston

---

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Science

---

By

Janice Greco Forlano

December, 1973

# ABSTRACT

After a brief review of the literature and finding no accepted definition of hypnosis, three questions were posed.

1. What is hypnosis?
2. Why is it difficult to define?
3. What areas need to be investigated to further the understanding of hypnosis?

It was concluded, hypnosis is an altered state of consciousness accompanied by certain phenomena depending upon internal and external influences acting upon the subject, functioning in a manner similar to psychophysiologic reactions. Its elements presented on a continuum from most general to most specific are social influence, motivation, learning, perception, personality and physiology. Until more is known about the lawful properties of these elements, a more precise explanation of hypnosis will not be possible.

The definition postulated was not explanatory but descriptive and directional, describing hypnosis as comprised of elements and pointing out the pertinent areas of investigation. A better understanding of the internal element, physiology, may be an aid to psychosomatic healing and lawful information about the external elements will add insight to the understanding of behavior. Finally, since hypnosis is almost entirely externally determined, those who study behavior, e.g. psychologists, use hypnosis most effectively.

TABLE OF CONTENTS

## LIST OF TABLES

# PART I

## What Is Hypnosis?

# CHAPTER I

## A DEFINITION

Hypnosis, one of the oldest therapeutic tools available to clinicians, is as yet unexplained and remains with the bulk of its potential relatively untapped. With the exception of its ancient origin and the seemingly evasive nature of its properties, so little about hypnosis is agreed upon that there is no generally accepted definition. The many possible forms of subject responses as well as the variety of procedures which can be utilised by a clinician to induce the hypnotic state, make description and explanation of the outcome of its application exceedingly difficult. There is, however, a fairly regular pattern apparent when hypnosis is used: usually the inductor instructs the subject to concentrate on one object or movement, often of a monotonous quality, and eventually the subject seems to pass into a quieted, passive state resembling sleep. Induction can be more rapid and the client can remain alert with certain procedures. How or why any altered condition can be brought about by such a procedure remains unexplained.

Many factors are believed to interact in the induction process. The personality of the individual, any previous experience with hypnosis, as well as the motivation to participate, and any preconceived notions about how the subject is expected to act all affect the outcome. The type

of induction technique, the hypnotist's manner and the physiological predisposition of the client can cause still further variations. Much of the disagreement among reearchers concerns the degree to which a particular factor seems to interact with the process. Little more than descriptions have been proposed to determine how a functional relationship may exist between these factors and hypnosis or among the factors themselves.

Proposed definitions of hypnosis usually take the form of a hypothesis in one or more of four categories: psychological, physiological, experimental or clinical observation. Theories based on data from those areas most directly associated with the science of psychology include learning, perception, motivation, role expectancy and personality. Those categorized as "physiological" observe bodily functions, especially the brain and nervous system, to locate explanations. Generally, "experimental" and "clinical" theorists present colclusions they have drawn from their investigations. Since experiments and case histories are often used to support theories, there is considerable overlap between the approaches.

# CHAPTER II

## QUESTIONS POSED

Many practical uses have been found for hypnosis. Some of the reported uses have been to increase attention and memory, reduce tension, stress and overactivity thus increase relaxation and raise the pain threshold. Hypnosis has been used as an aid in diagnosis and therapy. Examples of successful hypnotherapy are impressive and occasionally incredible, but nonetheless leave hypnosis unexplained.

The purpose of this thesis is to attempt to answer the main questions which arise when confronted with the mysterious nature of hypnosis.

1. What is hypnosis?
2. Is hypnosis definable? If not, why not?
3. What areas need to be investigated to best further any insight to the hypnotic process?

# CHAPTER III

## THE ORIGIN OF HYPNOSIS

Before surveying the current literature on hypnosis, it would be helpful to briefly review the origin of this technique of therapy, especially in addressing the problem of defining. Though descriptions of hypnosis and states resembling it can be found as far back as ancient Egypt, a consideration of the past three centuries will be sufficient for the purpose of this thesis.

According to Wolberg (1965), the first major publication relating to hypnosis was De Imperio Solis et Lunae in Corpora Humana et Morbis Inde Oriundis, written in 1703 by Richard Mead. Very roughly translated, the book discussed the influence of the moon upon the human body and its functions. It was from this book that Franz Anton Mesmer (1734-1815) ~~plagiarized~~, in a 1773 publication, the notion that the gravitational tides in the atmosphere influenced everything, including people. At a highpoint in his popularity, Mesmer placed his patients in tubs or baquets, attaching magnets to their bodies or simply pointing a magnet at them.

His contribution if that he induced a trance before applying the magnets, to bring on that part of the procedure he called the "crisis", which was a convulsion. Mesmer's most significant misinterpretation was his conviction that

persons in this state could foresee the future. Finally in 1784, the French government organized an investigation of this cult of animal magnetism by nine scientists. One of these investigators was Benjamin Franklin. The investigators decided against Mesmer, but he lived out his life with a degree of influence nonetheless.

The Marquis de Puysegur (1751-1828) was able to produce the trance without the "crisis". He even succeeded in producing somnambulism, the deepest form of hypnosis; but the Marquis believed there was a fluid in the body responsible for the reaction to the magnets. Jose Custodio de Faria emphasized the subject's psychic impressionability and noted that with increased concentration one could decrease pain. Unfortunately, he also believed the blood thinned in instances of samnambulism.

It was Alexander Bertrand (1795-1831) who stipulated that suggestion was crucial to the trance, in his Du Magnetisme Animal. One of the earliest professional practitioners to become interested in mesmerism was John Elliotson (1791-1868), who helpt start the journal, "Zoist" which discussed this new technique and met with disapproval among the professional population. James Braid, who was more popular, coined the word "hypnotism", meaning to put to sleep. He also introduced the term "monoidism", a condition resulting from the mind being possessed by dominant ideas. Braid disproved that any magnetism was involved, and in Neurypnology (1843) stipulated

that hypnosis was due to a fatigued nervous system.

In the meantime, a Scottish surgeon in India, James Esdaile, performed over one thousand minor and three hundred major operations using hypnosis. Due to the discovery of chemical anesthesia in 1848, interest in hypnotism waned. Some associated it with the "black arts".

The fact that Liebeault (1823-1904), a private physician, exaggerated the value of hypnosis actually hurt its acceptance. At the Nancy School, Hippolyte Bernheim (1840-1919) noticed Liebeault and became an ardent devotee. But at the Salpetriere, Jean Martin Charcot (1825-1893), a much more prominent man, postulated that hypnosis was an abnormal condition. Professor Heidenbain at Breslau believed eye fixation paralyzed the brain. It was a while before Pierre Janet, at the Salpetriere explained Charcot's errors.

While working with Anna O., Breuer and Freud used hypnosis to remove symptoms and find their causes. Freud being disappointed that hypnosis did not permanently cure, turned to free association, dream interpretation, hidden motives, and transference. The rejection of hypnosis by these two prominent figures, Freud and Charcot, was a great setback for a further investigation.

It was not until 1933 when clark Hull (1884-1954) had published his Hypnosis and Suggestibility, in which both theories and experiments concerning hypnosis were discussed, that public and scientific interest in this topic was revived.

Then during World War II, interest again increased with the need for quick forms of therapy at the battle fronts. Societies emerged in the United States among those interested in studying hypnosis, such as the American Society for Clinical Hypnosis and the Society for Clinical and Experimental Hypnosis. In 1953 the British Medical Association appointed a subcommittee, the Psychological Medical Group Committee, to study hypnosis in medicine and found it valuable in anesthesia and analgesia. The Council on Mental Health of the American Medical Association endorsed the use of hypnosis in medicine in 1956. In 1961, the American Psychiatric Association reported the acceptance of hypnosis in psychotherapy, followed shortly by the American Psychological Association.

Today, there are separate societies for psychiatrists, psychologist and dentists, as well as joint societies. Other organizations are the American Board of Clinical Hypnosis, a certifying body, the American Board of Professional Psychology in Hypnosis (ABPPH), Association to Advance Ethical Hypnosis (AAEH), Council of Societies in Dental Hypnosis (CSDH), the Institute For Research in Hypnosis (IRH), International Center of Medical and Psychological Hypnosis (ICMPH), the International Society for Clinical and Experimental Hypnosis (ISCEH), and the American Hypnotists' Association (AHA).

# PART II

## The Current State of Hypnosis

# CHAPTER IV

## THEORIES OF HYPNOSIS

Accompanying the lack of general agreement concerning a definition, there are a great number of theories of hypnosis. Only the most widely accepted of these theories will be considered. Theories based on topics and areas usually studied by psychologists will be reviewed first since they are the most common. Those topics will include state description, phenomena description, social or role expectancy, learning theories, suggestibility and susceptibility, personality theories and psychoanalytic approaches.

