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THE PROFESSIONAL USE OF HYPNOSIS:
SOME LEGAL AND ETHICAL IMPLICATIONS

A Thesis Submitted to the Graduate Division in Partial
Fulfillment of the Requirements for the
Degree of Master of Science

By
Reese Wells

KANSAS STATE COLLEGE OF PITTSBURG
Pittsburg, Kansas
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TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
Statement of the Problem	1
Need for the Study	1
Research Design	2
Scope and Limitations	3
II. THE HISTORY OF HYPNOSIS	5
Early Origins	6
Recent History of Hypnosis	15
Summary	19
Bibliography	21
III. THE NATURE OF HYPNOSIS	23
Theories as to the Nature of Hypnosis	23
Suggestibility	31
Trance Induction	36
Summary	47
Bibliography	49
IV. EFFECTS OF HYPNOSIS	56
Hypnosis and Freudian Concepts	56
Behavioral Manifestations of Hypnosis	60
Age Regression and Repression	66
Posthypnotic Suggestion	69
Asocial Uses of Hypnosis	71
Summary	81
Bibliography	84
V. PHYSIOLOGICAL CHANGES IN HYPNOSIS	89
Blood and Cardiac Reactions	90
Respiratory and Brain Reactions	93
Fatigue and Muscular Reaction	96
Sensory and Uterine Reactions	99
Summary	107
Bibliography	110
VI. HYPNOSIS AND THERAPY	118
Neurosis	118
Therapy	120
Summary	136
Bibliography	137

TABLE OF CONTENTS (cont.)

CHAPTER	PAGE
VII. LEGAL REGULATION OF HYPNOSIS	141
Legislation Abroad	141
State Legislation	145
Summary	148
Bibliography	149
VIII. SUMMARY	150
Conclusions	159
Recommendations	165
APPENDICES: A	169
B	171
C	176
D	178
E	180
F	182
G	184
H	186
I	188
J	191
K	193
L	195
M	200

ABSTRACT

This is a study of the legal and ethical aspects in the use of hypnosis. The need for the problem is posed by the great amount of lay interest in the performance of trance induction. Historically, hypnosis has been the subject of periods of rising and falling interest. Since World War II, when it came into extensive use for therapeutic purposes, interest in hypnosis has been on the upswing. The consequent publication of literature on the subject has kept interest at a high level.

In compiling information for this study the writer has turned to books, journals, abstracts, newspapers, magazines, and other written materials. He has also corresponded with leading authorities in the field. The research procedure also has called for written inquiries to governmental agencies in this country and overseas.

The use of hypnosis dates back almost to the dawn of civilizations. The trance inductions described in the literature of various cultures the world over were roughly the same as those used today. However, in periods of the past, hypnosis had connotations of the supernatural. Anton Mesmer effected the transition to modern use. Early modern experimenters employed it for a great number of purposes--particularly as an anesthetic. It has found even wider use today.

Theories concerning hypnosis are many and varied. They

range from those of sex and subordination to cortical dissociation and conditioned reflexes. Nobody knows for certain what takes place in the trance induction. Experiments show that just about anybody can produce a trance provided he finds the proper subject. It has also been found that the ability to enter trance is a part of just about all of us. Trance depth can range from light to almost lifelessness.

The entranced mind appears to have a certain plasticity not found under ordinary conditions. By means of suggestions properly used the operator can elicit responses of regression, kinesthesia, hallucination, and anesthesia, to name a few. It is also possible to obtain personal information not ordinarily available from the subject and to implant ideas and compulsions that otherwise would be foreign to the subject.

Contrary to popular belief it is possible to elicit many asocial responses from entranced subjects. They have been persuaded to commit acts of assault, theft, lying and other asocial performances. Subjects have also been abused unintentionally by hypnotists.

Many physiological changes can also be brought about by means of hypnosis. By employment of indirect suggestions to entranced subjects, experimenters have noted changes in heart beat, respiration, blood pressure, blood content, muscular reaction, body temperature and other voluntary and involuntary functions of the body.

Hypnosis offers great promise as an instrument of therapy. Because it is possible to render the subject's mind to a plastic state, hypnosis has provided a handy means for the study of mental disorder. It has also been helpful in dentistry and medicine as an anesthetic.

There are few legal restrictions on the amateur use of hypnosis. Only six states have laws applicable to it. However, Great Britain specifically reserves hypnosis for the healing arts. Sweden also has restrictions on amateur performances.

The writer concludes that evidence supports the need for legislation restricting the use of hypnosis to those engaged in the healing arts. It is felt that the likelihood of unintentional harm is greater than that of intentional harm. A sound background in mental dynamics is recommended for those who would employ hypnosis.

CHAPTER I

INTRODUCTION

Statement of the Problem

The supposed "dangers" of hypnosis have been the subject of great controversy throughout the ages. The question has never been resolved to the satisfaction of practitioners. The purpose of this thesis has been to determine whether there are dangers in the use of hypnosis and whether there should be safeguards to avoid them. It is a study of the legal and ethical aspects of hypnosis.

Need for the Study

Hypnosis has a history marked with the rising and falling of interest. From newspaper and journal reports on the subject, interest in hypnosis at the present is rather strong. Its use in therapy during World War II has been the subject of many articles in professional journals and technical books. Accompanying this professional interest has been a wave of curiosity from laymen. Amateur investigations have produced one book--a best seller, incidentally--which claims that hypnosis has been the avenue by means of which subjects have been transported beyond the shades of death to previous life. The public preoccupation with reincarnation influenced hundreds of people to become practitioners or subjects in order to investigate their "before lives."

Concomitant of this lay interest has been the use of hypnosis for public entertainments in night clubs and on television.

In view of public interest in hypnosis it would appear that the question of whether hypnosis poses danger to the subject would be pertinent. This, of course, calls for a definition of what one can consider as dangerous.

The word is used here to imply psychic, physical or social harm.

For example, if one who is under the influence of hypnosis can be persuaded to perform acts contrary to his normal conduct this would be dangerous to him in a behavioral sense, particularly if such acts are considered by society to be antisocial or amoral.

Evidence that this has been done will be found in later chapters of this thesis.

The writer feels that a more serious danger is posed in the possibility of disturbing the subject's psychic welfare. It will be shown later in this thesis that this can happen in the close relationship between the hypnotist and his subject without a conscious knowledge of either of what has happened.

Research Design

This thesis is intended as a discussion of arguments on whether hypnosis can or cannot be used to the detriment of the subject.

With the exception of one original and informal experiment, the material used in this thesis is derived from newspapers, magazines, books, journals and letters.

From a survey of the literature the writer found an abundance of material suited for the purposes of this discussion. It was felt from the outset that original experimentation in this field requires a greater degree of professional knowledge of psychodynamics than the writer possessed. This opinion has since been reinforced to the extent that the writer feels that only those who have demonstrated a sound knowledge of human behavior should be permitted to use hypnosis.

Scope and Limitations

As has been stated previously, the conclusions of this thesis have been drawn from a survey of the literature on the subject of hypnosis. Because it is of a survey nature, conclusions of experimentors have been accorded more importance than their rationale of research, except in certain instances in which their findings have been challenged.

The reason for this is obvious. Hypnotism has been the subject of an untold number of volumes and experiments. To detail each of them would be to obscure the forest with the trees.

In conducting his research the writer has used libraries of Kansas State College at Pittsburg, Kansas; Memphis State University at Memphis, Tennessee; the University of Tennessee

College of Medicine at Memphis, Tennessee; Southwestern at Memphis in Memphis, Tennessee. He has also used public libraries of Memphis, Tennessee; Carthage, Missouri; and Joplin, Missouri.

In addition, he has corresponded with those engaged in research in hypnosis and with American representatives to governments abroad. Acknowledgment for their help is given elsewhere in this thesis.

CHAPTER II

THE HISTORY OF HYPNOSIS

A study of whether hypnotism should be limited in use only to those professionally qualified to use it demands a look into its history. There are two reasons for this: (1) the reader should be familiar with the background of the subject, and (2) it is necessary to distinguish between mass hypnosis and hypnosis as manipulated by the operator with the subject.

Numerous examples of both are found in the history of the subject. The Airbe Druad of ancient Ireland was an example of mass hypnosis. On the other hand, the Illumination by the Palms was an example of hypnosis as manipulated by the operator. (3, 9, 5)

The Airbe Druad and other incidents reveal that there is a force within the individual which betrays him under certain conditions. This force is called by some students "homogeneous" suggestibility, or autosuggestion. Another term, "heterogeneous" suggestibility, has been used to describe the force which is brought to bear when suggestion offered by another influences the individual.

It can be argued that heterogeneous rather than homogeneous suggestibility is operative in some cases, as when infirmities are cured under the exhortation of faith healers

or when one rushes out and buys an unneeded article after hearing a persuasive advertisement. It would be extremely difficult in a case of mass hypnosis to point an accusing finger.

Much less difficult is the identification of an individual who brings about trance induction in another.

Early Origins

The early history of hypnotism is a study of man and the mysterious. Hypnotism was a powerful force loaned by the deities to the sorcerer, priest or shaman for the manufacture of magic. Suggestibility so manipulated formed the basis of "white" or "black" magic the world over. It was used to cure or to destroy in the temples of Chaldea, Egypt, the Roman Empire, Greece, Persia, India, the South Sea islands, the ancient Orient and in other budding cultures. One might, in fact, safely say that the practice of the mental phenomenon known today as "hypnotism" antedates recorded history (3, 11, 15)

To obtain a glimpse into the early use of hypnosis, one must turn to religion and magic. Primitive man was a pantheist. He worshipped the sun, the moon, the stars, trees, rivers, springs, snakes and animals. When, in the transition from nature to fetish worship he came to set up carved sticks and stones to represent these things, he imputed to the inanimate objects the same invisible powers ascribed to the natural things they represented. His belief in these powers led him to be influenced by them. (3, 15)

In much the same manner, primitive man imputed to exceptional individuals--those, who by trance or other means had gained control of the gods within him--the power of those gods whom he controlled, giving rise to a class of greatly feared and respected individuals, the priests, sorcerers, prophets, physicians, shamans, kings and heroes who could make magic. Their power was limited only by the extent of human suggestibility. They could heal but they could also produce insanity, gross impairment of physical functions--or even death. (3, 15)

Interesting is this modern note from primitive times. A young Gubawingu tribesman was found recently lying in the bush near the Hirkkala Methodist Mission in desolated Arnhem Land of North Australia. Believed to be a victim of polio, he was flown to a Darwin hospital where a medical examination was conducted. No signs of polio were found.

The nineteen-year-old youth from a Stone Age culture experienced difficulty in breathing and swallowing and was placed in an iron lung. Physicians, by patient questioning, learned he was the victim of a curse pronounced by his mother-in-law in order that her daughter might marry a man from another tribe. A fellow tribesman explained, "Him bin sung song of dreamtime snake. When you sung song, snake coils around arms, legs and chest and you no longer breathe." (22)

The influence exerted by one individual over another is explained by Fraser's two principles of magic: the principle

of homeopathic magic, which is founded on the association of ideas of similarity, and the principle of contagious magic which is founded on the association of ideas by contiguity.
(12)

Thus, the Malayan who impales with a sharp instrument the wax image of his enemy is a practitioner of homeopathic magic, and the primitive Australian who becomes possessor of an enemy's tooth over which he chants a malediction is a practitioner of contagious magic.

The key to the success of either practice is the knowledge on behalf of the intended victim that he is the subject of these magical rites. Human suggestibility does the rest.
(12)

It is noteworthy that, after the victim of his mother-in-law's "snake song" had been convinced that white magic, that of healing, was more powerful than the destructive black magic his symptoms disappeared.

Although the name has been changed, the principles of primitive magic hold fast today. The medical doctor who successfully "cures" his patient with a placebo practices homeopathic magic. The tourist in Rome who buys a guaranteed chip of wood from the Holy Cross as a talisman of good luck unconsciously displays belief in contagious magic. Again, the power of suggestibility is at work.

Formal hypnotic induction, the "temple sleep" of the priests of Egypt, the Persian Magi, the Levites and the

Greeks is described in the literature of these civilizations. An Egyptian papyrus dating about 3,000 B. C. sets forth the procedure of modern hypnotism. (11) It was employed in the temples of Aesculapis (or Asklepios) for the ailing.

The visitor to the Asklepiian temple submitted to prayers, mineral baths, massages, inunctions and sacrifices, after which he was inducted into the rite of the "incubation" or temple sleep. The devices of incubation, in addition to the relaxation of baths, massages and inunctions, included fixation of attention, music and wine, of which all are employed by modern practitioners.

The ancient Irish were familiar with hypnotism. The Druidic "Imbasus Foresnai" or "Illuminating by the Palms of the Hands" was used by the priest for enlightenment--on one occasion as to whom should be the King of Ireland. As described by Cormac, King and Bishop of Cashel, the priest, after having pronounced incantations upon his palms, took his idols to bed. He then placed his hands upon his cheeks and, while four Druids chanted over him, fell into a deep sleep during which a vision appeared in answer to his question.