### Psychological Theories

State Description. In describing the hypnotic trance, a number of authors speak of varying states or stages in order to explain the changes in phenomena that may occur during hypnosis. These stages can be thought of as levels or degrees of depth of a trance. Clark Hull (1933), who revived interest in hypnosis, delineated four stages:

1. Muscle reading, such as that which occurs while using a ouija board.
2. Waking suggestion, which displays general catalepsy.
3. Light hypnosis, which displays catalepsy of the eyelids.
4. Profound hypnosis, which includes most of the phenomena occuring in hypnosis, e.g. hallucinating,

heightened suggestibility, analgesia, rapport and trance logic. These will be considered in greater detail later. Hull's theory was an experimental approach in terms of suggestibility and those factors affecting it. According to Hull, hypnosis is not the same as sleep and can be used as a therapeutic aid, but he is against using it in place of medication. One of the most valuable advantages to hypnosis is its ability to restore memory, even from childhood. Hull based this on studies like Stalnaher and Riddle's but also pointed out a failure to duplicate these results by Huse and Mitchell. Memory, according to Hull, is comprised of learning, retention and recall. Much of this opinion was based on his work with hypnotism.

Charles Tart (1969) used a self-report depth scale to measure what he called the criterion of hypnosis which was similar to suggestibility and served to discriminate between different qualities of hypnosis. This measurement ranged from "awake" to "plenary" on a scale of zero to fifty. In the self-report depth scale, the subject is asked to rate the depth of the trance at several points in the procedure. This is done during a preliminary session. The subject reports the first number which comes to mind. The scale is:

| | |
|---|---|
| 0 | awake |
| 1-12 | relaxed |
| 20 | analgesia |
| 25 | dreaming while hypnotised |

30 amnesia

40 suggestions become reality

50 plenary, unusually deep

A good trance averages between 30 and 40 accoring to Tart (1969).

Shor (1962) has described three dimensions of depth:

1. The dimension of hypnotic role-taking involvement
2. The dimension of the trance
3. The dimension of archaic involvement.

The first is the extent to which the complex of motivation and cognition concerning the role has sunk below the conscious level. The second is the extent to which reality-orientation has faded below awareness of the conscious. In the last dimension, depth is a) the degree to which archaic relationships are formed with the hypnotist, b) the strength of a transference which occurs, and c) the extent the subject's personality is involved.

Many researchers refer to depth or stages in describing techniques, procedures, and especially induction with the majority of theorists accepting the concept of depth.

Phenomena Description. Often those phenomena which appear in hypnosis are described or listed without offering an actual hypothesis as to how or why they occur. Whether hypothesized about or not, those phenomena most often cited are:

1. suggestibility - negative and positive, doing what is suggested, or its opposite
2. analgesia or hyperalgesia - a decrease or an increase in sensitivity to pain
3. hallucination - negative and positive, the inability to see something present, or seeing what is not present
4. amnesia or hypermnesia - a decrease or an increase in retentiveness or memory
6. trance logic - a type of faulty rationality which subjects sometimes display: e.g. If the subject is asked by the inductor if the latter is outside, the subject will look to see if he is. Obviously if the inductor is speaking to him, the subject should realize the inductor is inside with him.
7. catalepsy - general or specific, a waxy or semirigid condition of the muscles in general or in one part of the body
8. relaxation - often appearing sluggish or even asleep
9. rapport - a relationship in which the subject responds only to the inductor
10. altered attention - a change of attentiveness in regard to speed and accuracy

Because of all the perceptual changes apparent in these phenomena, hypnosis is often thought of as an altered state of consciousness. As a result it is sometimes compared with

states induced by certain chemicals. Masters and Houston (1960) have compared the hypnotic trance with psychedelic experiences. Both are treated as transforming experiences which are supposed to result in actualization of latent capacities and shifts in philosophical orientation. These changes occur with the accompaniment of emotional and sensory at-homeness in the world. Some of the phenomena shared by both psychedelic and hypnotic states include:

1. a change in the perception of and orientation to time and space
2. a change in rate and content of thought
3. a change in body image
4. eidetic images
5. abrupt mood changes
6. awareness of internal organs and processes
7. a sense of better communication, including telepathy
8. an increased capacity for concentration
9. a tendency for regression
10. increases in psychodynamic processes and character traits

Others comparing the trance with psychedelic experiences have reported similar phenomena, e.g. Aaronson (1965) and Krippner (1969) using psychedelics, and Barber (1970) who studied L.S.D., yoga, and marijuana. No one has been able to explain how or why any of these takes place.

Social or Role-Expectancy. The overwhelming majority

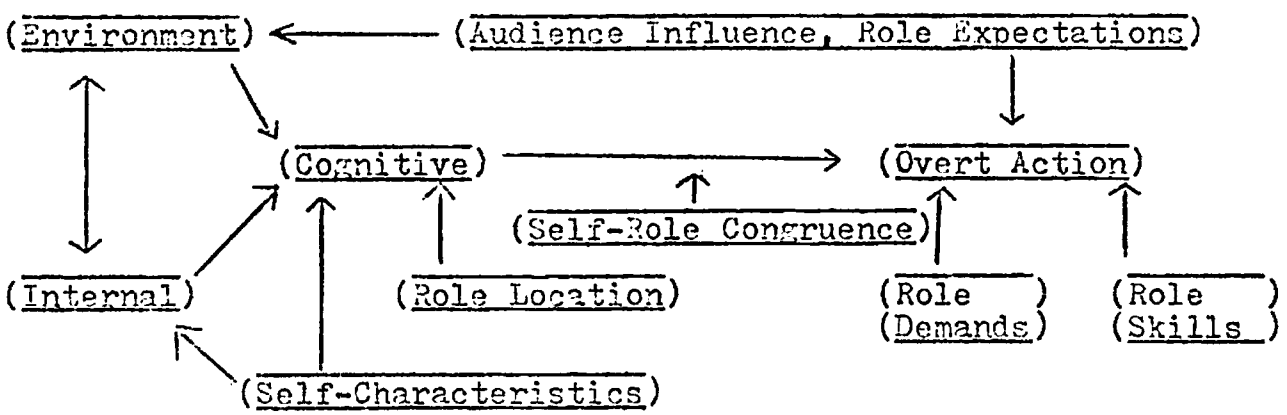
of books about hypnosis refer to the possibility that hypnosis is a social experience and that the subject is, to a degree, playing a part. One of the more elaborate models of role theory analysis has been postulated by Sarbin and Coe (1972). They have worked out a cognitive model in role theory terms, that is shown in table 1.

The diagram points out the sources of influence which help determine how people get information about what is expected of them. In the hypnotic situation, the subject reacts to different hypnotist cue characteristics to determine subsequent role enactment.

For support, Sarbin duplicated a study by Wells (1941) on the topic of antisocial acts and hypnosis. A posthypnotic suggestion that the subject take a dollar bill from a lab coat was carried out. This did not work when a graduate student invited the subjects to his apartment and gave the same posthypnotic suggestion. Sarbin and Coe (1972) felt this supported differential role location, based on the differences in the cues in the two settings. No explanation of how a change in cues altered the role location was offered for the example. The reduction in hypnotic responsiveness in children below the age of nine, reported by London (Sarbin and Coe, 1972) was cited as indirect evidence that role location was important to the enactment of the hypnotic role. They felt that the children had not yet learned the role of hypnotist adequately to instantiate the reciprocal role of

Table 1

Sarbin and Coe's Cognitive Model in Role Theory




These are the points of influence considered in the theories postulated by Sarbin and Coe (1972). This is a simplified version using only the most general sources which may influence a person's behavior. For any individual in particular there would be a variety of other points, depending on that person's lifestyle, as well as being slightly different from one given circumstance to another. The end product of this sequence is any resultant overt action.

hypnotic subject.

This is in direct conflict with Bramwell's (1903) claim that there is an inverse relationship between age and susceptibility. However, Bramwell did not discuss a lower limit. Since Sarbin and Coe (1972) did not specifically define what they meant by responsiveness, it may not be equatable to Bramwell's use of the term susceptibility. Theorists generally have agreed that age makes only very little difference; however, when considering learning theory, Secter and Tremain (1969) have pointed out that a degree of physiological development was needed in order to be hypnotised. If ocrrect, very young children would be handicapped as hypnotic subjects. In addition to the cognitive model, three dimensions of role enactment have been stipulated by Sarbin and Coe (1972), being (1) the number of roles, (2) the preemptiveness of the role, and (3) the organismic involvement in the role. Each has a varying degree of meaningfulness for a situation.

According to Hilgard and Atkinson (1965), Orne has emphasized the importance of the "demand characteristics" in a given social situation. Furthermore, research by Cronin, Spanos, and Barber (1967) has pointed out the importance of motivation in induction. Tart (1969) and Shor (1962) have emphasized the importance of rapport in the social interaction which occurs during hypnosis. All of these concepts are valuable; however, it would seem that since so many factors

affect social behavior, it would be extremely difficult to make a theory of hypnosis based on role analysis very specific, in regard to which variable was causing which effect.

Learning Theories. One area of investigation which has displayed a degree of lawfulness in its discoveries is that which tries to explain hypnosis as a type of learning experience. From this standpoint, it would be very understandable why hypnosis susceptibility improves with experience up to a point and then levels off in much the same manner as a learning curve. This impression of "plateau hypnotizability" has been evidenced in research by Shore, Orne and O'Connell (1966). Similar findings have been reported by Tart (1969) as well as Cooper, Banford, Schubot and Tart (1967).

Perhaps most outstanding in this area of theorization is Ernest Hilgard. Hypnotic induction is learned and susceptibility is enhanced by the fact that the learned procedure is recorded in the mind, much the same way a habit is. According to Hilgard (1965) multiple paths are formed for the hypnotic experience and can be activated. 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. This of course can not be proven at this time, but it does promise an area of further investigation; physiology. Hilgard and Hilgard (1962) have done substantial work in the area of susceptibility and will be mentioned in the appropriate section.