Another Druidic charm, the ritual sacrifice of a white bull, was employed to find a king for Ireland, which led to the coronation of Lugaidl as successor to Conaire More, who had died seven years previously. As described in the "Leabhar-Na-h Uidhre," the ceremony at historic Tara was commenced with

the slaughter of a bull. A portion of the flesh and broth was eaten by a man. Following this meal he slept while four Druids pronounced an oration over him. During his slumber he envisioned the countenance of the man who next would be king. (20)

Obviously, early day practitioners were men of considerable prestige. Their omnipotence was real in the minds of their followers. In this intrapersonal relationship rested the success of their inductions. Modern research has shown prestige to be an important factor in influencing human behavior. (8)

One of the most noteworthy of all personalities belonged to a man in whom was placed unswerving faith by his followers. They believed Jesus Christ could cure the blind. He did. They believed he could cure the leper. He did. They believed he could awaken the dead. He did. It is remarkable, however, that the majority of Christ's healings were those of cases known today to be of hysterical origin. (10)

The performance of such "miracles" of healing were not limited to Jesus Christ, however. The history of Scotland records the resurrection of a young convert by St. Columba, who came to the court of King Brude in the latter part of the sixth century. The venerable Saint also effected other startling cures. When the Druid, Broichan, tutor to King Brude, refused to liberate an Irish bondsmaid, Columba assured him that he would die. Upon becoming deathly ill,

Broichan sent for Columba. The priest placed in a cup of water a white pebble. It floated. After observing this miracle, Broichan drank the liquid and was cured. The bondsmaid went free. (20)

The physician, Greatrakes, stroked diseases out of his patient's body through the extremities. (21)

Physical abnormality often has provided the afflicted with the social stature necessary to influence others. The reason, perhaps, lies in the arresting appearance of the deformed, or, in the case of those mentally afflicted, the supernatural connotation ascribed by the primitive to trance and catalepsy.

Such an abnormality was the evil eye--thought to be possessed by those with eyes of an arresting nature such as the strabismic or nystagmic, or even those of penetrating gaze. Lord Byron was believed to be of the evil eye. (15)

Grotesque postures also have been used to facilitate evil inductions. The Celt concentrated the power of his spell by balancing himself on one leg, with one arm outstretched and one eye closed while pronouncing his incantation. Such a posture hardly could fail to convey to the intended victim the suggestion that evil things were about to befall him. (20)

Trance and catalepsy are remarkable examples of abnormal behavior by means of which individuals have been elevated to positions of great influence. The shamans of Siberia provide

an excellent example. Considered as individuals who have submitted to the will of the spirits to acquire great supernatural powers, they have been known to enter trances lasting for several years. Others have been known to be irresponsible to the point where they have to be watched constantly lest they wander off and freeze to death. Still others have been known to become ill and emaciated to the point of death, sometimes in a bloody sweat. (4, 9) The use of trance and catalepsy in shamanism also has been practiced by the Shasta Indians of California (4) and by the Peyote cults among Indians of the United States and Mexico (2, 17), to mention a few.

Age, in some cultures, elevates one to shamanism. When a Maya woman of the Yucatan is in labor, the old shaman, with words of their former idolatry, will enchant her and hear her confession, which eases the birth ordeal. (17)

In primitive cultures of the world today the belief in shamanism is strong. The faith of the followers is evidence that mental conditioning on behalf of the subject plays a vital role in the induction of the states of suggestibility.

Training in shamanism can be arduous. In order to promote his ability to enter trance readily, the Eskimo shaman, or angagok, submits to fasting, isolation, grinding stones for long periods of time, all devices to promote the ability to use autosuggestion. In addition, he learns a special language of obsolete words and symbolic expressions, even ventriloquism.

His seances are dramatic, performed in dim light or dark, with the angagok hooded or tightly bound behind a screen. He employs incantations, incessant drumming and song to accomplish his trance inducing purpose.

His followers behold strange things such as the piercing of the angagok's body with spears or knives, the opening of the body of the patient and cleansing of the intestines which are then replaced (naturally leaving no scar) and the removal of disease producing objects from the body by suction. (1)

Such a seance was witnessed among Eskimos of Greenland by Freuchen (13:134-135) when an elder of the tribe, Sorquq, was called upon to exorcise devils. Shortly after the commencement of the monotonous drum beat, the dancing and singing, Sorquq "disappeared" from view, his voice being heard coming up from the nether world. Freuchen relates:

All of us sat there singing as we had before. Ecstasy was upon the face of every man and woman. Their cheeks were swollen, their eyes bright and shining. They swayed back and forth to the rhythm of the song and their hands marked the double beats. No one seemed to see anything, but merely to use his eyes as beacon lights. In the middle of the floor was Krilerneq, writhing and twisting like a dancer.

Suddenly, one of the men, Kriskk, went out of his head. Unable to contain himself to the regular rhythm of the service, he leapt to his feet, crying like a raven and howling like a wolf. He ran amuck and the audience had to defend itself against his attack. He rushed at me. I pushed him away and he fell over Ivaloo. With a quick move of his hands he tore off her boots and pants completely, but she, almost as wild as the man, screamed not in fear but in ecstasy. They began to yell in a tongue I could not understand, certainly it was not the usual Eskimo language. But everyone seemed to understand

what was said, and, if there is such a thing as speaking in tongues, I heard it then.

The life of the neophyte shaman has its pitfalls. He may be killed by an older angagok with whom he is competing. Or, if he fails too often in cures, he may be regarded as a sorcerer and be destroyed.

Innumerable examples of mass hypnosis are recorded in history. One such example is found in the "Airbe Druad," the invisible hedge produced by incantations to surround an enemy. If an enemy could leap through the magic circle the charm would be broken at the cost of his life. Such a hedge was used at the battle of Culdreime in Ireland. (20)

The appearance of the flagellants in Italy in 1260 marked the onset of another example of mass hypnosis. Seized by the fear of Christ, the rich and poor, old and young, walked the streets with sighs and tears of remorse, scourging themselves with leather thongs until blood flowed from their wounds.

Only slightly more than 100 years later the continent was afflicted by the dancing mania which called peasants from their fields, craftsmen from their shops, housewives, boys and girls from their homes, to dance in the streets until exhaustion overcame them. The Children's Crusade and the witch hunts, inspired by the Papal Bull of 1488, provide other startlingly clear examples of human susceptibility to individual or mass suggestion. (19)

These principles are by no means extinct in our culture today. They are displayed in many religious ceremonies and entertainments. Faith healers continue to hold sway over the devout and faithful. (14) Modern music makes its contribution. The entrancingly repetitive beat of rock and roll is removed from the primitive only by its setting.

Recent History of Hypnosis

The transition of hypnosis from the primitive to the modern was accomplished by Franz Anton Mesmer, a native of Itznany, Switzerland, whose experiments with a magnet gave him the idea that similar power is possessed by the human hand. (15) Mesmer, whose graduating dissertation dealt with the subject of planetary influence on man, first attempted practice of Mesmerism in Vienna. His private seances came to an untimely end, however, after a "commission" sent by Maria Theresa investigated them and subsequently requested that he depart the city within 24 hours.

After some failures at Spa, Mesmer arrived in Paris in 1778 and soon was employing his talents profitably.

He rigged up baquets of wood, measuring a foot high and about 20 feet in diameter, which he filled with a mixture of hydrogen sulphide and other ingredients, the nature of which he would not disclose. Extending from the wooden covers of these baquets were iron conductors from which depended a ring for contact with the patients who stood, hand in hand, around the tubs.

Mesmer maintained that certain persons threw off an almost gas, or fluid, which he called animal magnetism. Because this quality could be transferred to inanimate objects, Mesmer believed, afflicted persons could be healed by the discharge of this magnetic fluid into the tubs. This theory of healing was in contradiction to the belief by animists that everything depended upon the changes induced in the subject's mental state.

Clad in a lilac suit, Mesmer busied himself playing a harmonica, stroking his patients with a wand and staring into their eyes. A private chamber was available should a "crisis" develop among his patients. That such crises did occur can easily be ascribed to the power of suggestion which produced spontaneous hysterical convulsions or hysterical trance states.

A government commission in 1784 discounted his theory. Mesmer subsequently left Paris. During that same year the Marquis de Puysegur produced the first report of a genuine "sleeping" trance. And, within the next fifty years, most of the major phenomena of hypnosis were discovered, including trance induced hallucinations, amnesias, anesthetics and other transformations. (15)

Scientific interest was directed toward Mesmerism through the efforts of James Braid, a surgeon of Fifeshire, Scotland, who settled in Manchester and became interested in the subject. At first skeptical, Braid was soon convinced

that Mesmerism was more than "collusion and illusion." By experimentation, he discovered that a self-induced sleep could be produced by a fixed stare at a bright, inanimate object. Through his work he proved that Mesmerism is subjective and personal. He called it neurohypnotism and, distinguishing it from natural sleep, theorized that it was a neurophysiological phenomenon. (6)

During the same year in which Braid's Neurypnology, or The Rationale of Nervous Sleep (5) was published in 1843, John Elliotson issued a pamphlet in which he related, "Numerous Cases of Surgical Operations Without Pain in the Mesmeric Trance." Elliotson, the first to use the stethoscope in England, met with the same reaction which has been accorded many researchers in the field since--ridicule.

While Elliotson was exhorting his profession to investigate the use of hypnosis for anesthetic purposes, another physician half way around the world was performing surgery regularly with no anesthetic other than hypnotic suggestion. A Scot in the Indian medical service, James Esdaile began to try hypnotism in operating on Hindu convicts in 1845, after having indulged in a hunch which enabled him to relieve by Mesmerism the suffering of a patient in great pain.

After having been put to severe test by the doubting deputy governor of Bengal, Esdaile subsequently compiled a record of 300 major operations and several thousand minor operations performed under hypnosis, with a mortality of 5.5 per cent. (15)

In his book, Hypnotism, Bramwell (7:160) gives the following description of an operation by Esdaile in which the subject was under hypnosis.

Dr. Esdaile...instructed a native assistant to commence the process and the patient quickly passed into a state of deep coma. Esdaile then amputated the leg six inches above the knee; Not a muscle moved, the pulse was steady and regular, and there was no perspiration on the forehead, no paleness on the countenance: in fact, the patient was as motionless as a corpse. Shortly after the operation he awoke in the most natural manner, stretching out his arms, yawning and rubbing his eyes. He said, in reply to questions, that he had had a good sleep and felt all the better for it. He was intensely surprised when told that the operation was over; and showed his gratitude in the usual native manner, by placing his hands on his breast and muttering blessings on the doctor.

The use of hypnotism went into limbo about the middle of the Nineteenth Century. It was revived after two decades for therapy by Liebeault, Bernheim, Charcot, Janet and others. But the interest was temporary.

Because of its sometimes transcendental nature, the hypnotic trance has been employed for many purposes, but not always with success. Such was the finding of a practitioner who was employed by the St. Louis Browns in the spring of 1949 to "remove the team's inhibitions and anxieties and generally improve their morale." When he left the team, it was in the American League basement. The same practitioner experienced similar failure the following year with the New York Rangers who eventually won only one game and lost seven in the National Hockey League. (18)

It should be pointed out, however, that such applications of hypnosis have not been limited to the American scene. Six hockey players in Hinckley, England, were placed in a trance and told by the hypnotist, "You will win. You will win," in a big game against Bedworth. Newspapers reported that the team's left halfback was so carried away he kicked a hat the 50-yard length of the field. The writer was unable to learn the outcome of the game. (23)

A great number of experiments involving hypnosis have occupied modern researchers. These will be discussed in later chapters of this thesis.

Summary

There is ample evidence in the writings of the ancients and in the primitive cultures that exist even today that hypnosis has been used to influence behavior since long before the dawn of civilization. Although it has had many names, its basis appears to lie in the suggestibility of individuals and groups. Certain factors have been found to heighten suggestibility.

Culture apparently plays a role. In primitive cultures the suggestion of intervention by supernatural powers has provided many startling examples of how behavior has been influenced by suggestion.

It is logical that primitive Irishmen would remain rooted to their tracks once told they were surrounded by a magic hedge which would claim the life of anyone who dared break it.

They were of a day and age when the gods walked the earth and commanded a healthy respect.

Although cultures change and gods vanish, transcendental forces survive in various guises. The 13th century Christian, convinced of the wrath of Christ, had no other recourse but to repent his sins or face eternal punishment.

The ages have produced men of commanding personality who represent spiritual forces to common man. They have performed their miracles because the masses have been convinced they could. The priest, the shaman, the angagok, the king--all were considered endowed with supernatural powers and were thus enabled to perform supernatural feats.

The age of enlightenment has produced a new set of gods--the scientists and physicians--who, by their knowledge (whether actual or imputed) can influence the behavior of the individual or the crowd.

It is this aspect of suggestibility which gives rise to the belief that prestige is a factor in trance induction. But this is not the only factor, and will be discussed in later chapters.

Another factor is the instruments by means of which trance induction is achieved, apart from the religious or cultural setting. The temples of health in ancient Egypt, Greece, and Rome employed these instruments--wine, soft music, and other relaxing and soporific devices along with the ele-

ments of monotony and repetition--in much the same manner in which they are used today.

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CHAPTER III

THE NATURE OF HYPNOSIS

Theories concerning the nature of hypnosis and the conditions under which it might be brought into use are of interest here. The relationship which exists between the hypnotist and his subject certainly should be taken into consideration in determining whether the use of hypnosis should be limited to those qualified to employ it. Of equal interest is the extent to which the general population is exposed to hypnosis through suggestibility. Another consideration of interest which deserves attention is the method of trance induction.

The following chapter will deal with these subjects in an effort to cast light on the problem.

Theories As to the Nature of Hypnosis

The hypnotic trance may be likened to the sharp scalpel of the surgeon. It provides the operator with a means by which the subconscious processes of the mind might be observed. Just as the surgeon makes an incision through the living tissues of the abdomen to lay bare the vital organs beneath, so, too, might the hypnotic investigator penetrate the surface layers of conscious control to reveal the realm of mentation which lies suppressed.

Many theories have been advanced to explain hypnosis. None has yet been proved. It is a mental state which, thus far, has defied attempts of investigators to impose upon it psychometric delimitations.

Theories concerning hypnosis are almost as varied as they are abundant. A century of investigation has failed to turn up an answer which embraces the wide range of physiological and psychological phenomena which can be elicited by means of hypnosis. Possibly another century will pass before the answer is found.

Classical theories, those of Janet (53), Binet, and Fere (6), and Charcot (16) held hypnosis to be a symptom of hysteria. In view of the prevalence of hypnotic susceptibility these theories are not now considered tenable.

Of the many schools of thought advanced on the subject, two find mention more frequently in the literature than others. Those are the theories of subordination and sex. (46)

Ferenczi (29) believed reaction to hypnotic suggestion was a result of regression by the subject to an infantile state in which the infantile attitude toward the parent of the opposite sex is assumed. Freud, as reported by Scheidlinger (87), also was impressed by the extreme dependence and submissiveness of the individual in relation to the leader. Comparing this relationship with that of a member in a crowd to its leader, he observed that, "Hypnosis has a good claim to being described as a group of two," (32:73). He agreed with Ferenczi in that

he felt that the hypnotist issuing the command to sleep assumed the role of the subject's parents.

Brill (13) also noted this "blind obedience" and ascribed it to the unconscious fixation of the libido on the person of the hypnotizer by means of the masochistic component of the sexual instinct.

Jung (56) described the inner mechanism of the fixation of subject to hypnotist as "more or less the relationship between the father and child." The patient falls into a sort of childish dependence from which he cannot defend himself even by rational insight.

Horsley (47) finds in drug hypnosis the same "willingness and even eagerness" to enter into a relationship of dependency, with "unquestioning surrender" to the hypnotist's commands.

Rosenweig and Sarason (82) find hypnotic susceptibility associated with "regression and impunitiveness." McDougall (63) found that hypnosis satisfied an "instinct of submission." Schneider (93) believed performances under hypnosis have the characteristic of instinctive action.

Farber and Fisher (28:150) find erotic components to hypnosis. They said that:

Many observers have compared hypnosis to sexual seduction . . . and it is commonplace that a male hypnotist can hypnotize women much more easily than men. It is noteworthy that practically all the erotic dream translations . . . were obtained from comparatively uninhibited women and from one male subject who was a rather passive individual with a marked attachment for the hypnotist.

Maierov (62) observes that the somnambulistic phase of hypnosis is characterized by "deep dissociation of cortical activity." He speaks of the "mechanism of negative induction by one cortical functional system on others." Prince (78), Burnett, (15) and Sidis (97) concluded that the degree of dissociation of cerebral functions was the key to hypnotic phenomena. Messerschmidt (65) also has investigated dissociation. Wolberg (108) advances the view that hypnosis is a spreading of inhibition over the higher centers of the cortex. Korotkin and Suslova (58) find evidence of the "irradiation of cortical inhibition"

Bennett (4) felt hypnosis to be a suspension of activity in the white substance of the cerebrum with a corresponding increase of activity in other parts of the brain. Heidenhain (44) singled out the ganglia as the seat of inhibition. Sidis (97) felt there was a "functional dissociation" of nerve cells. Volgyesi (101) and Hart (42) say anemia to be the cause. Eysenck (27) felt hypnosis involved a limiting of energy at the synaptic nerve junctions into a smaller number of channels.

White (106:488) observed that :

Dissociation, called upon to account for amnesia, post hypnotic phenomena, and those instances when impressions fail to govern motor processes, implies the subjects to be in a state of temporary fragmentation such that different parts of his behavior take place independently without their usual communication. These ideas deserve the respect which is due to first approximations but their prolonged survival keeps the theory of hypnotism in swaddling clothes when it should be grown to adult stature.

Schneck (90)(91) has found clinical data to illustrate that for some individuals hypnosis is equated with death. He concluded that this may be a protective or defense reaction and may pave the way for bridging the gap between animal and human hypnosis.

Schilder and Kauders (88) said that hypnosis and suggestibility have an erotic root. They pointed out that if one hypnotizes women he often observes before the hypnotic sleep and after the awakening a "glance of surrender" which is "characteristic of sexual excitement" and a trembling "corresponding to the trembling under erotic excitement." They said further that the "hysteriform rigidities" at the beginning of hypnosis often shows a relationship to the motions of coitus.

Freud (33:78), as might be expected, observed that:

From being in love to hypnosis is evidently only a short step. It is only that everything is even clearer and more intense in hypnosis, so that it would be more to the point to explain being in love by means of hypnosis than the other way around. The hypnotist is the sole object, and no attention is paid to anything but him . . . the complete absence of tendencies which are uninhibited in their sexual aims contributes further toward the extreme purity of the phenomena. The hypnotic relation is the devotion of someone in love to an unlimited degree but with sexual satisfaction excluded

Jones (55) also has found erotic components in hypnosis.

Frosh, Arlow, Ross, and Farachow (36) discuss homosexual feelings in the transference situation during hypnosis.

White (106) adopts a role-taking theory in belief that the subject behaves during the trance as he is directed by

the hypnotist. Wolberg (108) found hypnosis to be pleasure seeking.

Hull (48)(49)(50)(51) believes the difference between the hypnotic state and the normal state is quantitative rather than qualitative. The only thing which seems to characterize hypnosis as such and which gives any justification to the practice of calling it a "state" is its generalized hypersuggestibility. Wells (105) found all the phenomena could be produced without suggestion of sleep and offers the term "waking hypnosis."

Held (45) thinks that the transition to the hypnotic state is caused by the sympathetic stimulation which relaxes the lenses. For him there is a neuro-psychological parallelism. The sympathetic nervous system is phylogenetically older than the parasympathetic nervous system, and free association which is passive and is not controlled or directed consciously is psychologically an older form of mentation than is the conscious, alert, controlled thinking. The appearance of a neurologically older state (relaxing of the lenses) is accompanied by the appearance of psychologically older intellectual state.

Pavlov (76), Platenow (77), and Bechterew (3) raise the question as to whether hypnosis is a reflex conditioned by word stimuli. Pavlov (76) offers the suggestion that sleep and hypnosis involve a spread of cerebral inhibition. Bass (2) feels that Pavlov's reflex conjecture is less promising

than his hypothesis concerning sleep. Bass showed experimentally that the knee-jerk and voluntary reaction to signals, both of which either disappear or are greatly weakened during sleep, show a behavior during hypnosis hardly, if at all, distinguishable from that of the waking state.

Pavlov (76) has a kind or corollary to his theory of sleep. He puts forward the hypothesis that hypnosis is fragmentary sleep resulting from a partial irradiation from some central source.

Until such a time as evidence is presented to explain completely the nature of hypnosis the researcher must content himself with dealing with it as a personality manifestation and be reconciled to the fact that no two personalities manifest themselves in identical fashion, whether they are contained in two separate organisms or whether they are incorporated within the same organism.

Whatever the mechanism may be, the hypnotic trance presents a personality with a behavior pattern which, like that of the conscious level, is meaningful and goal directed.

Just as the extent to which flesh and muscle are exposed depends on the depth of the surgeon's incision, so, too, does the extent to which the id personality is revealed depend on the depth of the hypnotic trance (85)(60). Although trance depths occur in a continuum, observations of Davis and Husband (19) lead them to the belief that levels are characterized by certain phenomena. From their findings they have compiled

the following table:

DEPTH	SYMPTOMS
Insusceptible	
Hypnoidal	Relaxation, fluttering of the eyelids, closing of the eyes, complete physical relaxation.
Light trance	Catalepsy of the eyes, limb catalepsies, rigid catalepsy, glove anesthesia.
Medium trance	Partial amnesia, posthypnotic anesthesia, personality changes, simple posthypnotic suggestions, kinesthetic delusions, complete amnesia.
Somnambulistic trance	Ability to open the eyes without affecting the trance, bizarre posthypnotic suggestions, complete somnambulism, positive visual hallucinations, posthypnotic; positive auditory hallucinations, posthypnotic; systematized posthypnotic amnesias, negative auditory hallucinations, negative visual hallucinations, hyperaesthesias.

These manifestations are, of course, elicited at the suggestion of the operator. To all outward appearances, the subject may appear perfectly awake. His physical appearance, however, gives no indication of the plasticity of his mental state. Recognition of trance depth will come to the operator who learns to interpret the responses of his subject in terms of the subject's behavioral pattern.

One might easily see from Davis and Husband's table of depth phenomena the extent to which the processes of perception might be altered. It is this wide range which lends to the

psychological researcher the tools necessary for effecting reorientation of the individual, for the construction of new frames of reference. At the same time, it is this wide range of mental phenomena which makes the hypnotic trance a weapon rather than tool in the hands of the lay practitioner unacquainted with the dynamics of mentation.

Suggestibility

The instruments by means of which these levels are achieved are suggestions. By suggestion is meant the intrusion into the mind of an idea. The conditions of suggestibility, or the mind's readiness to accept ideas, include: fixation of attention; distraction of the attention; monotony; limitation of voluntary movement; limitation of the field of consciousness; inhibition; and immediate execution (103).

There is nothing mysterious in the element of suggestibility as it applies to society or to the individual. This is essentially the principle of behavior exploited by the advertiser in selling his product, the minister in preaching his gospel, the politician in selling his platform, and the nation in rallying its people. As Sidis (97:327) has observed:

Social suggestibility is individual hypnotization written large. The laws of hypnosis work on a great scale in society. Hypnotic suggestion is especially effective if it accords with the character of the subject. The same holds true in the case of social hypnotization. Each nation has its own bent of mind and suggestions given in that direction are fatally effective.

The effectiveness of suggestion must lie in its indirection. It must be inserted unobtrusively into the frame of reference in such a manner that it appears the logical course of action. Suggestion directly offered frequently arouses counter suggestion and defeats its purpose.

The pages of almost any "slick" magazine will provide ample evidence of the extent to which this principle of human behavior is applied by those whose job it is to influence the behavior of others--the advertising agencies.

Thus, a gleaming new car is shown in a setting rich with connotations of luxury--the suggestion being, not that this car is a good piece of machinery, but instead, that this car will lend to its owner prestige. The purchaser buys, not a conveyance, but a place in society.

The suggestibility of the individual leads Wells (105) to the observation that all of the phenomena of hypnosis, i.e., anesthetics, paralyses, etc., can be produced with no suggestion whatever of sleep. He offers the term "waking hypnosis" as a description of the state in which these phenomena appear in the absence of suggestions of sleep or drowsiness.

The suggestibility of the individual in the waking state can be employed by the hypnotist to determine the readiness with which the subject will enter the hypnotic state. Several means are available to the experimenter to determine suggestibility (51).

Among these is Cheveraul's pendulum which consists only of a plumb bob suspended on a string and a ruler. The ruler is placed on a table and the subject is given the string with the bob attached and instructed to suspend the bob directly over the middle of the ruler. Once this has been done the operator suggests that, with no movement of the hand, the bob will swing to another number. If, for example, the bob is suspended over the number "6" at the middle of the ruler and the suggestion is given that the bob will swing to the number "4", this will be done with no apparent effort by the suggestible subject.

Odor detection also has been used as a test for suggestibility. This test consists solely of implying an odor to an odorless liquid. Those who detect the implied odor display some degree of suggestibility inasmuch as they have incorporated the operator's suggestion into their perceptual pattern.