Other theorists have attempted to show the similarities between hypnotic behavior and learning behavior. Thompson (1970) has suggested that the reason for the variety of reactions to hypnosis is the same as the reason why one thing can be taught to a group with everyone getting a different impression. This does not explain a great deal because everything we react to is subject to filtration and therefore can be thought of as a form of learning. Much more meaningful was the research reported by Secter and Tremain (1969) in which similarities were found between hypnosis and learning. Some of these similarities include motivation, goal orientation, readiness, experience, as well as physiological and psychological development. Support for at least one of these characteristics has been found by Kline (1960, 1967), Tart (1969), Sarbin and Coe (1972) and Tracktir (1973), while Shor (1962) has verified all of the findings.

Finally, hypnosis has been explained as a type of conditioned reflex. This will be considered in greater detail in the section devoted to physiological explanations. It will suffice here to mention that many believe hypnosis is conditionable and if so, its behavior would follow certain laws. Alexander (1968) has even postulated that posthypnotic suggestion is a type of second-order conditioning.

Suggestibility or Susceptibility. Suggestibility, the degree to which a person will accept and carry out a suggestion, and susceptibility, the ease by which a person proceeds

through induction- both affect an individual's ability to be hypnotized. The ease with which a subject or client can be hypnotized is very important to researchers and practitioners. Because no one has ever really proven exactly what hypnosis is, many describe it as a state of heightened suggestibility. This was the very basis for all of Hull's (1933) work. Obviously a dead-end theory, hypnosis can not be explained unless one can explain suggestibility. It is mentioned here because everyone has referred to the very suggestible nature of hypnosis, but it is more of a phenomenon than an explanation. More meaningful work has been done in the area of susceptibility, which seems to be, at least in part, a function of the personality.

Personality Theory. In working with hypnosis, many have expressed the feeling that certain personality types are more susceptible to hypnosis and suggestion than others. The most promising work in this regard has been done by Josephine and Ernest Hilgard (1962). Together they have found that childhood factors appear to affect the selective responsiveness of hypnotic subjects. A great deal has been established in this area, compared to what is agreed upon in other areas of hypnosis, and there is beginning to emerge a picture of the ideal hypnotic subject. This is valuable for the sake of efficiency in experimentation. It also is a safety factor in knowing with whom hypnosis will work best in the clinical situation. Ultimately, once

understood, hypnosis may tell us a great deal about personality.

Psychoanalytic Theory. Despite Freud's rejection of hypnosis, many of his followers have become interested in this technique, and have offered psychoanalytic explanations of how it works. The most common approach is to compare a phenomenon in hypnosis with one of the mechanisms or relationships postulated by Sigmund or Anna Freud (Chertok, 1966).

Due to the heightened retentive abilities displayed by many subjects, hypnosis has sometimes been explained as a product of regression. Sandor Ferenczi (Wolberg, 1965) suggested that hypnosis reactivated the childish attitude of blind faith. This would be based on a transference between the client and clinician. Rapport has often been explained as a type of transference by Schiller and Jones (Chertok, 1966). The hypothesis offered by Freud depicts hypnosis as involving the devotion of someone in love to an unlimited degree but with sexual satisfaction excluded, according to Chertok (1966). Gill and Brennan have postulated that hypnosis is a particular kind of regression process which may be initiated either by sensorimotor indeational deprivation or by stimulation of an archaic relationship to the hypnotist (Chertok, 1966).

Sometimes, ego functions are claimed to be behind hypnotic experiences. Gindes (1951) has coined the term hypnosynthesis, the combination of various elements of the id, ego and superego. With hypnotic induction applied to

psychoanalysis, the personality is said to be broken down to separate parts, just the opposite of hypnosynthesis. Gindes concludes that both hypnosynthesis and hypnoanalysis are needed to find and recognize pathogenic material, as well as make adjustments to stimulate growth and terminate a behavior disorder. In considering hypnoanalysis of the criminal, Lindner (1944) has cited Anna Freud. She believed that in hypnosis the ego could take no part in the therapeutic procedure, thus robbing the patient of the cathartic working through of the precipitating events. This argument would support her father's rejection of hypnosis.

Related to the notion of ego intergration is dissociation, which will be considered in the section reviewing physiological explanations. Actually, there is a great deal of overlap in these theories because many researchers attempt to explain their findings in terms of psychoanalysis, e.g. Masters and Houston (1960), Wolfe and Rosenthal (1970), and Kline (1960). In summary, hypnosis has been described in terms of regression, transference, ego structure or functions, and primitiveness, the latter also being considered in physiological studies. While nothing substantial has been found yet, psychoanalytic explanations are widely accepted and in some cases are exclusively referred to. This is especially true of handbooks discussing hypnotic techniques, e.g. Shaw (1958), Wolfe and Rosenthal (1970), Horsely (1943), and Lindner (1944).

Physiological Theories

Many researchers are looking for a physiological explanation of hypnosis, because certain phenomena suggest that bodily functions are affected, e.g. a change in one's sensitivity to pain. Together, knowledge of hypnosis and physiology may have great practical significance. Since hypnosis often resembles sleep, there have been attempts to compare these two physiological states. Studies have failed to reveal any similarity. The EEG and GSR patterns as well as basal metabolism rate, respiration, patellar reflex, cerebral circulation, and heart action more closely resemble the waking state, as reported by Wolberg (1965). However, Domhoff (Moss, 1960) reported the equivalence of the EEG patterns of the hypnotic trance and the "dream" stage of sleep (stage I or REM sleep). He notes, also, that the psychologically important issue of content differences between night dreams and hypnotic dreams has never been examined in a controlled, quantitative manner. Barber and Burguin (Schneck, 1953) have reported that a brief disappearance of alpha activity may occur with certain hypnotic suggestions.

Sometimes hypnotizability is treated as a hereditary trait, passed down the phylogenic scale through evolution. The regressive quality of hypnosis is described as an immobilizing reaction used by lower animals to survive, such as death feigning (Wolberg, 1965). There is little resemblence

between human and animal hypnosis; however, Chertok (1966) has pointed out that there is little research in animal hypnosis. He further cited Gill and Brennan's suggestion that hypnosis is a product of stimulation of an archaic relationship to the hypnotist. Similar to this, is Mears' (1961) atavistic concept, describing it as inheritance from remote ancestors. Hypnosis was also associated with goal-directed striving, ideo-motor mechanisms and psychodynamic defenses (Mears, 1961).

Mentioned earlier was dissociation, the division of various functions of the brain. Janet is said to have described hypnosis as the splitting off of a group of ideas from the mainstream of cognition, with depth being the degree of dissociation. By contrast, Wolberg (1965) also states, any resultant amnesia is artificial and hypnosis is actually a state of increased coordination of the mental processes. Prince (1957) reported the case of Sally Beauchamp, who is an example of extreme dissociation. With hypnosis, he was able to observe alternating personalities fighting for control of a weaker personality designated as BIV, the "idiot".

Finally, hypnosis is considered to be a conditioned reflex by some. Here a word or simple act serves as a cue to certain physiological reflexes. What reflexes, how they operate and how a person can come out of a trance if so motivated is not explained, as Wolberg (1965) has noted. Alexander (1968) has maintained that conditioning reflex

physiology is crucial to the hypnotic state, which is produced by repetitive monotonous stimuli. Conditioning in hypnosis occurs in the paradoxical or ultraparadoxical phases, and the effect of posthypnotic suggestions is explainable in terms of second-order conditioning. The phases he refers to are those postulated by Pavlov, who observed the reactions of his dogs to the flooding conditions incurred during the Leningrad Flood of 1924. According to Pavlov, in stressful situations, an organism's inhibitory and excitatory systems will go through what he called the "hypnoidal phases". These are:

1. Normal-when the excitatory function is greater than the inhibitory function, allowing normal waking reactions
2. equivalence-when the excitatory function equals the inhibitory function, interfering with the waking reactions
3. paradoxical-when the inhibitory function is greater than the excitatory function, making normal reactions difficult
4. ultraparadoxical-essentially an extreme form of the paradoxical, with the subject having great difficulty functioning, often reacting in a manner just the opposite of the normal reaction
5. profound sleep-the inhibitory drive becomes so strong it passes down the cortex and subcortex, thus

turning the mechanism "off".

Not completely different is Kubie's (Chertok, 1966) description of hypnosis as an intrapersonal experience. Here the repetitive monotonous stimuli is said to affect the sensorimotor mechanism, which Gill and Brennan referred to earlier.

While none of these is proven yet, they suggest a path of investigation, as Hilgard's theory of habit systems did, thus opening the possibility of finding a functional explanation, or even using hypnosis to investigate physiological phenomena.

Experimental Theories

Since hypnosis is still based on unproven information and unexplained phenomena, some prefer to avoid theorizing, altogether. While most in this category only report data, Barber went out of his way to discuss why he does not offer a theory; namely, there is no altered state to theorize about. Theodore Xenophon Barber is, perhaps, the most outspoken researcher in experimental hypnosis. In his opinion, much of what has been proposed is based on expectation and imagination (Barber, 1969a). The only acceptable information is that which can be verified, and Barber has proposed a method for collecting and testing data. More will be said about Barber and other researchers like him in the section on research methodology. It is sufficient here to note that a portion of today's investigators do not accept or seriously

consider the current theories and are not interested in presenting one.