Two tests which have shown a high correlation as tests of suggestibility are the postural sway test and the heat illusion test (79)(37)(61). The subject undergoing the postural sway test stands before the operator with eyes closed, hands at his side and heels together. After a few moments he is given the suggestion that his body is beginning to sway slightly, either forward, backward, or to the side. Unless he deliberately inhibits the movement, the highly suggestible person will display considerable sway under these conditions.

The heat illusion test is conducted merely by offering suggestions of heat to a subject who is holding a device with a heat potential. The subject who "feels" heat when none is actually present displays suggestibility.

The variables governing suggestibility are almost unlimited. Haupt (43) believes that the extent to which one is suggestible may vary at different times from zero to 100 per cent. Prince (78) agrees with Haupt. Serog (95) claims that 100 per cent of normal men are susceptible to some level of hypnosis.

In a test of primary suggestibility and hypnotic suggestibility in a group situation, Furneaux (37) reported 62 per cent of men and 42 per cent of women in an audience of 105 males and 20 females experienced a marked reaction to a suggestibility test and 50 per cent of the men and 65 per cent of the women reported a marked reaction to a hypnotic induction test.

Bernheim (5)(13), who employed hypnosis on more than 10,000 subjects reported success with 85 per cent of them. Upon finding he could not hypnotize a patient of Freud's, he was convinced the method should be dropped. Bramwell (9)(10)(11) reported on attempts by 20 early-day practitioners to hypnotize more than 20,000 subjects in individual sessions. The report indicated a range of susceptibility of between 78 and 97 per cent.

Results obtained by Eysenck (26) with the postural sway test indicate the range of susceptibility to indirect suggestion at between 22 and 90 per cent. Reymert and Kohn (79) and Furneaux (37) have offered similar findings.

Experimental findings indicated that children are more suggestible than adults (51). The same findings revealed that girls were more susceptible than boys and women more so than men.

Bramwell reported the percentages for deep somnambulism ranged from 55 for children between the ages of 7 and 14 to 7 for adults between the ages of 56 and 63, with 10 to 20 per cent of young adults being susceptible. He concluded, quite naturally, that children are the most susceptible.

By the use of the heat illusion test, Reymert and Kohn (79) arrived at the conclusion that suggestibility is at the peak at the age of eight and varies inversely with age. Similar conclusions were obtained by Messerschmidt (66) in tests of primary and secondary suggestibility. Small (98) and Guidi (41) offer evidence that would confirm childhood as the time of greatest suggestibility, as do Binet (7), Papov (74), Sherman (96), Giroud (40), Rose (80), and Gilbert (39). Hull (51) and Coffin (18) reached the same conclusion after surveying literature on the subject.

Furneaux's (38) group test indicates women to be more suggestible than men. Seashore (94) and Davis and Husband (19) agree. Otis (73) finds only a slight difference in the

suggestibility of boys and girls. Only slight differences also were found by Friedlander and Sarbin (35), Brown (14), and Lodge (61).

LeCron (59) found that the majority of hypnotists tested for hypnotizability made poor subjects. Most agreed that they were too analytical of the process and critical of the tactics and suggestions employed. The suggestion was offered that hypnotizability was a function of interest.

Trance Induction

Granted, then, that a large segment of the population is suggestible, the question now arises as to who can utilize this characteristic in trance induction.

The relationship which exists between the subject and the hypnotist is one of the most important of all aspects of hypnosis. It is similar in nature to the relationship of a crowd to its leader. Just as the crowd is subject to the influence of its leader, so, too, must the individual be subject to the influence of the hypnotist.

Because of the behavioral similarity of the hypnotic subject to the submissive, dependent member of a crowd, Freud (33) has described hypnosis, as the writer has mentioned earlier in this chapter, as a "group of two."

Erickson (23) observed that the rapport which exists between the hypnotist and his subject is insensible to external conditions except when they are called to his attention by a

hypnotist.

Wolberg (108) found that the hypnotist is frequently considered by his subject as "an omnipotent individual vested with protective and punitive powers, whose commands cannot be resisted."

Ferenczi (29) found that the hypnotist could represent either a "father" or a "mother" image. In commanding the subject, the hypnotist assumes the role of his parents.

Brill (13:38) observes that, "In psychoanalytic therapy we are anxious to make the child independent so that he will not have to lean on the omnipotent parent. Hypnotism does just the opposite and for that reason alone it is not good as a form of therapy."

These theories of hypnotic relationship, and they are only a few of the many, are in strong agreement on one salient point--that the hypnotist is invested by the subject with almost unlimited powers. Such a situation in which ego defenses are lowered and the plastic sub-conscious levels are bared to external influences becomes dangerous in the hands of one who is ignorant of mental dynamics. Numerous examples have been found by this writer of actual cases of mental and physical distress caused unwittingly by the hypnotist in the trance situation.

Some subjects enter the trance state only with difficulty. Others are easily entranced. Many of the latter have fallen victim to a sometimes fatal mental conditioning

which highway safety experts describe as "highway hypnosis." Observed particularly on turnpikes, highway hypnosis is caused by monotony of landscape, the glare of sunshine, heat, the quiet purr of the engine, a minimum of grades and curves, and the rhythmic pattern of lights at night, which combine to produce drowsiness or sleep. One highway official blamed half of the fatal accidents on the New Jersey Turnpike in 1954 on this condition. To stimulate the driver, traffic experts have advocated that billboards and other monotony relieving distractions be constructed along the turnpike (70) (72).

Freuchen (31:242) tells of another form of trance induction:

In Greenland, as everywhere else, nervousness manifests itself in one form or another. When the hunters are out in their kayaks on still waters, they are often becalmed, with sun's bright glare reflected in their eyes as from a mirror. Suddenly, as they wait patiently for seals to rise to the surface, they are gripped with a paralysis which prevents their moving a muscle. They sit as if petrified and they say they have a feeling that the water is rising over them but they cannot lift a hand. Then, if a slight wind curls the surface of the sea, they are freed of the spell and come out of it. Or, if a companion happens to see them and paddles close, rests his hands on their kayak or touches it with his oar, they are enabled to move again.

Trance induction is an art which calls for a wide knowledge of human behavior. It involves much more than simply commanding the subject to sleep. The hypnotist must be aware of the role and self of his subject and must be prepared to orient his approach to fulfill those personality

needs which arise. It must be pointed out that no two subjects are alike. Their responses to the same stimulus will be different. A technique which produces results with one subject might fail with another. The hypnotist, therefore, must be prepared to evaluate his subject's reactions and alter his technique as needed (20)(75).

Brenman, Gill and Knight (12) found spontaneous fluctuations in "depth" of hypnosis occur when an existing psychological equilibrium is threatened. They concluded that the hypnotic state involves not only gratification of pregenital and oedipal libidinal needs but also a constantly changing balance between needs, hostility expressions and defenses against both these instinctual impulses.

Two basic approaches are available for trance induction. They are the "father" approach and the "mother" approach. The father approach is forceful and domineering. In using it, the hypnotist dramatically employs the subject's own fears as a means of implementing his commands. This is an approach frequently used for theatrical exhibitions because of its rapidity. On the other hand, the hypnotist who employs the mother approach gently persuades his subject into the trance state. It is more the approach of indirection.

Watkins (103:74-75) lists five general principles to further the trance induction. They are:

1. Establishing rapport with the patient and building up prestige in his eyes.
2. Securing a high degree of attention so that external stimuli are excluded.

3. Using a monotonous group of suggestions by voice, metronome or other comparable auditory and visual stimuli.

4. Utilizing challenges when they can be successful and avoiding them when the patient can meet them.

5. Maintaining at all times a confident manner.

One of the classical methods of trance induction was the eye fixation method employed by Braid (8:115). He reported that, "A patient may be hypnotized by keeping the eye fixed in any direction. It occurs most slowly and feebly when the eyes are directed straight forward and most rapidly and intensely when they can be maintained in the position of a double internal and upward squint."

A trance can be produced by auditory stimuli. Commonly employed are the ticking of a watch or metronome as the suggestion of sleep is offered (21)(103).

Tactual stimuli also has been employed. Stroking the skin of the face, head, arms, and hands, especially the region around the brows and eyes, are effective in some cases (52). If the reader will recall, this was the method used by Greatrakes in effecting cures with his patients (99). Sleep can also be produced by making downward passes over the body without actually touching the subject, while suggestions of sleep are offered. The role played by this sort of "hocus pocus" might possibly be to distract the subject to lend indirection to the verbal suggestions offered at the same time.

The hypnotic trance may be induced in the wide awake subject who is highly suggestible. Watkins (103)(104) reports an experiment in which a soldier was offered a \$10 bill if he could resist trance induction while he stared at the bill on a table. The experimenter kept his money. The term "waking hypnosis" has been offered by Wells (105) for this phenomenon.

Ordinary sleep has been used to promote the hypnotic trance. As the subject sleeps the hypnotist offers trance inducing suggestions in a voice sufficiently low to avoid awakening the subject. One such example proved embarrassing to the wife of a Frenchman who was awakened by his wife's talking in her sleep. Thereafter, he questioned her each night. Finally, realizing that her husband was aware of the activities of her daily life, the woman went to a physician with a plea for help (53).

Modern methods of trance induction call for a great degree of skill at indirect suggestion to promote trance induction. Christenson's (17) fast and slow confusion techniques are remarkable examples of these. The object of the technique is to distract and confuse the subject with chatter or physical stimuli, or both, as suggestions are introduced, without the subject realizing that the confusion has been created intentionally.

A modification of this method, which requires less skill, employs postural sway and ideomotor activity. As the subject

counts backward from 100 at a fairly slow rate, the operator offers sleep suggestions. At the same time, suggestions of arm levitation are given. As these suggestions are offered, the operator, who stands facing the subject with his hands on the subject's shoulders, gently causes the subject to sway in a circular motion.

A method frequently employed by stage hypnotists for fast induction requires that pressure be applied to the carotid artery and vagus nerve while the subject breathes deeply and suggestions of sleep are given. Because the supply of blood to the brain is interrupted, thereby causing the possibility of brain damage, the pressure should never be exerted for a period of more than 15 seconds. This is a method recommended for use only by the most highly skilled practitioners who are completely familiar with the physical condition of their subjects.

There are numerous other methods of trance induction of which all employ the basic principles of suggestibility mentioned earlier in this chapter. It is up to the hypnotist to determine which method is the most desirable in view of the subject's inclinations. Regardless of the method chosen by the hypnotist, he must exercise care in its use, or incur the risk of psychic damage to his subject. The hypnotist must also take care in the presentation of his suggestions to avoid setting up counter-suggestion. Schneck (92) had had a patient who was unable to close his eyes although he tried.

As Kline (57) has pointed out, specific words used in trance induction can produce sexual associations which lead to resistance of hypnosis. At all times the hypnotist must be aware that the hypersuggestibility of the subject, the extreme concentration of attention to a single stimulus, enables the subject to detect minimal cues which the hypnotist may not be aware of having offered.

As these things would indicate, the success or failure of an attempt at hypnotic induction may rest with the operator rather than with the subject. Estabrooks (25) believes that the subject is extremely sensitive to minute cues which in turn indicate what the operator actually expects the results to be. If the latter expects positive results the subject detects this fact and does his best to meet the expectations and vice versa. Frosh, Arlow, Ross, and Farachow (36) point out that under conditions in which the hypnotist and his subject or the therapist and his patient are in conflict, it is possible to inflict punishment.

The hypnotist must be prepared to recognize the trance state once it has been achieved. Subjects occasionally enter hypnosis after the attempt at induction has been abandoned. Although no harm can come from the trance itself, it is a good idea to make prearrangements for a signal to be given upon achieving deep hypnosis (24).

Another safeguard for the welfare of the subject would be to keep a complete record during the trance state in

order that compulsive ideas can be "erased" before the trance is ended.

Trance induction can be facilitated by the use of narcotics. If a resistive subject is given a barbiturate, and suggestions are superimposed over the seminarcotic state, a trance can be achieved readily in most cases (47).

Once the trance has been achieved by this method, or by other standard methods, posthypnotic suggestions can be given to facilitate the induction of a trance in future sessions.

Practice in the act of being hypnotized facilitates its performance. Hull (5) observes that the rate of gain is more rapid in early stages. He says that a period of disuse is followed by a partial loss of the facilitation. Erickson (24) estimates that four to eight hours of initial training will enable the subject to enter a trance readily.

One might also learn to place himself in a trance. The power of autosuggestion or homosuggestion, like that of heterosuggestion, is virtually unlimited. The thanatomania, or death by autosuggestion, which nearly claimed the life of the primitive Australian mentioned in the first chapter of this thesis, also has been known to cause death among Eskimos and other primitives. Salter (68)(84), a student of Hull's, believes that 20 to 25 per cent of those who try can achieve a deep trance. Another 10 per cent can enter a light trance, he says. McDougall (63) describes a subject who could

voluntarily throw himself into a trance-like state. His circulation was so modified that a needle could be thrust into the arm without producing bleeding.