Case Histories and Clinical Observations

Clinical observations have always helped to support or disprove hypotheses. In hypnosis, almost every author referenced in this thesis, thus far, has relied on case histories to a certain extent. Some have completely relied upon them. When case histories are reported to support a theory, they are sometimes discussed in a very brief manner, only describing those aspects of the case in which the theorist is interested. One example of this is Milton Kline (1960, 1967). He organizes a number of opinions in his books, sometimes with many sections written by others, introducing many concepts, e.g. Watkins' hypnointrospection, which describes subjective experience. Unfortunately, some of the cases presented are so brief that the reader aquires no more than a claim. For example, Mr. X was suffering from impotence. A number of hypnointrospective sessions were administered to him. Today he is happily married and has three children. While this is not a case directly quoted from one of Kline's books, it is similar in manner to a number of those presented in his books.

Several carefully detailed books and articles have been written describing one case in particular to serve as an insight to those with little or no previous experience with the clinical application of hypnosis. Prince's Sally Beauchamp,

mentioned earlier, is an example of this. Gardener (1973) has written about the application of hypnosis to a case of epilepsy involving petit mal seizures. Also, Shibata (1968) has given an illustration of a tragic failure, an often overlooked aspect of hypnosis. As in experimental hypnosis, no specific explanation has been offered which does not resemble or combine other theories of hypnosis.

## Synopsis

Some of the most prominent theories of hypnosis have been reviewed. The main types of theories are physiological, psychological, experimental and clinical observation.

Psychological theories can be further divided into state description, phenomena description, social or role expectancy, learning theories, suggestibility and susceptibility, personality theories, and psychoanalytic approaches. Thus far, learning theories and correlations between susceptibility and personality have provided some of the most meaningful data on hypnosis.

Phyiological approaches primarily involve EEG and GSR patterns, basal metabolism rate, respiration, patellar reflex, cerebral circulation, heart action, heredity, ideo-motor mechanisms, dissociation, and conditioned reflexes. Here, conditioned reflex theory seems to be the most promising area to investigate in the hope of establishing lawful information about hypnotic behavior. While not a great deal has been proven in the field of physiology, this does seem

to be a direction hypnosis research may take to acquire information about the functions of hypnosis, if only to disprove some popular ideas now held by researchers.

The shortcomings of explaining hypnosis with the support of clinical observation only, are exactly the same for this area of investigation as they would be for any other. Clinical reports are not as standardized as experimental reports; therefore, they are subject to the reporter's interpretation to a greater extent. More will be said about experimental hypnosis in the chapter discussing methodology.

# CHAPTER V

# TECHNIQUES

The more popularly used techniques will now be reviewed. Most of those related to induction are the work of Milton Erikson, a practicing psychiatrist in Phoenix, Arizona. No one else has presented as extensive and detailed a discussion of this topic. While there are other techniques, most of these are variations of those which will be covered. Each of Erikson's (1967) techniques will be described briefly. More information about techniques and courses in hypnosis will be discussed later.

Hypnotic techniques can be divided into four areas: testing, induction, deepening, and recovery. In the area of testing, the discussion leans heavily on works by Wolberg (1965), with deepening and recovery being more dispersed with respect to sources.

## Testing

Suggestibility testing is recommended before actual induction to find good subjects for research and to avoid poor candidates in the clinical setting. Poor candidates are those who might suffer attacks of anxiety as a result of the procedure. While there are many other methods, the five most commonly referred to will be reviewed to present a picture of the type of data these tests hope to accumulate.

The Coin Test. The subject is asked to balance a coin on the back of his hand, and then slowly turn the hand over while receiving the suggestion that he will fall asleep upon completing the instructions.

Postural Sway. Standing with the inductor behind him, the subject is told that he is being pulled backward. In reaction to this suggestion, the subjects body sways in a backward direction.

Hand Levitation. The suggestion is made that the subject's hand feels light enough to float upward, and it does.

Hand Clasp. After receiving the suggestion that he can not release his tightly clasped hands, the subject is asked to try to do so and he finds he can not.

Pendulum Test. The subject observes a swinging object while being reminded how tired his eyes are becoming from following the object.

While there are other tests, those presented show that these are tests of suggestibility in the waking state. It is generally assumed that people who can accept suggestion without experiencing defensive anxiety usually make good candidates. For further details on these tests, some helpful sources are Wolberg (1965), Shaw (1958), and Gordon (1967). In the area of autogenic training, Shibata (1968) has exemplified the need for caution in picking subjects for the technique of self hypnosis by reporting a case of suicide.

Induction

The procedure in hypnosis which concerns clinicians most is induction for it determines how safely, quickly, and successfully hypnosis can be applied. Induction is the process by which a person is transformed from the waking state to the hypnotic state. Before actually reviewing the techniques, it would be helpful to discuss some of the ideas behind their development.

Through experiences in his own practice, Erikson believed that each subject varies in the amount of time required for induction. He felt imaginary aides are more effective than mechanical devices which give the clinician just one more thing to keep track of. He concluded that an inter- and intra-personal relation with the subject was important. One area of particular concern was the deep trance. In this state the subject seems to behave in accordance with the unconscious, e.g. not speaking. Some phenomena which supported this conclusion are amnesia, analgesia and regression. The subject can learn to speak via automatic writing. In the deepest hypnotic state, somnambulism, the subject seems to function at the unconscious level without any interference from the conscious, being stuporous and passive. Erikson's greatest concern was the need to protect the subject. He stressed caution in distinguishing the trance from consciousness. Furthermore, he pays strict attention to orienting the subject for the procedure and utilizing the subject's responses

as cues of anxiety, e.g. trembling, perspiration and any difficulty during induction. With an understanding of Erikson's outlook, his techniques will now be presented.

The Confusion Technique. This is best for subjects consciously resistant to induction or for intelligent clients interested in hypnosis. The idea is to give a series of contradictory stories and/or riddles, constantly shifting in orientation, without allowing the subject to make sense of what he is being asked to understand. For example, the subject is told there are a group of ducks with two ducks in front of a duck, two ducks in back of a duck, and one duck in the middle. How many ducks are there? Since it is not specified that the questioner must be referring to the same duck when saying in front of and in back of a duck, the correct answer can be three or five. Regardless of whether three or five is given, he should be corrected without being given an explanation. The therapist quickly moves to a new topic. In time the subject is overwhelmed, not being permitted to ask questions while being expected to understand the answers. The method is supposed to be especially helpful in cases where the hypnotist wants to use regression during the trance.

The Rehearsal Technique. The therapist finds one simple monotonous act and has the subject repeat it, such as looking at a moving object with the eyes turned upward in a strained position. This method is good for deep trances and is very

helpful for inducing dreams. Emphasis is placed upon how tired and heavy the eyelids feel.

The Multiple-Dissociative Technique. The subject is presented an object and instructed to visualize similar objects. With prolonged repetition and stress on the boredom of the situation, a very deep trance can be induced and maintained.

The Post-Hypnotic Technique. This is used for the ease of later inductions. While in a trance, a posthypnotic suggestion is left to permit development of a spontaneous trance. It is best to use some casual activity as a cue rather than an attention-compelling overt act.

The Utilization Technique. A reverse of the usual procedure, the inductor first accepts the patients's present behavior and works with that instead of introducing an object or act of interest. For example, a repetitive act or idiosyncrasy of the subject is found; and, in an effort to facilitate concentration, it is discussed. This requires the cooperation of the subject, since his behavior will be altered in the waking state by directing his activity. This technique is less subtle.

Investigating A Specific Amnesia. In the first and second trances, the subject is instructed to free associate. While doing this again in the third trance, the subject is also left with a posthypnotic suggestion for automatic writing. In the fourth trance, questions concerning the specific amnesia can be directly put to the subject.

The Ideomotor Technique. Here, hand levitation is first used, with only one hand, either one - handedness not being important - being appropriate. Then a head nod or shake is administered, with a rapid movement to be used as a signal for conscious answers and slower movements to signal any unconscious answers. A catalepsy develops and a trance is induced rather quickly. By focusing on inner feelings and capability, this method can bypass overt resistance.

The Pantomine Technique. A nonverbal procedure, which relies upon body-language cues. This is similar to the confusion technique, in that communication gaps cause intense uncertainty and eagerness.

The 'Surprise' and My-Friend-John Technique. The subject is asked to imagine someone sitting in a chair and the hand technique is applied; sensing and feeling the suggestions. By speaking slowly and clearly and feeling what they are saying, the subject can be brought to a trance by suddenly being asked a question by the hypnotist. This is similar to self-induced hypnosis.

When using any technique, the suggestions should be given in a manner acceptable to the subject. People respond differently to various tones of voice. Another method of induction was reported by Alderete (1967) who successfully hypnotized a Japanese patient through an interpreter, carefully pointing out the necessity for rapport between the subject and the interpreter. Here, the subject was the interpreter's mother.

A dentist named Owens (1970) has successfully hypnotized a patient over the telephone. One of the factors making hypnosis difficult to define has been the fact that it can be induced under so many different circumstances.

Methods Of Deepening The Trance State

It is generally agreed that depth is achieved more readily with certain types of techniques than other, e.g. Erikson's (1967) multiple-dissociation, rehearsal and confusion techniques. Tart (1969) has reported trances beyond the plenary level with a mutual-hypnosis technique in which two subjects hypnotize each other, enhancing the rapport since the subjects are sharing the experience. Caution should be taken when using this technique, since the hypnotists, themselves, are in a trance. Tart noted a tendency for rejection of his participation, as if he had been intruding (1969). Maximum depth for each subject was initially achieved in a practice session separately, so that the mutual-hypnosis session was not the first encounter that the subjects had with hypnosis. Practice can improve the subject's ability to go deeper, but only up to a point (Shore, Orne and O'Connell, 1966).

Recovery

Most handbooks caution the reader about sudden recovery from a trance, stating the patient should be arousd gradually (Wolberg, 1965, Shaw, 1958, and Gordon, 1967). Care should be taken to be certain that the subject is completely awake and alert before leaving the office. While the warning is

there, often just a few sentences are used in describing recovery, as compared to entire sections devoted to induction. Sometimes entire books have been dedicated to describing the various details found in induction. No explanation of this comparatively casual attitude toward recovery was found.

# CHAPTER VI

## RESEARCH METHODOLOGY

There is much research being conducted in the area of hypnosis. Numerous approaches have been used to observe hypnotic phenomena, and there has been an attempt to standardize the experimental methodology so that information acquired in one study may be comparable to other studies. The suggested methods offer means of controlling variables and quantifying findings. Some of the widely accepted discoveries will be reviewed but first the more prominent researchers and their methods will be discussed.

Beyond a doubt, the most controversial researcher has been Barber. He has received most theories and discoveries in hypnosis with great skepticism and criticism. Not only has Barber (1969a, 1970) insisted that no evidence has been offered to support the notion of an altered state of consciousness, but he has also questioned the existence of hypnosis and the hypnotic experience. Barber asserts that all of the conditions which occur in hypnosis can occur in the waking state. While it is not unusual for a phenomenon or symptom of one condition to be observed in another condition, a condition will generally have at least one symptom which is peculiar to itself. Not one symptom or phenomenon has been identified which is unique to hypnosis. It should be pointed out that several physiological conditions, or diseases do not

have one symptom that is not shared by another condition. The diagnosis of a physiological or even psychological condition is very often based on the pattern or combination of symptoms observed, and not symptom uniqueness.

Barber (1969a, 1969b) has given a rather detailed description of what should be studied about hypnosis, and how. Firstly, the behavior to be observed should be specified in advance to avoid speculation about responses not directly observed. Secondly, the antecedent variables should be specified. Thirdly, a functional relation between the antecedent and consequent variables should be delineated by empirical investigation. Finally, an attempt to subsume the relations under general principles should be made or at least an explanation of why they can not should be offered. If research in hypnosis could be conducted along these lines, the findings would be valuable, or at least verifiable. However, it seems to be still somewhat beyond our present technology to find and prove relations, especially functional ones, because not enough is known about the functions and properties of the mind.

An example of this difficulty is Barber's (1970) contention that while subjects may report anesthesia, their bodily signs still register pain, causing doubt as to whether they really are experiencing anesthesia. While pointing out that Sutcliffe has also reported these findings, Hilgard and Atkinson (1965) have questioned the belief that the only

dependable responses are physiological, concluding that this noes not discredit the phenomena of hypnosis. Actually, no one knows exactly what pain is; so, the questions are as yet unresolved.

A quantitative method for testing hypotheses in hypnosis has been proposed by Starr (1970) using multiple regression and statistical inference. She stipulates that any hypothesis tested should be put in the form of a regression equation with one or more sources of information used as base on the prediction. Lieberman (1972) has postulated a paradigm for control, which simply requires two conditions, the hypnotized and the unhypnotized, the latter serving as a control group. When studying an observable task, this method helps to determine which stimulus has caused what phenomenon.

Sarbin and Coe (1972) have designated eight stages or levels of role playing to categorize phenomena studied in this area of role-theory research in hypnosis. They are:

0 - none

I - minimal amount of acting

II - amount necessary for assessment

III - heated acting

IV - catalepsis, compulsive, posthypnotic behavior

V - conversion hysteria

VI - suspension of voluntary action, "possession"

VII - ultimate control by the environment

Josephine Hilgard (1970) has done some of the most

extensive work in personality and its relation to hypnosis and susceptibility. Interviewing each of 187 Ss before the SHSS (Stanford Hypnotic Susceptibility Scale) was administered, she found strong correlations between type of childhood rearing, certain social aspects of the personality and the degree of susceptibility. Some determining factors found were severity of punishment in childhood, temperamental similarity to the opposite sexed parent, ease of communication in the interview, motivation for hypnosis and global ratings of normality. Some typical SHSS items taken from Weitzenhoffer and Hilgard (Hilgard and Atkinson, 1965) are:

1. Postural sway-falls without forcing
2. Eye closure-closes eyes without forcing
3. Hand lowering (left)-lowers at least six inches by end of 10 seconds
4. Immobilization (right arm)-arm rises less than one inch in 10 seconds
5. Finger lock-incomplete separation of fingers at the end of 10 seconds
6. Arm rigidity (left)-less than two inches of arm bending in 10 seconds
7. Hand moving together-hands at least as close as six inches after 10 seconds
8. Verbal inhibition (name)-name unspoken in 10 seconds
9. Hallucination (fly)-any movement, grimacing, acknowledgement of effect

10. Eye catalepsy-eyes remain closed at end of 10 seconds

11. Posthypnotic (changes chairs)-any partial movement

12. Amnesia test-three or fewer items recalled

As mentioned previously, some researchers use case histories to support or simply report findings, rather than offer a formal hypothesis or experimental method. A good example of this is Hall (1973) who reported that clinical observations suggest a significant neurophysiological component in hypnosis analgesia. His conclusion was based on a) cases of unusual response during brain surgery under hypnosis, b) success in hypnotizing naive children, c)success is hypnotizing adults with no preconceived expectations about hypnosis, and d) the verbal reports of subjects which seemed to verify the conclusion. This is in direct conflict with Sutcliffe (Hilgard and Atkinson, 1965), and Barber (1969a); however, it is a case study and can not be replicated easily.

The research done in hypnosis has led to varied discoveries related to 1) perception, 2) susceptibility, and 3) dream research.

Perception

In a study conducted by Aaronson (1965) it was found that depth can be altered by hypnotic suggestion. This is not the phenomenon of depth which is concerned with the level of a trance state. Here, depth is simply the dimension of distance in the subject's visual field. Objects can be made to appear closer or farther away. Elizabeth Erikson (1966)

has observed an alteration of visual perception. In the waking state when we look at invisible glass we are looking through and at the glass, simultaneously, ignoring dust streaks, perhaps through habituation. In the trance state, looking at and through are separable acts. The dust and streaks become very obvious. While hypnosis seems to increase perception of detail, it does so at the cost of speed.

Feinberger (1914) has noted the effect of hypnosis upon values of color, while Fogel (1963) has reported an effect on perception in general. Finally, Tart (1969) has reported a case of extrasensory perception resulting from hypnotic induction. The difficulty here, as with most studies in parapsychology, is the lack of verifiability of such a study, as well as a general lack of controls. Masters and Houston (1960) have also reported instances of telepathy, but most, like Wolberg (1965) and Barber (1970) would prefer something more substantial.

Susceptibility

A great deal of work has been done in the area of hypnotic susceptibility. Cronin, Spanos, and Barber (1967) have shown that favorable information about hypnosis raised the subject's expectations about their hypnotizability and increased their responses to objective and subjective suggestions. Barber (1969a) has further reported that the subject's attitude, expectancies, motivation in the situation, and the

wording and tone of the suggestion affect susceptibility. All of these are what Barber calls antecedent variables.

Cooper, Banford, Schubot and Tart (1967) have shown susceptibility can be modified, up to a point, by experience, with the better subjects profiting most. The increase was not a great one and there were contaminating factors. The motivation of the subjects would not be the same as the motivation of patients seeking therapy. There was no physician-patient relationship, and rapport seems to be very important in hypnosis (Tart, 1969). Also, by picking Ss with a certain amount of stability, they may have selected against change. As a result, no one really knows exactly how much experience would help. After considerable testing, Hartman (1967) concluded that there was no significant relation between susceptibility and social intelligence.

Ernest and Joseph Hilgard (1962) have, with illustrative cases, drawn an interesting picture of who can be hypnotized. Based on the developmental-interactive aspects of hypnosis, they concluded:

1. A firm discipline enhances susceptibility.
2. A lax discipline inhibits susceptibility.
3. In a case of overdemanding parents, the hurt personality responds fairly well to an authoritarian technique of induction.
4. A fantasy life, regulated by parents who help the child distinguish the real from the unreal helps

phenomena of cognitive distortions, e.g. amnesia and regression.

5. Sometimes, harsh but consistent rearing aids induction but persons raised in a happy atmosphere make the best subjects.
6. Those who identified with the like-sexed parent are more susceptible than those who identified with the opposite-sexed parent.
7. Extroverts are more susceptible than introverts.