The question has frequently arisen as to whether a person can be hypnotized without his knowledge or consent. The evidence points conclusively to the affirmative.

Already cited in this chapter have been examples of automobile hypnosis, involuntary hypnosis experienced by the Eskimos, sleeping hypnosis and the waking hypnosis induced by Watkins (103) who offered a \$10 bill to a soldier if he could resist trance induction.

Schneck (89), Estabrooks (25), and Watkins (103)(104) are in agreement that some subjects cannot resist the induction of hypnosis. Schneck (89) concludes that it is possible to hypnotize a person without his being aware of it. Adler and Secunda (1), Erickson and Kubie (22), Sargant and Fraser (36), and Rosen (81) all have used techniques aimed at preventing the subject from knowing he was hypnotized. Fresacher (30) has offered a paper on sleep induction.

A notable case of involuntary hypnosis is reported by Erickson and Kubie (22) who placed in a trance a woman patient in a mental hospital as she was ostensibly chaperoning another patient who was supposed to be receiving hypnotic therapy. The woman was subsequently given psychotherapy in the sleeping and waking states to relieve a depressive phase of manic depressive psychosis. All evidence indicated

she would not have permitted hypnosis.

The British Broadcasting System banned televised hypnosis in 1946 after a unique incident occurred in its London studios. While being auditioned for a show, a professional hypnotist sent four of the six audition judges into a trance. But that wasn't all. A secretary and an announcer, both of whom were watching the audition on monitors elsewhere in the building, also fell asleep. The proposed entertainment was flatly rejected with the comment that, "We consider it too dangerous" (69).

Probably one of the most publicized cases of involuntary hypnosis was that of a young woman on a television program who was offered \$100,000 if she could resist trance induction. She did not have a chance (71).

Much has been said about the induction of a trance. In these final words, mention should be made of means of terminating the trance. Occasionally a subject will be found who will resist the termination of the trance. Such a case happened in the early 1930's which resulted in a ban on future demonstrations at Allegheny College (67).

Such resistance on behalf of the subject is obviously a behavior manifestation which meets the needs of the subject at the moment (107). Left alone, he will awaken in time. This type of behavior is more the exception than the rule. Most subjects will awaken readily at the command of the hypnotist. Braid's (9) method was merely to clap his hands

sharply near the subject's ears. An equally effective method is to instruct the subject that he will awaken gradually as the hypnotist counts to three--and then begin counting as the subject reorients himself.

Summary

Theorists have offered a great number of theories as to what hypnotism is. It was once thought a symptom of hysteria. It has been found to be a relationship in which the subject subordinates himself to the operator much as a child subordinates himself to a parent. Sexual elements have been found in hypnosis by some. Others find it to be pleasure seeking. Neurology and reflexes have been offered as explanations. Theories are abundant and varied: none has been proved.

The extent to which hypnotic phenomena can be elicited is a function of depth. Indirect suggestion has been found more effective than direct suggestion.

Suggestibility of the subject in the waking state can be used as a means of determining his readiness for entering the hypnotic trance. Estimates on the extent of suggestibility range from 0 to 100 per cent. Women have been found to be more suggestible than men; children are more so than adults.

The relationship between the subject and the hypnotist is held to be an important aspect of the hypnotic induction.

Elements of sex and submission are most frequently found in this relationship. Hypnotists agree that the operator is invested with almost unlimited powers by the entranced subject.

Trance induction can be accomplished by a great number of methods. The two basic approaches are the stern commanding approach and the gently persuasive approach. One method of fast induction, by interrupting the blood supply to the brain, poses danger of physical damage to the subject.

Trance induction may be facilitated by use of narcotics. It may also be achieved in the waking state without the subject's awareness. Some people cannot resist the induction of a trance. One may place himself in a trance.

It has been observed that trance induction is accomplished readily with some individuals--those who have a high degree of suggestibility. Some estimates place this number as one in every four persons--a sufficient number to merit some safeguards for their welfare. Compounding this need is the fact that even a moderately suggestible person--once hypnotized and given the posthypnotic suggestion that subsequent inductions will be easier--will readily reenter trance on command.

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CHAPTER IV

EFFECTS OF HYPNOSIS

A great number of phenomena can be elicited from the subject in the trance state. The evocation of these phenomena argues for limits in the use of hypnosis. The purpose of this chapter is to present some of the major phenomena discovered by researchers through the years and to point out some instances in which they have been brought about to the detriment of the subject.

Hypnosis and Freudian Concepts

Turning once again to the Freudian concept of the human mind, one finds two areas of mentation, the Id and the Ego, at times functioning in harmony under the integrative influence of the Super Ego and at times in complete disharmony (28). Considering human behavior to be primarily adaptive, the extent to which equilibrium is maintained will be governed largely by the areas of agreement in which these two levels of thought operate.

It is in this field of interaction that psychoanalysis interests itself.

The subconscious is animalistic in nature. Analysis has consistently revealed that through its course currents of thought and feeling which are entirely alien to our conscious beliefs (32). The growth and development of the subconscious mind is in inverse ratio to that of the conscious mind. The

two exist on a continuum. From it derives abstract thought of the conscious level. This area of thought is ever active--collecting and storing ideas and impressions--often those subliminal to the conscious mind.

The Ego, or conscious mind, on the other hand, is cultural. It orients the organism within the sphere of society. It draws from the subconscious that which is needed for its purpose and rejects that which is unsuitable.

One who places himself in the hands of a hypnotist gives to him a passport to those realms of mentation which normally remain in obscurity. Psychic researchers are undecided as to why a subject will agree to this relationship. The relationship itself is recognized as a strong one whatever the reasons may be.

Many theories have been offered. Most of them recognize the hypnotist as a godlike figure whose words are commands. Ferenczi (25) likens the situation to a "father-child" relationship. The recovery of this feeling toned memory image of the father from the subconscious where it has lain repressed creates a fixation which Jung (37) describes as a neurotic formation which at times becomes extraordinarily powerful. Horsley (33:147) remarks that, "One of the most interesting features of hypnosis, whether of the verbally induced or drug induced variety, is the willingness and even eagerness with which the subject enters into a relationship of dependency upon the hypnotist with unquestioning

surrender to his commands."

Freud, as reported by Scheidlinger (67), was impressed by the "extreme dependence and submissiveness" of the subject. Rosenzweig and Sarason (65) found hypnotic susceptibility associated with repression and impunitiveness. McDougal (57) found that hypnosis satisfied an "instinct of submission."

Others add to this relationship an element of eroticism. Freud (28) comments that, "From being in love to hypnosis is evidently only a short step." Farber and Fisher (24) point out that a male hypnotist can hypnotize women more easily than men and they compare the situation to sexual seduction. Schilder and Kauders (68) note physical reactions to hypnotic induction that are similar to those of sexual excitement.

The interpersonal experience can be of value in the treatment of neuroses or it can be dangerous as Breuer had had occasion to discover. As Brill (7:36) relates:

There was another and perhaps even more conclusive reason for Breuer's ultimate retreat. His famous patient, Ann O., kept coming to see him for advice and assistance with her problems and Breuer, following his custom, used to hypnotize her. One day the young woman came to him in a hysterical state, and while he was going through the hypnotizing formulas, she suddenly grabbed him, kissed him, and announced that she had become pregnant by him. . . . The experience was too much for Breuer. He had not been able to brave the world of prudery to begin with, and this final incident was the climax. There and then he decided to separate from Freud.

These two elements, a soft, malleable and normally unresistive mind and the presence of an almost god-like

figure whose word is a command, can be combined to elicit from the individual behavior of a remarkable nature. The extent to which this can be accomplished is a function of depth. In cases of adequate depth, response to a command is compulsive.

It should be obvious by now that the trance itself poses no danger to the subject. The possibility of harm from hypnosis derives from the suggestions introduced to one in the trance state.

Hypnotic behavior may also derive from cues unwittingly given by the hypnotist and interpreted by the subject as a command. The latter has been known to occur, with the subject endowing specific words used in trance induction with sexual associations, which has led to resistance of hypnosis. In other cases, unwitting cues have caused the subject extreme discomfort.

All life experiences are recorded by the human mind. These experiences provide frames of reference by means of which the individual orients himself within his environment. They provide the basis for motivation. As Sidis (74:171) has observed, "An abstract general idea in the consciousness of the waking self has a particular idea as its basis in the sub-waking self."

Personality, then, is the sum of experiences and the interpretation given them.

When the subconscious mind is exposed, new "experiences" can be artificially introduced. That these experiences are

assimilated and provide bases for behavior of the waking self has been demonstrated time and again.

Behavioral Manifestations of Hypnosis

Ashley, Harper and Runyon (2) have shown that the psychological organization of a person contributes to the figural organization of his perceptions. A "coin" that appears to a "poor" subject as much larger than it actually is becomes considerably smaller in appearance when the same subject is given suggestions of a rich setting. Kluge and Steinwachs (44) found that even the writing and hand pressure curves of subjects were influenced by suggestions of situations such as "dancer, king, beggar, child."

Weitzenhoffer (86) has concluded that hypnosis per se can improve some functions or capacities and that suggestions can cause extensive alterations in nearly all organismic activities.

Another of the multitude of hypnotic phenomena is that of hyperaesthesia. Perception can be enhanced to a remarkable degree. It has already been noted that the limitation of attention enables the subject to perceive cues which normally would register only subliminally. Even more remarkable demonstrations of this phenomenon have been obtained experimentally.

Bergson(74) reported a case in which a subject who

appeared to be reading through the back of a book held and looked at by the operator was in truth reading the image of the page reflected in the latter's cornea. Sidis (74) describes a subject who apparently read with his eyes closed when really his eyelids were parted to such an imperceptible degree that detection was almost impossible. Hyperaesthesia has been demonstrated in the theater on many occasions by having the subject select from several apparently identical cards, one of which has been shown to him previously. The subject's discrimination of minute differences in texture, color, or form enables him to do this. On the other hand, Erickson (18)(19) has found that blindness and color blindness induced by hypnosis is as real subjectively as organic blindness.

Travis (79) and Lifschitz (52) found auditory thresholds could be lowered. Fisher (26) found that they could be raised. Sterling and Miller (77) found hearing could not be improved when it was already at peak levels.

Schneck and Bergman (70) found no improvement in performance during hypnotic states. Eysenck (23) investigated loudness discrimination and found no improvement between performance in trance and waking states. Erickson (17) found suggested deafness prevents the establishment of conditioning to sound.

Olfactory hyperaesthesia also has been demonstrated. Braid (74) related an experiment in which the subject was

able to restore an article of clothing to its owner by smell. Carpenter (74) recounted a similar experiment in which a glove was returned to its owner.

Kinesthetic hyperaesthesia is reported by James (35) who wrote, "I have seen a coin from the operator's pocket repeatedly picked out by the subject from a heap of 20 others by its greater 'weight' in the subject's language."

Another transcendental manifestation which can be brought about through hypnosis is that of hypermnesia--or superior memory. By means of this, memories long forgotten can be restored. Smith and Sawadski (75) used this phenomena in conjunction with regression in relieving a 20-year-old woman of stage fright which originated at the age of seven. They emphasized the superiority of hypnotic recall over waking recall. A complicating factor in the use of hypnotic recall, however, is the ability of the subject to hallucinate experiences (7).

In laboratory experimentation, White, Fox, and Harris (92) demonstrated that the ease of hypnotic recall depended largely on the type of material learned. Recall for meaningful non-verbal material, movies, was superior to that of meaningful verbal material. Recall of nonsense material was least efficient.

Temporal condensation under hypnosis has been extensively investigated by Cooper (8)(9)(14), Cooper and Rodgin (12), Cooper and Tuthill (13), Cooper and Erickson (10)(11),

Erickson (16), and Welch (87). The results of their investigations are in agreement that temporal condensation can be achieved. In an experiment on learning nonsense material under conditions of temporal condensation and in the waking state, Cooper and Rodgin (12) found that the time required, including presentation of the material, was 17.4 in the trance series compared with 41.0 in the waking series.

Cooper and Tuthill (13) were unable to obtain improvements in writing with the subordinate hand under conditions of hallucinated practice, although the subject felt he had received practice effects of having actually done it.

Cooper and Erickson (10) reported a marked facilitation in hallucinated violin practice under temporal condensation.

Early researchers were in agreement that subjects under hypnosis could estimate time more accurately than non-hypnotized subjects (53). Eysenck (23) found that space perception was a third better in trance states than in waking states, with no suggestion of improvements given.

Hypnosis appears to facilitate the formation of conditioned reflexes (73)(49).

Wells (88) has investigated the use of waking hypnosis for instructional purposes. Experiments in this have been successfully conducted. Allen (3) told the Virginia Academy of Science in 1937 he had increased grade averages from two to 16 points by telling entranced students at Hampden-Sidney, "As a result of this trance your powers of concentration will be greatly increased, your mind will work better, and you

will not be nervous during examination. You will have great ambition to be successful in your studies and to improve your class records."

Sherrard (82) said treatment restored confidence and removed "nervous inhibitions."

Dreams have been valuable in studying the process of symbolization. Because it is possible under hypnosis to remove some of the inhibitions of waking life--and because some hypnotized subjects have a facility for interpreting symbols--investigators have been able, to a limited extent, to investigate the meaning of dreams. Mazer (56) found a direct relationship between trance depth and the extent to which dreams took on a symbolic character.

Farber and Fisher (24), in one series of experiments, found that five of 20 subjects were successful in dream translation. Their findings emphasized, however, the amorphous nature of dream language, leading them to argue against too narrow an interpretation of symbols.

Klein (40) also was successful in investigating this field. He presented sharply defined stimuli to the subjects which invariably influenced the dream content, with the stimulus often in disguise or symbolized.

Sweetland, Anders, and Quay (78) found that the extent to which symbolism occurs is determined by the subject's emotional adjustment. The better adjusted subjects symbolized the most.

Dreams have proved useful as a diagnostic device in hypnoanalysis by Schneck (72).

The skillful and gradual use of hypnotic suggestion can be effective in bringing about in an individual a change of attitude toward life, rationalization, compensation, daydreaming, alcoholism, and sex. Using Thurston's study of Nationality Preferences and Grice's Scale for Measuring Attitude toward any Race or Nationality, Glasner (30) found that such changes were basic and not merely superficial. In an individual application, Watkins (84) brought about a change in a soldier's hostile attitude toward his commanding officer, thus effecting a better adjustment in military life.

The profundity of these changes has been investigated by Lane (46), Levine, Grassi, and Gerson (50)(51), Counts and Mensh (15), who obtained changes in Rorschach scores by implanting moods by hypnosis.

Just as attitudes and moods can be changed, so, too, can memories. Traumatic experiences can be reenacted and new interpretations given them. This is explained by Sidis (74:273) who says that:

Ideas, impressions implanted in the subconscious self, when accidentally dissociated from the upper personality, rise to the periphery of the consciousness as insistent ideas, imperative concepts and uncontrollable impulses of all sorts and descriptions. In hypnotic and especially in posthypnotic suggestion we hold the key of all conceptual and impulsive insanity.

Positive and negative hallucinations can be produced in the hypnotic subject. He can be made to see things which are not actually present.

Bernheim relates an experiment in which Leigois rendered himself invisible to an 18-year-old female subject of good reputation. Although he took many liberties which he otherwise would not have taken, i. e., pinching her calves and thighs, she failed to take note of his presence. He concluded that he could have assaulted her without her ever knowing it (74).

Age Regression and Repression

Age regression provides another valuable tool to the researcher in mental exploration. Under adequate conditions of trance depth some subjects can be regressed to extremely early ages in life. The regressions are physiological as well as mental. They can be induced or occur spontaneously.

EEG data convinced True and Stephenson (80) that regression to infancy was physiological as well as psychological. Reflexes established in the waking states are lost in regression. Reversal of the Babinsky reflex has been obtained.

Kline (42) advances the theory that regressions are a form of psychological activity involving disorientation for the subject and a reorganization of his perceptual equilibrium and control mechanisms, especially insofar as they apply to time and space perception.

Emotional patterns conform to the regressed age of the individual. Kline (43) regressed a 25-year-old subject to

the three-year level and exposed her to fear producing situations. Her reactions assumed a pattern similar to that of a child of that age.

The patterns of mentation conform. Keir (39) used word association tests, intelligence tests and the Rorschach test and found that, although personality is essentially unaltered, the mental age changes to conform with the regressed age. Kline (41), using the Otis Test of Mental Ability, found that IQ scores indicated that, "Changes in intellectual functioning reflect losses in maturational power and not in capacity of brightness." Hakebush, Blinkowski, and Foundilliere (31) claimed to have elicited neonatal reflex responses. Leeds (47) using the Goodenough Draw-a-Man Test and the Stanford-Binet, found changes which conformed to the age of regression. Mercer and Gibson (58) used these two tests and the Rorschach test to investigate regression and concluded that changes were real. Spiegel, Shore, and Fishman (76) regressed a soldier to earlier levels of life, using psychological tests for each age level. The scores made corresponded with those expected for the test level. Mairov and Suslova (55) found that speech characteristics changed. Elements corresponding to those of childish articulation are present in speech when early age, from one to five, is suggested. Appropriate changes were present when suggestions of growth were given. The authors also found that peculiarities to childish speech corresponded roughly to those which are

exhibited during the subject's childhood.

Regressions may bring about revivification. Five subjects regressed by True and Stephenson (80) to the age of one month displayed a reversal of the plantar reflex. Two subjects displayed the sucking reflex and one the Moro reflex.

Revivification can be harmful to the subject. A patient regressed by Erickson (16) to the time of life when he had been drugged and struck on the head, lapsed into unconsciousness again. Ford and Yeager (27) regressed a subject who at one time was afflicted with strabismus. Although the affliction had been corrected by surgery, it reappeared when the age of regression preceded the time of surgery.

In regressing a convict at Leavenworth, Wilson (93) ran into similar complications. The patient was regressed to a time of an attack of tonsillitis in which throat conditions had been so severe that a trachea tube had to be forced down his windpipe so that he could breathe. Although the tonsils had been removed, the attack took place with its original complications when the day had been reached.

Gidro-Frank and Bowerbusch (29) regressed a subject to early infancy and noted a reversal of the Babinsky reflex.

Experiences long repressed can be brought to light through hypnosis. That can also be further repressed. Amnesias can be induced that will render inaccessible even that material introduced during the trance in which the

suggestion of amnesia is given.

The amnesia can be maintained for extremely long periods of time. Wells (89) reports an experiment in which three subjects maintained amnesia for nonsense syllables for a year, only to recall them at the hour suggested when the experiments commenced.

Posthypnotic Suggestion

The final phenomenon to be considered in this chapter is that of posthypnotic suggestion. As one might suspect from the report of Wells' experiment in the preceding paragraph--suggestions given during the trance state can be maintained well after the initial trance has ended. The range of suggestions that can be so perpetuated is limited only by the range of suggestions that can be introduced into the trance state.

The influence of unconscious stimulation is seen in the reactions of persons to posthypnotic suggestion (38). It is believed by Franz that Bernheim and Liefault's posthypnotic experiments helped provide Freud with the starting point of his investigation of unconscious processes (1).

The effectiveness of the posthypnotic phenomena is long lasting. As mentioned previously, suggestions given by Wells (89) lasted for a year. Weitzenhofer (85) has reported observing it for 134 days. Erickson and Erickson (21) believe it can last for five years.

An experiment by Luria (54) demonstrates well the manner in which conflict introduced into a subject's subwaking personality rises to the surface to influence the subject's reaction to the conscious stimuli. The subject in this experiment was a woman medical student who was hypnotized and informed she had agreed to perform an illegal abortion. Before she was awakened a suggestion of amnesia for the hypnotic state was given. Thus was introduced into the subconscious an element contrary to the subject's training and beliefs.

Prior to induction of the conflict she was given a word association test in which some of the words referred directly to the artificial conflict. At that time she demonstrated no marked affective responses. However, after her arousal from the trance in which the conflict had been suggested, her responses to the significant word were retarded and variable, often accompanied by conspicuous motor disturbances.

After she was rehypnotized and the conflict was removed, the affective responses disappeared.

Huston, Shakow, and Erickson (34) persuaded a hypnotized subject he had accidentally burned a hole in a girl's dress with his cigaret. The subject subsequently became upset, complained of headaches and gave up smoking. He also exhibited a hostility toward the hypnotist which made it difficult for him to be rehypnotized in order that he could be given an understanding as to what had happened.

Asocial Uses of Hypnosis

An amateur's interest in hypnosis created a mild hysteria among sixth graders in Detroit's McLean school after their English instructor attempted to demonstrate trance induction.

A half hour after the demonstration, hysteria set in among some of the girls. One started to cry, another joined her and others said they felt sleepy or that their legs felt numb. Pupils blamed it on the instructor's "magic" and parents demanded his removal. Fortunately for all concerned the incident quickly was cleared up by school officials (59).

In another incident, a woman patient of Kline (48) was found to have lost control of her bladder and bowel functions as a result of having been regressed to the age of two by an amateur hypnotist who had failed to remove the effects of his suggestion.

An unhealthy interest in spurious claims of reincarnation led to the suicide of a 12-year-old Shawnee, Oklahoma, boy who took his own life in order to investigate the theory "in person" (6).

The question as to whether hypnotized subjects can be persuaded to harm themselves or others has been investigated by Rowland (66), Young (94), Wells (90), and others, with conclusions fairly in agreement that such is possible. In seeking to determine whether hypnotized persons would harm themselves, Rowland utilized a box covered with invisible

glass in which a live rattlesnake had been placed. The glass had been treated with a preparation to eliminate reflection. Each subject was instructed to pick up the "piece of rubber hose."

In determining whether hypnotized subjects would attempt to harm others a research assistant was seated behind the invisible glass and the subject was instructed to hurl nitric acid into his face.

Rowland (66:117) reported that although they appeared horrified at what they were having to do, the subjects in both instances complied with the command.

As a control, he employed 42 non-hypnotized subjects of whom all but one refused to pick up the snake. He wrote that:

. . . With one exception all the persons were not only badly frightened at the appearance of the snake, but would not come close to the box; only a few were finally persuaded to pick up a yard stick and try to touch the snake. They all seemed bewildered when they touched the glass which they could not see. The exception referred to was as follows: A young woman was told to reach for the snake and she did so at once, of course striking the glass. When asked why she complied so readily, she said that, of course, it was an artificial snake and she was not afraid of it. Assured that the snake was real, she made a closer examination of it. She then became frightened and even though she knew she was protected, would not go near the box.

Young (94) repeated Rowland's experiments with success of a startling nature. Using glass "so invisible, indeed that the experimenter had to keep his eye on the written schedule of the experiments to tell him whether or not the

glass was to be used in that individual experiment" a realistic twist developed when the subject hurled acid when the glass was not in use. Fortunately, the experimenters were prepared to cope with such emergencies and no permanent harm resulted to the "victim".

In summing up the results of his experiments with snakes and the acid, Young (94:406) commented that, "In this research, as in Rowland's, the subject may have been deluded or they may have been masochistically trustful or subservient. In either case they entered into the situation from which un hypnotized subjects--and they themselves when un hypnotized--recoiled."

Rowland's experiments have been affirmed by Wells (90).

Experiments have been offered which demonstrate rather well that a subject under hypnosis can be induced to commit assault on the person of another. Watkins (83)(84) placed a soldier under hypnosis and described as a "dirty Jap" a lieutenant colonel who participated in the experiment. Thus deluded, the private savagely attacked the officer and was removed from him only by force. In a similar experiment, the subject was a lieutenant who produced a knife which no one knew he had in his possession. Had he not been quickly overpowered, serious damage would have resulted.

Estabrooks (22) observed like results. In his experiment he turned a hypnotized subject against his best friend by suggesting that the friend was really a Nazi spy. Corroborating evidence was a Swastika which the hypnotized suggested

was engraved on the inside of the lid of the friend's cigaret case.

When the subject "saw" the Swastika which was not there, he had to be forcibly restrained from attacking his pal. "We were obliged to rehypnotize him to 'unSwastika' his mind," Estabrooks noted.

On many occasions it has been shown that hypnotism can be used to elicit information voluntarily suppressed by the subject. This writer placed a 47-year-old subject accused of bank robbery under trance and by means of posthypnotic suggestion learned from him the whereabouts of a hidden bank roll. The experiment was conducted after interrogation for two hours by law enforcement officers failed to shake an alibi he offered.*

Watkins (84:51), who has elicited repressed material from subjects under hypnosis, has observed that: "Seldom can material which has been voluntarily suppressed be withheld once the patient has been placed in a trance."

This is applicable also when induction has been accomplished with a subject asleep. This is well demonstrated in Janet's account of the sleep talking housewife.

The fascinating possibility that hypnosis was the agent by means of which spurious confessions of crime were made during the communist purge trials of 1937 has been raised by Dr. John H. Beck (4) in a letter to the New York Times. Said he, "The accused in the post-hypnotic state is not only

*Appendix, L.

completely unaware that he was ever hypnotized but is convinced that he committed the suggested crime."

Straus (64), a London physician, suggested that government agents could protect themselves by means of hypnosis. The New York Times quoted him as saying, "A government agent so trained could make himself insensitive to pain of all kinds, including the sound of his interviewers voice, could send himself to sleep in all circumstances and induce amnesia for matters which he did not wish to reveal in such a way as to circumvent the use of truth drugs."