Dreaming

Due to the apparent similarities between sleep and the trance state, a good deal of research has been conducted in an attempt to find a functional relation between the two. Thus far, however, no relation has been found (Barber, 1969b, and Moss, 1965b). As mentioned earlier, Domhoff (Moss, 1965b) has observed similarities between the EEG patterns of the hypnotic trance and REM sleep. Concerning both dreaming and perceptual changes during hypnosis, Moss and Stachowiak (1965b) found no evidence to substantiate the assertion that hypnosis can facilitate the latent capacity to understand symbolic language, a view often proposed by various handbooks and casebooks on hypnosis. According to Schneck (1953), the only difference between the waking state and the hypnotic trance was reported by Barber and Burguin. They found that an occasional brief disappearance of alpha activity may occur with certain hypnotic suggestions. While showing what

hypnosis is not, this particular area of research has not, as yet, shed much light on what it actually is.

# PART III

## The Future Use Of Hypnosis

# CHAPTER VII

## POPULARITY AND RESTRICTIONS

There is no way of being certain how popular or successful the clinical application of hypnosis is today. Very little is said about failures except for skepticism by Barber (1969a, 1969b, 1970) and an occasional report of failure, such as Shibata's (1968). Wolberg (1965) has suggested any failure in the procedure was due to improper induction. The concensus seems to be that failures are people who are not susceptible.

If increased acceptance is a measure of success, it is certain many are satisfied with the results they have achieved through the use of hypnosis, because it is more popular now. According to Moss (1965a), the Council on Mental Health of the American Medical Association released a report affirming the use of hupnosis in medical practice. On February 15th, 1961, the American Psychiatric Association followed suit, stipulating that all courses in hypnosis should be given in recognized medical training institutions (Chertok, 1966). One survey which shed some light on the extent of popularity hypnosis may be enjoying was a study conducted by Moss (1965a). He found that out of 39 Medical Scholls, 26 met the qualifications to teach hypnosis, but only 17 offered practica. In a survey of 54 psychology departments, 26 had instructors qualified as hypnotists, but only 9 offered any exposure to

the topic and 6 offered practica.

Some members of the medical profession are trying to restrict the use of hypnosis to themselves; that is M.D.s only. Moss (1965a) cited a report issued in 1961 which concluded that the shortage of physicians is being used to improve the status of non-medical healers, such as dentists and psychologists. This A.M.A. report went on to urge that corrective measures should be taken. Moss responded that unless psychologists protect their right to use this method which is basically psychological, they may be legally excluded from the field. This attitude of the A.M.A. is also discussed by Arons (1967).

The main reason the A.M.A. might be able to restrict the use of hypnosis is the lack of interest many psychologists have shown. While the American Psychological Association Council of Representatives voted to recognize the Society for Clinical and Experimental Hypnosis, Moss points out that only 15% of the Society's membership are psychologists. Also, they constituted less than 4% of the American Society of Clinical Hypnosis, as of 1965. Many attribute this to public prejudice and a lack of trained personnel to teach the subject (Estabrooks, 1957, Wolberg, 1965, and Arons, 1967).

Hilgard and Atkinson (1965) have stated that researchers like Sutcliffe and Barber have been misleading to readers. Along this same line of impression upon others, it should be mentioned that some authors have presented information without a full explanation or test of validity. One example

here would be Milton Kline (1960, 1967) whose case studies were mentioned earlier. Another would be Cook (1950) who claimed many unproven facts, e.g. more precautions need to be taken when hypnotizing women because of their emotional nature. He further claims that age extremely affects susceptibility, that American subjects display greater independence of thought, and that the Dutch are stoical and unemotional. These notions probably reflect the opinions of the author, who may have considered them common knowledge, not in need of testing. Some authors have inadvertently thwarted the acceptance of hypnosis.

Also hurting hypnosis was the belief that during a trance, a person could be coerced into undersirable activities. To this Scott (1960) has replied that hypnoanalysis is no more dangerous than any other interpersonal relationship. Supportive statements have come from Wolberg (1965), Shaw (1958), and Arons (1967). The public is better informed today, though, and hopefully hypnosis will continue to grow in popularity.

# CHAPTER VIII

## POTENTIAL

The potential areas of application of hypnosis are numberous and they will be briefly reviewed presently. Many uses have been found for hypnosis in the area of psychology. Several researchers and practitioners have suggested that hypnosis combined with another form of therapy would improve the original form of therapy. Combined with psychotherapy, it is called hypnotherapy or hypnoanalysis. Ludwig and Levine (1965) have found hypnotherapy more effective than just psychotherapy, and just as effective as psychedelic treatment, while less effective than hypnodelic therapy. These findings were based on a study in which all the subjects were administered a Linton-Langs Questionnaire both before and after treatment. Horsley (1943) has reported success with what he calls the narcohypnoanalysis technique, again a combination system. Hypnosis could be used as an adjunct to psychotherapy and medicine (Gindes, 1951). Scott (1960) found hypnosis especially useful for symptom substitution in hypnoanalysis. Gindes (1951) has divided hypnotherapy into hypnosynthesis and hypnoanalysis, as previously described. Others reporting success with this combination are Brooks (1922), Wolfe and Rosenthal (1973), Wolberg (1945, 1965) and Lindner (1944).

Wickramasekera (1969) has suggested that once the

therapist has been able to increase the reinforcing value of present adaptive forms of behavior by associating them with significant factors in the patient's past, he could influence many of the insights of the patient with types of expectation and demand characteristics. This could possibly be looked upon as the application of hypnosis to behavior modification. Other applications have been to specific conditions, e.g. Watkins' hypnotherapy of war neuroses (1949) and split personality (Prince, 1957). Hypnosis reportedly has been especially helpful with problems in human sexuality (Wolberg, 1965 and Erikson, 1967) and skin and allergic diseases (Hall, 1973 and Scott, 1960).

Erikson (1967) has delineated a specific sequence of steps to administer hypnotherapy. They are:

1. symptom substitution - replace incapacitating symptoms with nonincapacitating symptoms
2. symptom transformation - redirection of anxiety
3. symptom amelioration - keeping control of the symptom
4. correcting emotional responses

Luthe (1963) has emphasized the value of autogenic training. Meares (1961) and Weiss and English (1943) have stressed medical hypnosis, such as those practices exemplified by Hall (1973) and Gardener (1973).

An interesting development out of the physiological school has been reflex-conditioning therapy. Alexander (1968) has discussed techniques in this area, and Salter (1949) has

done similar work. Other areas of application have been in criminology, dentistry, and obstetrics. One example of the latter is the Houston Organization for Parent Education. HOPE offers classes in the LeMaze method of childbirth. Once believed to be based strictly on a conditioning principle, many researchers now realize that restricted concentration on one monotonous repetitious act, breathing, is very similar to autohypnosis. The growing popularity of HOPE is an indication of the amount of success this method has attained. No exact figure can be given, because LeMaze mothers are mixed in the hospital statistics with deliveries using natural childbirth and local anesthetics.

Some of the uses for hypnosis in research have been the hypnotic investigation of dreams which involves experimentally induced dreaming. Barber (Chertok, 1966) describes the hypnotically induced dream as a product of a posthypnotic suggestion. Moss and Slachowiak (1965b) have studied dream content. While Tart (1969) has done similar research, he has also conducted studies of paranormal phenomena, which have also been investigated by LeCron (1952). In a Masters Thesis, Synolds (1972) used relaxation training, a form of hypnosis, to develop efficient use of energy, resulting in improved handwriting. Levitt (1964) has investigated hypnotically induced anxiety in subjects to further the understanding of the development and effects of anxiety.

Many simply list those conditions in which hypnosis

can be used. These conditions are those regarded to be directly affected by emotional states, such as ulcers, skin conditions, menstruation, sexual functions, secretion of milk and many others. What becomes evident is that the hypnotic state is conducive to relaxation and to relieving tension. In this sense, hypnosis can relieve many conditions aggravated by anxiety and stress.

Dr. Jack Tracktir (1973) has explained that hypnosis is just one more tool which can be used with therapy. Hypnosis, he believes, should never be applied alone, but should serve as an adjunct with other methods. The therapist does best when the method of induction is simply whatever works best for a particular individual. Those physiological disorders which are most relieved by hypnosis are conversion reactions. Tranquilizers and their effects can be duplicated by hypnosis; however, hypnosis displays greater control since it can be turned off. ~~According to Tracktir~~, hypnosis is a state of concentrated awareness, or selective attention. No matter how deep it becomes it is not sleep, and the most important credential of any therapist using hypnosis is a knowledge of psychology.

# CHAPTER IX

## DEFINING HYPNOSIS

After considering the information collected, some conclusions can be drawn regarding the questions posed at the beginning of this thesis.

The first question, what is hypnosis?, essentially asks for a complete definition. Though there is no generally accepted definition, one will be proposed at this time:

> Hypnosis is an altered state of consciousness in which certain phenomena may occur, depending on conditions both internal and external to the person hypnotized, and which functions in much the same manner as a psychosomatic condition.

Consciousness is altered by a change in the tension state. The phenomena that may appear are those discussed in the third chapter of this thesis, all of which can be affected by the tension level. The influencing conditions are similar to those operating in a psychosomatic disorder, though the hypnotic trance is in no way pathogenic.