It should be pointed out that there have been failures as well as successes in experiments to determine the extent of hypnotic compulsion. In an experiment with several subjects, Young (94) was unable to bring about certain hypnotic phenomena which his subjects had chosen not to perform prior to trance induction. The phenomena included inability to walk, post-hypnotic amnesia, visual hallucination, inability to open the eyes, analgesia and other phenomena. Young reported that in every instance the subject was successful in preventing the occurrence of the phenomena which he had chosen previously to prevent.

Erickson (20) hypnotized a student who was a skillful pickpocket and told him to pick a pocket. The student refused. With more than 50 subjects he was unable to elicit antisocial conduct.

On the other hand, Wells (91) believes Young's failures

to be a result of inadequate trance depth. He repeated Young's experiments and found that fifteen of his sixteen subjects were unable to prevent the occurrence of the hypnotic phenomena which they had previously chosen to inhibit. One of Wells' subjects who was still unconvinced was told to clasp his hands and was given instructions that he would be unable to unclasp them until told to do so by the operator. A burning cigaret was then placed in his hands in such a position that it would burn them unless they were unclasped. Twice the subject avoided being burned by unclasping his hands. On the third attempt he was unable to clasp them and was burned.

Where Erickson failed to persuade a pickpocket to commit a crime, Wells (91) induced a student to steal a dollar and spent it. The subject was unable to recall the incident until rehypnotized. A graduate student of Wells' accomplished the same thing with three undergraduate students.

Wells commented that, "failures are only failures; and numerous failures do not invalidate one single success."

Bjornstrom (5) reports a case in which a person was persuaded under hypnosis to steal a bracelet and then to accuse another person of having committed the crime.

Other cases of hypnotically produced crime are found in the literature. Two of the earliest examples which have come to this writer's attention supposedly occurred in the latter part of the nineteenth century. Kraaft-Ebing (45)

reports that a girl under hypnosis feigned to make a retreat in order to gain admission to a convent which housed numerous treasures. Her mission was to steal them. Also recorded is a case in which a subject was influenced to break into a tabernacle in order to steal the Hosts from the chapel.

The skillful use of hypnosis lends itself to other asocial purposes. In 1936, a 40-year-old German was sentenced to 10 years in prison and was fined 3,000 marks after conviction of having kept a woman under hypnotic influence to exploit her financially and morally. Representing himself as a physician, he constantly suggested new illnesses which he cured at a price. An accomplice was sentenced to a term of four years (61).

A learned German mathematician in Heidelberg who aided his nephew to escape from U. S. Constabulary officers shortly after World War II, claimed he had been hypnotized into impersonating an American investigator in order to accomplish his escape. The nephew and companion were recaptured (62).

One of the more serious of army crimes is desertion. Punishment under some circumstances is death. The seriousness of the crime of desertion is repeatedly stressed for soldiers entering military service. However, Schneck (69) influenced a soldier to desert his duty by creating a conflict between a posthypnotic suggestion and the soldier's assignment.

Hypnosis also has figured frequently in American divorce courts. One such case was heard in Chicago's Superior Court.

the 23-year-old plaintiff claimed her physician-husband had kept her under hypnotic influence for the entire two years of their marriage and had forced her into an unfavorable property settlement. The husband, who had previously been enjoined by the court from utilizing the telephone to continue his hypnotic domination, claimed his wife was putting on an act after the court ordered him to place her under hypnosis in the courtroom (60).

Under these considerations the question is raised as to whether a subject under hypnosis might be seduced and amnesia be suggested for the act. Schilder and Kauders (68), who maintain that, "there is not a single well accredited case of a real crime having been performed by a hypnotized person on the command of the hypnotist and against the will of the hypnotized person," agree that, "the man or woman hypnotized may be more readily induced to perform sexual acts than other crimes." They commented further that this is likely to occur only in a situation in which conditions signify "an outright consent or even challenge to the sexual act" as in lay hypnosis performed without witnesses.

The hypnotist can cause great discomfort by a suggestion given unintentionally in an indirect manner. After hypnotizing a physician and ordering him to awaken in about a half hour, Tuckey (74) left the room certain that the subject would come back to himself as instructed. Upon his return he found the subject still sitting in the chair and highly distressed.

The subject's jaws were firmly shut. He could not recover his speech. Tuckey theorized that while hypnotizing he inadvertently passed his hands over the mouth of the subject, which gesture was taken as a suggestion to keep the mouth firmly shut.

Jenness (36) related an incident in which an itinerant hypnotist suggested to a volunteer subject that he would develop a violent distaste for butter. An amnesia for the suggestion was given before the subject was awakened. The following day the subject was violently nauseated when he ate butter. Although his friends explained the cause, he had no conscious knowledge of the suggestion, which increased his anxiety.

Summary

The Freudian concept of the mind divides it into layers of conscious and unconscious mentation. The interaction of the two layers is controlled by the censor-like Super-Ego. It is this censor which stands as an obstacle to psychoanalytical probing. It is the means by which the organism protects itself within the sphere of society by keeping suppressed those elements of thought and action which although present, are not socially acceptable.

Hypnosis provides a detour around the Super-Ego. It enables the prober to obtain glimpses into this realm of forbidden thought. The reasons for this are not known,

although many theories have been advanced to explain it. None has been proven.

Most of the theories consider the hypnotist as a "god-like" figure whose relationship to the subject is akin to that which exists between father and child. Lending strength to these theories is the fact that the subject displays a submissiveness toward the hypnotist. This has been found to be particularly true when males hypnotize females. The dependency of the subject on the hypnotist borders on the neurotic in some cases.

In this state of rapport the subject often readily accepts suggestions given by the hypnotist and will perform bizarre acts which he would not (and often could not) perform in normal circumstances.

The fact that the censor does not abdicate its job completely during trance induction has been discovered through resistances created by the use of words which have a sexual association--sex being taboo. However, once depth has been achieved, it has been found that the censor is less diligent and new experiences can be implanted in the subconscious mind.

Amazing examples of the efficiency of sensory perception have been found in subjects in the trance state. The senses of sight, smell, taste, touch, and hearing have been found to be capable of far greater discrimination than is ordinarily exercised in the waking state. Experiments in temporal

condensation have shown that the mind is capable of performing with a speed never before realized. These experiments are of great significance in the fields of learning and remembering.

It has also been found that the subject can be regressed to early ages of life--even infancy. In such cases recall is heightened greatly. The regression involves a physiological reorientation of the subject to the period of regression. This has been found to be dangerous to the subject when the physiological reorientation involves a period in which the subject has been exposed to traumatic experience.

The mind entranced has been found to be capable of accepting suggestions to be acted upon at a later time when the subject is awake. Suggested amnesia for the post-hypnotic suggestion can render it obscure to the subject. Estimates are that posthypnotic suggestion can remain active as long as five years. The phenomenon has provided researchers with a dramatic means of demonstrating the rise of subconscious elements to become neurōtic tendencies.

Contrary to popular belief researchers have shown that the subject under hypnosis can be influenced to perform acts contrary to his mores. This has been accomplished by means of indirect suggestions in which the subject has been placed in a setting which lends logic to his course of action.

Hypnotized subjects have been influenced to perform acts of harm to themselves and others, including theft and attempted murder. They have been persuaded to divulge

information which was used to their detriment. The implications of this discovery in psychological warfare have been pointed out on several occasions.

The relationship between the subject and the hypnotist also exposes the subject to the likelihood of unintentional psychic injury. Cues unwittingly given by the hypnotist, or carelessly given, can cause the subject great discomfort without either the hypnotist or the subject knowing why.

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CHAPTER V

PHYSIOLOGICAL CHANGES IN HYPNOSIS

The extent to which hypnosis can be used in influencing mental processes and personality facets is a matter serious enough. Compounding the seriousness is the extent to which physiological processes can be influenced.

Lending strength to the findings presented in the following pages is the fact that most of them were obtained under strict laboratory conditions in which minute changes were measurable.

The human body is a constellation of organs, each functioning within its own sphere, but so closely inter-related with those about it that its function is subordinate to the whole. Just as the bodies of a celestial constellation fall within the orbit influence of a dominant planet, so, too, do the organs of the body fall under the influence of the brain. The result of this psychic relationship is to expose the organ to forces from without the body in addition to those which are exerted from within.

Because the brain is an apperceptive organ, not only receiving and evaluating stimuli, but also ordering the responses, its role must be considered in all organic dysfunctions for which no mechanical reasons can be found. The dynamics of neuroticism and its companion, psychosomatic illnesses, lie in the developmental influences of the psyche. As an organ primarily concerned with the survival of other bodily organs over which it exercises dominance, and by which

it, in turn, is influenced, the brain's fundamental development is animalistic. Culture provides the second influence. When the two are in conflict with themselves or with each other, an adaptation must be made. If animalism is dominant in the conflict, the adaptation will be directed outwardly. If culture is the dominant influence, the adaptation will be directed inwardly.

The extent to which physiological functions can be altered by perceptual processes is not known. Laboratory experiments in hypnosis have demonstrated, however, that the range is great.

Blood and Cardiac Reactions

Researchers have found, for example, that suggestions alone can influence action of the heart. Their findings appear to corroborate those of Sidis (95) which indicated indirect suggestion rather than direct suggestion to be the more effective in accomplishing these alterations.

The initial steps of trance induction produce a mild increase in pulse rate, according to the findings of Baumler (7) who also reported his subject to be excited and restless. Once trance induction has been completed, heart action assumes a pattern similar to that of one at rest in waking states. The findings of Stokvis (96) indicate a moderate decline of pulse action at the start of hypnosis and an increase to normal after awakening. He further reported

that suggestions of tranquility produced a slight decline in pulse action, whereas suggestions of anxiety, pain, wrath, and work produced increases. Jenness and Wible (54) found no appreciable changes in heart action from the waking state to the trance state when no suggestions were given that changes will take place. They, like Stokvis, also found that heart action was unaffected by direct suggestions of palpitation.

From the foregoing it would appear obvious that trance induction produces little change, if any, in heart action. Direct suggestions to alter heart action are also ineffective. But when the element of indirection is brought to bear, through suggestions of emotional states, changes have been observed. This has enabled researchers to obtain electrocardiograph readings similar to those obtained in cases of heart disease, thereby presenting a diagnostic tool.

Forel (33) is another who believed heart action could be influenced. Possibly one of the most startling reports of the effect of suggestion on heart action, and one which has found its way into many psychological discourses, is that of Dr. Hack Tuke (99). He reports a case of death by syncope in a man who was blindfolded and told he was bleeding to death while warm water trickled down his arm into a basin.

White (106) and Benedek (9) have obtained changes in blood pressure by suggestions of emotional states.

Kleinsorge and Klumbies (56) found that suggestions

of heat, coldness, fright, and disgust produced moderate changes in pulse beat. Van Pelt (102) obtained a change in heart action through the suggestion of an automobile collision. Deutsch and Karf (24) suggested light work to a hypnotized subject at rest and obtained a mild increase in heartbeat; a stronger increase was obtained by suggestions of heavy work. They also obtained changes by suggestions of emotional states.

Bier (11) reported that suggestions of rest, happiness and excitement will alter pulse by as much as 80 per cent through suggestions of anxiety. Benedek (9) accelerated the pulse by suggestions of emotion. Wilson (110), Astruck (5), and Whitehorn (180) accelerated heart action by suggestion. Sears (92) retarded heart action normally associated with pain.

Bitterman and Marcuse (12) demonstrated that the body "remembers" whether the conscious mind does or not. They found that suggestions of posthypnotic amnesia do not affect cardiovascular responses to recall of certain words at a symbolic level.

Cramer and Wittkower (21) increased frequency of heart action up to 60 beats per minute through suggested emotions and also observed, in some cases, that X-rays showed heart enlargement. Lowy (67) used suggestions to calm further the pulse of a calm person. White (106) obtained changes in blood pressure.

Lipkin, McDevitt, Schwartz, and Duryea (66) brought about changes in peripheral circulation. They reported having relieved vasopastic symptoms and having observed changes in capillary flow. Doupe, Miller, and Keller (26) found that suggestions of pain and emotional states affected circulation of the fingers. Marcus and Sahlgren (73) claim that menstruation flow can be regulated by hypnotic suggestion.

Blood texture and content have been influenced to some extent by hypnosis.

Kirschenberg (55) found a spontaneous reduction in blood viscosity after his subjects had been under hypnosis for an hour.

Kretschmer and Kruger (60) found that, in subjects with abnormally high calcium levels, the levels could be increased by suggestions of excitement and decreased by suggestions of calming. Glaser (38) found that excitation of a subject afflicted with hysteria increased calcium level.

Schazillo and Abramov (94) claim that mild influences on blood potassium level can be exercised through hypnosis.