There are a number of other similarities between hypnotic experiences and psychophysiologic disorders. According to Coleman (1964) a psychosomatic disorder is a physical symptom resulting from emotional mobilization during sustained stress. Hypnosis is just the opposite, with phenomena, instead of symptoms, resulting from emotional immobilization during

reduced stress. Psychophysiologic reactions occur when emotional outlets are blocked and tension is then discharged through the individual's anatomy. In hypnosis, tension is usually reduced, allaying the emotions. Any reaction, usually the acceptance of a suggestion, occurs only when the subject is motivated to do so. Table 2 clarifies these similarities. It does not claim or suggest that these conditions are exactly the same. The functional similarities between hypnosis and psychosomatic reactions would explain why hypnotherapy has enjoyed the most success in conversion reactions. Some examples are skin conditions, tension headaches, gastrointestinal disorders, genitourinary disfunctions, and nervous system reactions including perceptual changes. In both cases, as far as symptoms or phenomena are concerned, the external influence is social and the internal influence is already in the physiological repertoire. No one has ever developed an ability through hypnotic suggestion which was not already a part of the individual's potential, and psychosomatic reactions are indicated by disorders the individual already has a tendency to develop.

While those offering physiologically-based theories consider the mechanism of hypnosis, and those favoring psychological theories consider the behavior of hypnosis, this theory stresses the interaction of the two, emphasizing that an externally induced idea becomes a physiological

Table 2

A Comparison of The Development
of a Psychosomatic Reaction to
The Induction of Hypnosis

| Psychosomatic Reaction | Hypnotic Induction |
|---|---|
| 1. Sustained stress | Motivation to participate |
| 2. Increased tension | Decreased tension |
| 3. Emotional mobilization | Emotional immobilization |
| 4. Stress outlets blocked | Reduced defences, opening inlets |
| 5. Resort to anatomical outlets | Increase susceptibility |
| 6. Express through symptoms | Carry out suggestions |
| 7. Identified as disorder | Identified as phenomenon |

This table attempts to delineate the relation of hypnotic induction to psychosomatic reactions. It is in no way intended to suggest that they are exactly the same, or that the stages are completely equal.

reality. In other words, how is the bodily state related to the mental state? Herein lies the shortcoming of this theory, since the explanation of hypnosis is dependent upon an explanation of psychophysiologic reactions, which themselves are not fully understood. Before offering a solution, the other questions will be discussed and a proposal of the elements of hypnosis with an evaluation of the theory will be presented.

The second question, why is hypnosis difficult to define?, has an answer related to the mind-body problem. How does mental information convert to physiological information? The question was unavoidable. If Descartes had not asked it, someone else would have, and many people do. However, prejudice has delayed the mobilization of investigation and eventual solution of this problem. That is, while the very technical difficulties of solving the riddle of the Cartesean dualism were inevidable, the rejection of hypnotism and other techniques related to the dualism were not. The rejection can be traced back to misinterpretations of evidence by some rather influential researchers in this field. This is not the only time progress has been thwarted by the reverence accorded to notions stipulated by prominent theorists. The same cautious manner which allows researchers to blindly accept prominent individuals' theories is probably behind the reserved manner with which some practitioners view a controversial procedure, such as hypnosis.

Thirdly, what areas need to be investigated to further insight into the hypnotic process? It would be helpful to delineate the elements of hypnosis, for herein lie the pertinent areas of research. The influence of hypnotic induction on a stressful situation will originate in the social environment. The degree to which an individual will attend to social influences will be related to the person's motivation to do so. Any motivation formed must be based on what has been learned. Learning is restricted to information which the individual is physically capable of perceiving. Interpretation of information perceived will be altered by the perceiver's personality. Personality is a product of what the individual was born with and what has been added by experience. The elements of hypnosis, going from the general to the specific, then, are social stimulation, motivation, learning, perception, personality and physiology.

A solution to the undefinable nature of hypnosis will be found in its elements, which can be categorized as internal and external. A means of supporting this assertion from the internal viewpoint, would be a brief discussion of the physiology of pain, which is related since it concerns the mind-body combination. An example is presented in the appendix. It is not the purpose of this thesis to determine the validity or popularity of any physiological explanation but to point out how emphasis on one element is not sufficient to explain hypnosis, as can be seen in the example given in the appendix.

A physiological description of consciousness overlooks the external influences. As pointed out earlier by Hilgard, there is no certainty that all experiences necessarily have a physiological counterpart.

All of the remaining elements are external aspects of influence. Since all but one of the elements are external it becomes evident that hypnosis is almost entirely a social experience. When the social stress and personal motivation is conducive to hypnotic induction, physiology is literally carried along. The most valuable data will be the lawful properties of behavior. One important area would be the points of social influence such as those discussed by Sarbin and Coe (1972). The personality factors correlating with susceptibility, like those pointed out by Hilgard and Hilgard (1962, 1965, 1970) would establish reliable measures. And, the relation of induction to learning experiences, such as the rate of learning and the effects of practice would help determine limitations and degrees of hypnotic experiences.

Like the other theories, this one is descriptive and does not explain hypnosis since it is not proven. Its value lies in its directional quality since it points out where to look for the answer. But it has a second use, as it considers the elements of hypnosis. A view emphasizing the elements of hypnosis suggests possible areas of application such as psychosomatic healing and the investigation of those areas from which the elements are derived. That is, an investigation

works both ways. If more is known about the elements, more is known about hypnosis; and, hypnosis in turn can be used to further investigation into these areas, e.g. personality, motivation, learning, etc..

At the same time, this theory suggests where we do and do not have verifiable facts. It becomes apparent that the areas outside of physiology are more important. Probably the most lawful data about hypnosis will come from learning approaches of investigation, e.g. Hilgard (1970), Secter (1969), Thompson (1970), and Alexander (1963), as well as personality correlates of susceptibility, e.g. Hilgard and Hilgard (1960, 1962). But most important of all, since most of the elements are aspects of behavior and social input, it becomes obvious that the people who are most qualified to study and use hypnosis are psychologists.

# BIBLIOGRAPHY

Aaronson, B., Depth perception and psychic experience, Altered States of Consciousness, New York; John Wiley and Sons, Inc., 1969, 263-271.

Alderete, J., The induction of hypnosis through an interpreter, Journal of Clinical and Experimental Hypnosis, 1967, 10(2), 138-141.

Alexander, L., Conditioned reflexes as related to hypnosis and hypnotic techniques, Journal of Clinical and Experimental Hypnosis, 1968, 10(3), 157-160.

Arons, J., Hypnosis in Criminal Investigation, Illinois; Charles C. Thomas, 1967.

Barber, T., An empirically based formlation of hypnotism, Journal of Clinical and Experimental Hypnosis, 1969, 12(2), 100-131.

Barber, T., Hypnosis: A Scientific Approach, New York, London, Cincinnati, Toronto, Melbourne; Van Nostrand-Rheinhold Company, 1969.

Barber, T., L.S.D., Marihuana, Yoga, and Hypnosis, Chicago; Aldine Publishing Company, 1970.

Beebe-Center, J., The Psychology of Pleasantness and Unpleasantness, New York; Russell and Russell, 1965.

Bramwell, J., Hypnotism: History, Practice and Theory, New York; The Julian Press, Inc., 1903.

Chertok, L., Hypnosis, Oxford, New York; Pergamon Press, 1966.

Coleman, J., Abnormal Psychology and Modern Life, Los Angeles; Scott, Foreman and Company, 1964.

Cook, W., Practical Lessons in Hypnotism, New York; Willey Book Company, 1950.

Cooper, L., Banford, S., Schubot, E., and Tart, C., A further attempt to modify hypnotic susceptibility through repeated individualized experience, The International Journal of Clinical and Experimental Hypnosis, 1967, 15(3), 118-124.

Cronin, D., Spanos, N., and Barber, T., Augmenting hypnotic suggestibility by providing favorable information about hypnosis, The International Journal of Clinical and Experimental Hypnosis, 1967, 16(4). 259-265.

Domhoff, W., Night dreams and hypnotic dreams: Is there evidence that they are different?, International Journal of Clinical and Experimental Hypnosis, 1964, 12(3), 159-168.

Erikson, E., Further observations on hypnotic alteration of visual perception, The American Journal of Clinical Hypnosis, 1966, 8(3), 187-189.

Erikson, M., Advanced Techniques of Hypnosis and Therapy, New York, London; Grune and Statton, 1967.

Erikson, M., Pantomime techniques in hypnosis and the implications, The American Journal of Clinical Hypnosis, 1964, 7(1), 8-33.

Erikson, M., The confusion technique in hypnosis, The American Journal of Clinical Hypnosis, 1964, 6(3), 183-208.

Estabrooks, G., Hypnotism, New York; E.P. Dutton and Company, Inc., 1957.

Feinberger, A., Note on the affective values of colors, The Psychology of Pleasantness and Unpleasantness, New York; Russell and Russell, 1965.

Fogel, S., and Hoffer, A., Effects of hypnotically induced changes in perception, Journal of Clinical and Experimental Psychopathology, 1963, 23, 24-27.

Gardener, G., Use of hypnosis for psycholgenic epilepsy in a child, American Journal of Clinical Hypnosis, 15(3), 166-170.

Gindes, New Concepts of Hypnosis, New York;, The Julian Press, Inc., 1951.

Gordon, J., Handbook of Clinical and Experimental Hypnosis, New York; Macmillan, 1967.

Grinkes, R. and Robbins, F., Psychosomatic Casebook, New York, Toronto; The Blakiston Company, Inc., 1954.

Hall, J. and Crasilneck, H., Clinical hypnosis in problems of pain, American Journal of Clinical Hypnosis, 1973, 15(3), 153-162.

Hall, J., Jungian Approach to Hypnotherapy, Lecture given to The Jungian Society, 1973.

Hartland, J., Education in hypnosis, American Journal of Clinical Hypnosis, 1968, 11(2), 125-127.

Hartman, B., Hypnotic Susceptibility and social intelligence, American Journal of Clinical Hypnosis, 1967, 10(1), 37-39.

Hilgard, E. and Atkinson, R., Introduction To Psychology, New York, Chicago, Atlanta; Harcourt, Brace, and World, Inc., 1965.

Hilgard, E., Hypnotic Susceptibility, Chicago, New York; Harcourt, Brace and Workd, Inc., 1965.

Hilgard, E. and Hilgard, J., Development-interactive aspects of hypnosis; Some illustrative cases, Genetic Psychology Monographs, 1962, 66(1), 143-178.

Hilgard, J., Personality and Hypnosis, Chicago; University of Chicago, 1970.

Horsley, J., Narco-Analysis, New York, London; Oxford University Press, 1943.

Hull, C., Hypnosis and Suggestibility: An Experimental Approach, New York; Appleton, Century, Crofts, Inc., 1933.

Kline, M., Hypnodynamic Psychotherapy, Illimois,; Charles C. Thomas, 1960.

Kline, M., Psychodynamics and Hypnosis, Illinois; Charles C. Thomas, 1967.

Krech, D., Crutchfield, R. and Ballachey, E., Individual In Society, New York, Foronto, London; McGraw-Hill Book Company, Inc., 1962.

Krippner, S., The psychedelic state, the hypnotic trance, and the creative act, Altered States of Consciousness, New York; John Wiley and Sons, Inc., 1969.

LeCron, L., Experimental Hypnosis, New York; Macmillan, 1952.

Levine, J. and Ludwig, A., Alterations in consciousness produced by combinations of L.S.D., hypnosis and psychotherapy, Psychopharmachology Abstract, 1965, 7, 123-217.

Levine, J. and Ludwig, A., The hypnodelic treatment technique, The International Journal of Clinical and Experimental Hypnosis, 1966, 14(3), 207-215.

Levitt, E., Persky, H., and Brady, J., Hypnotic Induction of Anxiety, Springfield; Charles C. Thomas, 1964.

Lieberman, L., Appropriate controls in hypnosis research, American Journal of Clinical Hypnosis, 1972, 14(4), 231-235.

Lindner, R., Hypnoanalysis of Crime, New York; Grune and Stratton, 1944.

Livingston, W., Pain Mechanisms : A Physiologic Interpretation of Causalgia and Its Related States, New York; The Macmillan Company, 1947.

Luthe, W., Autogenic training : Method, research and application in medicine, American Journal of Psychotherapy, 1963, 17, 174-195.

Masters, R. and Houston, J., The Varieties of Psychedelic Experience, New York; Holt, Rinehart and Winston, 1966.

Meares, A., A System of Medical Hypnosis, Philadelphia, London; W.B. Saunders Company, 1961.

Moss, C., Hypnosis In Perspective, New York, London; The Macmillan Company, 1965.

Moss, C., Hypnotic Investigation of Dreams, New York, London; John Wiley and Sons, Inc., 1965.

Owens, H., Hypnosis by phone, American Journal of Clinical Hypnosis, 1970, 13(2), 57-61.

Podmore, F., From Mesmer to Christian Science: A Short History of Mental Healing, New York; University Books, 1963.

Prince, M., The Dissociation of a Personality: A Biographical Study in Abnormal Psychology, New York; Meridian Books, 1957.

Sarbin, T. and Coe, E., Hypnosis: A Social Psychological Analysis of Influence Communication, New York, Atlanta, Dallas, Montreal, Foronto, London, Sydney; Holt, Rinehart and Winston, Inc., 1972.

Salter, A., Conditioned Reflex Therapy, New York; Creative Age Press, 1949.

Schneck, J., Hypnosis and Modern Medicine, Illinois; Charles C. Thonas, 1953.

Scott, M., Hypnosis in Skin and Allergic Diseases, Illinois; Charles C. Thomas, 1960.

Secter, I. and Tremain, L., The psychology of learning applied to hypnosis, American Journal of Clinical Hypnosis, 1969, 11(3), 191-195.

Shaw, S., Clinical Applications of Hypnosis in Dentistry, London, Philadelphia; W. B. Saunders Company, 1958.

Shibata, J., Limits of application of autogenic training to Schizophrenics and selection of patients, American Journal of Clinical Hypnosis, 1968, 11(2), 99-101.

Shor , R. Hypnosis and the concept of the generalized reality-orientation, American Journal of Psychotherapy, 1959, 13, 582-602.

Shor , R., Three dimensions of hypnotic depth, International Journal of Clinical and Experimental Hypnosis, 1962,, 10(1), 23-38.

Shore, R., Orne, M. and O'Connell, D., Psychological correlates of plateau hypnotizability in a special volunteer sample, Journal of Personality and Social Psychology, 1966, 39, 80-95.

Starr, F., The remarriage of multiple regression and statistical inference, American Journal of Clinical Hypnosis, 1970, 13(3), 175-198.

Solovey, G. and Melechin, A., Concerning the nature of hypnotic phenomena, Journal of Clinical and Experimental Hypnosis, 1957, 15(1), 67-76.

Synolds, D., Learning Problems Linked With Writing Problems, In requirement for a Masters Thesis, University of Houston, 1972.

Szasz, T., Pain and Pleasure: A Study of Bodily Feelings, New York; Basic Books, Inc., 1957.

Tart, C., Altered States of Consciousness, New York; John Wiley and Sons, Inc., 1969.

Thompson, A., Clinical and experimental trance: What's the difference?, American Journal of Clinical Hypnosis, 1970, 13(1), 3-5.

Tinterow, M., Foundations of Hypnosis From Mesmer to Freud, Illinois; Charles C. Thomas, 1970.

Tracktir, J., Personal conversation, 1973.

Watkins, J., Hypnotherapy of War Neuroses, New York; Ronald Press Company, 1949.

Watson, R., The Great Psychologists, New York, Toronto; J.B. Lippincott Company, 1971.

Weiss, E. and English, O., Psychosomatic Medicine: The Clinical Application of Psychopathology to General Medical Problems, Philadelphia, London; W.B. Saunders Company, 1943.

Wickramasekera, I., Reinforcement and/or transference in hypnosis and psychotherapy: A hypothesis, American Journal of Clinical Hypnosis, 1969, 12(3), 137-141.

Wolfe, B. and Rosenthal, R., Hypnotism Comes of Age, New York, Indianapolis; The Bobb-Merrill Company, 1973.

Wolberg, L., Hypnoanalysis, New York; Grune and Stratton, 1945.

Wolberg, L., Hypnosis: Is It For You?, New York; Grune and Stratton, 1965.

# APPENDIX

## A Physiological Explanation of Pain

Szazy (1957) has expressed the opinion that physiology will throw real light on the mind-body problem, describing the mind as a pattern and the nervous system as its threads. Weiss and English (1943) have pointed out that illness caused by emotion is as real as pain from bacterially derived disorders. A list of interpretations regarding physiologic mechanisms has been offered by Livingston (1947). They are:

1. Pain is a perceptual event and thus is affected by ideas.
2. Its underlying impulses are physical mechanisms.
3. The impulses may be responding to various stimuli.
4. They are altered by the internuncial central neurons in the spinal cord.
5. Each functional level of the nervous system further modifies the impulses.
6. The resultant sensory impressions register as a pattern of excitation in the sensorium, so that particular sensations can be recognized.

In a more detailed explanation, Weiss and English (1943) have described sympathetic nerve fibers associated with vascular supply, found in the brain covering, which have been shown to carry pain fibers. Headaches are due to intracranial pressure changes in those fibers, in turn affecting their intraventricular pressure. As a result, an emotional influence can cause the autonomic nervous system to create a circulatory disturbance which results in a headache.

One adaptive value of emotional influence is that increased tension or anxiety utilizes our mental resources to plan, alerting the organism to impending dangers, as suggested by Grinker (1954). He adds that anxiety is the central focus of psychosomatic diseases. Beebe-Center (1965) has added the concept of hedonic tone, a general algebraic variable whose values equal pleasantness when positive and unpleasantness when negative. Hedonic tone, according to Beebe-Center (1965), depends directly upon neural processes in the thalamus. This is based on varied studies, such as Goltz's which caused him to conclude that consciousness is not a direct function of the cortex alone, but also the infra-cortical centers. Also, Lashly found cortical mechanisms nonessential to brilliance discrimination, which Beebe-Center interpreted as strong evidence against the notion that the cortex is the sole immediate determinant of consciousness. Beebe-Center concluded that the essential organ of the optic thalamus is the consciousness center of certain sensation elements.

The general feeling derived from this viewpoint is that pain has a physiological explanation and that having a physiological counterpart gives a sensation, ie. pain, the quality of being real.