The leucocyte count has been increased through suggestions of feeding. Glaser (39) reports having obtained a rise in the count with suggestions of a mock meal. Wittkower (112) found strong increases in the leucocyte count through suggested emotions--particularly when there was no motor discharge.

Respiratory and Brain Reactions

Researchers have demonstrated rather convincingly that

respiration can be influenced by a number of suggested states.

Using hypnotic and post-hypnotic suggestions of light and heavy work on a subject performing a constant amount of work, Nemtozova and Schattenstein (77)(78) observed increases up to 50 per cent in ventilation. Astruck (5) bears out their findings to some extent. Cohen and Cobb (16) obtained a reduction in a patient afflicted with hyperventilation by suggestions of slower breathing given hypnotically and post-hypnotically. Sears (92), Dynes (28), and Brown and Vogel (15) have eliminated respiratory reaction to pain by suggestions of anesthesia. Fulde (35) increased respiration by suggestions of excitement. Bier (11) reduced the rate by suggestions of rest and happiness.

Bechterew (8) claims that changes in respiration, heart rate, and pupillar reaction, do not occur under conditions of hypnotically suggested anesthesia.

Nemtozova and Schattenstein (77)(78) and Levin and Egolinski (63) reported increases in oxygen consumption by suggestions of work. Fulde (35) obtained similar results with suggestions of excitement.

Measurement of the body's infrared radiation is a valuable method of research on brain activity of children. With the spread of "cortical inhibition" to the vasculo-motor analyzer, there occurs a general fall of infrared radiation associated with constriction of the blood vessels. Krasnigorskii (59) found simple awakening from hypnotic sleep is accompanied by a general

increase of infrared radiation associated with dilation of blood vessels. The customary changes of infrared radiation occasioned by local heat stimulation is modified markedly during hypnotic sleep.

After investigating the effect of hypnosis on cortical electro-activity, Lundholm and Lowenbach (70:506) reported it to be unaffected by modification of seeing and hearing. They commented that:

A recent article by Lemere lends support to our findings. Several hysterically blind persons whom he examined showed no alpha waves when their eyes were open, but the rhythm promptly appeared when they closed their eyes. We, too, observed a case of hysterical blindness who was finally cured by hypnosis. His alpha activity behaved in the same way as described by Lemere . . .

Dynes (27) found that electroencephalograms of frontal, parietal and occipital regions of the brain were identical in hypnosis and the waking state. Ravitz (86) marked peripheral potential changes in D. C. measurements of hypnotized subjects which were not evident under drug influence. Sixty D. C. records of 20 subjects were taken before, during, and after hypnosis. They were compared to 17 records of thirteen subjects under sodium amytal narcosis. Alterations in P. D. under sodium amytal narcosis were less pronounced than those under hypnosis; in many records there was no change. Amytal failed to produce a smooth tracing. The conclusion was that barbiturates apparently do not produce the marked peripheral potential changes found under hypnosis.

Fatigue and Muscular Reaction

The problem of fatigue has been investigated by a number of experimenters.

Williams (109) found that existing fatigue is undiminished by mere induction of the trance state, but that hypnotic suggestion inhibits greatly the onset of fatigue. Riegers (89) is in agreement with the latter findings. Eysenck (31), using a hand dynamometer, found improvements averaging 43 per cent with suggestions that the subject perform at his best.

Williams (109) reported that fatigue appeared just as rapidly in trance as in the waking state in a subject maintaining his arm on a horizontal plane under suggestions of catalepsy. Roush (90) obtained improvements after giving suggestions of no pain. Roush further reported this to be observed under conditions of post-hypnotic suggestion.

Wells (104) and Hadfield (43) claim increases in hand grip have been observed. Manzer (72) and Nicholson (82) make similar claims. Experiments of Young (114) and Eysenck (31) have led to conclusions that increased strength of hand grip can be obtained.

Meade and Roush (76) were unable to influence hand grip on the hand dynamometer but found a 16.8 per cent increase with the arm dynamometer. Nicholson (82), Williams (109) and Manzer (72), in different studies, found work capacity increased under hypnotic suggestion. Hull (51) has his doubts.

Whitehorn, Lundholm and Gardner (107) have found that emotional states--particularly those of grief and anxiety--bring about considerable change in metabolic rate.

Grafe and Traumann (41) have increased the rate of metabolism as high as 12 per cent by suggestions of grief and heavy work. An increase as high as 25 per cent was obtained by Grafe and Mayer (42).

Grafe and Traumann (41) with suggestions of depression and of heavy work, and Grafe and Mayer (42), with suggestions of pleasant and unpleasant experiences, effected increases in the metabolic rate. The latter experiment produced the conclusions that suggestions producing sorrow, more so than those which produce joy, increase metabolism. This finding also was reflected in the work of Whitehorn, Lundholm and Gardner (107), who found that induced anxiety and apprehension were particularly effective in increasing basal metabolism.

Goldwyn (40) found a mild decline in basal metabolism in subjects under hypnosis. Gessler and Hansen (36)(37) reported suggestions of coldness increased basal metabolism. Suggestions of warmth given at a temperature of 12 degrees Centigrade almost eliminated the body's heat adjustment.

Reiter (87) increased basal metabolism from 75 to 110 in a patient afflicted with obesity and myxedema, by daily hypnotic suggestions of increased blood flow in the thyroid gland. Weight was restored to normal.

In other physiological experiments, Benedek (9) obtained

acid in salivation by suggestions of an emotional state. Bowles and Pronko (99) found taste perception subject to alteration. They were able to equalize considerably the taste of sweet and sour and to invest these qualities with a neutral stimulus. Measurable changes in salivation were reported.

The effect of hypnotic suggestion on action of the stomach has been investigated extensively with conclusions generally in agreement that gastric processes can be influenced.

Frick, Scantlebury, and Patterson (34) found that suggestions of food could be used to inhibit hunger contractions. They also found that dreams in which food was strongly suggested produced similar results. Heyer (50) found hypnotic suggestion made possible changes in gastrointestinal motility. Lewis and Sarbin (65) and Scantlebury (93) were unable to obtain this result from suggestions of food given in the waking state.

Suggestions of delight, grief, or anxiety were found by Wittkower (111) to increase bile secretion whereas suggestions of annoyance produced a decrease. But, when dreams of food were introduced to the hungry subject the hunger contractions were diminished.

Experiments also have shown gastric secretions to be subject to hypnotic suggestion. Using suggestions of mock feeding to a subject whose stomach had been emptied prior to the experiment, Heyer (50) found secretions to vary

in quantity according to the suggested food ingested such as broth, bread or milk. Heilig and Hoff (46), who also offered mock meals, found secretions of gastric juices and levels of acidity could be altered according to suggestions of like or dislike. Suggestions that the subject liked the food increased secretions of gastric juice and acid. Gastro-intestinal motility also was increased. Suggestions of disgust reduced peristalsis.

Delhaugne and Hansen (23) suggested ingestion of heavily buttered biscuits, chocolate, marchpane, and schnitzel. They found an increase of acid, pepsin, and lipase in the stomach and trypsin, lipase, and diastase in the duodenum. Langheinrich (62) and Luckhardt and Johnson (68)(69) also reported having influenced gastric secretion.

Experiments by Marx (74) led to the conclusion that kidney secretions are subject to conditioning. Suggestions of drinking large quantities of water given to subjects under hypnosis produced changes in water metabolism similar to that produced when water in large quantities actually has been drunk. Heilig and Hoff (45) observed that suggestions of inclination produced retention of water, chlorine, and phosphorous; disinclination produced the opposite effect.

Sensory and Uterine Reactions

Experimenters have found an invaluable tool in the anesthetic use of hypnosis. The demonstration that the psyche

can be made to deny the existence of pain has proved an interesting one from the standpoint of alleviating human discomfort. Possibly no one has applied the phenomenon more extensively than Esdaile who performed thousands of operations with no anesthesia other than that hypnotically suggested. Bramwell was another of the early practitioners who found in hypnosis an ally for surgery.

Because of this phenomenon hypnosis has been employed on many occasions to ease the pain of childbirth (4). Although the use of hypnosis for this purpose has declined greatly since, possibly because it is not successful in all cases whereas chemical anesthetics are, hypnotic anesthesia still has its supporters.

An interesting study was made in recent years by Reynolds and Rodriguez Lopez (81)(88).

Their 21-year-old patient was found to be particularly susceptible to hypnotism early during her pregnancy. A professional hypnotist then suggested to her that she would feel no pain at the time of delivery. During the last month, she was kept in a hospital for fear that she might have the baby without knowing it under hypnotic suggestion.

Labor started normally and the patient was delivered about three hours after it began. At no time did the patient say she was in pain. The professional hypnotist put the patient into hypnotic sleep and awoke her several times during the delivery.

The two doctors measured the force and rhythm of the uterine contractions. In spite of the fact that the patient at no time experienced pain, contractions were disorganized and ineffective when she was awake. When she was told to sleep, the contractions became smooth and regular and the birth of the infant was expedited.

The doctors concluded that uterine contractions which have been held to be involuntary, or visceral actions, can be modified by some mental factor, at least in the particular case of the woman under hypnosis. The modification apparently does not come about with the relief of pain alone for the contractions were irregular when the patient was awake and suffering no pain. Also, the smoothness of the contractions were not affected by the degree of relaxation of the patient. Her contractions were best when she was asleep.

The physicians speculated that the uterine contractions powerful enough to expel the infant are controlled through the involuntary nervous system, the adrenal glandular mechanism or through a combination of both. The mental state of the patient, asleep or awake, may profoundly affect contractions through the glands or nerves.

DeLee and Greenhill (22)(101) have found that hypnosis is effective to some degree in 90 per cent of the patients that they have tested although as successful as a deep anesthesia in only one of four patients.

Bonjour (6) reported that suggestions that the normal

term had been completed could bring about premature deliveries as well as abortions. He interpreted these results as arising from induced uterine contractions which are presumed to be reflex in character. Abramson and Heron (1) have found that the first stage of labor was appreciably speeded up when preparturient patients were trained to relax by means of hypnotic suggestion.

Neutra (79) reports that postoperative and post delivery shock is greater following hypnosis than following an anesthetic. Kroger and DeLee (61)(101) hold that there are no consequences attendant upon the use of hypnosis. Raginsky (85) calls for the use of hypnotic anesthesia and chemo-anesthesia in combination. Abramson (2) points out the need for nurses and attendants specifically trained for handling patients under hypnotic anesthesia.

Another of the uses to which hypnosis lends itself because of its anesthetic producing qualities is that of dentistry. A patient of Heron's (49) reported she experienced no pain, and, in fact, believed that she had been acting, after a wisdom tooth was filled when she was under hypnosis. The use of hypnotic anesthesia for the removal of teeth has been of growing interest to the field of dentistry.

In the use of hypnosis for this purpose, not only can the dentist suggest anesthesia, but also he can control the flow of blood from an extracted tooth and the flow of

saliva in the mouth while he is at work. Heron (49) feels that training the patient to relax while in the dental chair is more important than inducing hypnoanalgesia. The time required to induce the latter and the relative uncertainty of the completeness particularly argue against its general use.

Hypnosis has also been used by Stolzenberg (97) in the cure of bruxism and hysterical trismus.

Probably one of the most interesting aspects of hypnotic suggestion and one which has been investigated extensively is the influence which can be exerted on the skin by means of it.

Levine (64) investigated electrical resistance of the skin with subject awake, asleep, and under hypnosis, with the finding that resistance under hypnosis was weaker than that under conditions of normal sleep. Altenburger and Kroll (3) found that hypnotic suggestion of increased sensitivity reduced chronaxy from .24 to .1, whereas suggestions of reduced sensitivity produced an increase to .28.

Eiff (30) found general sensations and temperature sensations to be psychically influenceable even in cases of a cold stimulus of plus 10 degrees Centigrade and 0 degrees Centigrade upon the unclothed body.

Blister production has been interpreted by Eiff (30) as evidence that perception of temperature can be influenced. Gessler and Hansen (36) make such a claim. Eiff (30) reports he altered temperature by suggestion. The extent was small,

however, only 1.8 degrees.

West, Neill, and Hardy (105), using the Hardy-Wolff-Goodell method of applying known amounts of radiant heat as painful stimuli, reported perception of pain to be reduced by hypnotic suggestions of anesthesia, with an accompanying inability to discriminate different intensities. Galvanic skin responses were diminished.

Sears (92) found that subjects who could not inhibit voluntarily responses to painful stimuli were able to do so under hypnotic suggestion of anesthesia. Under the latter condition, psychogalvanic skin reflex also showed a decrease.

The uses to which Esdaile employed this phenomenon already mentioned in this study are classical.

McDougall (75) describes a subject who could inhibit bleeding of a needle puncture of the arm by autosuggestion.

Pattie (83) possibly provided the key to the phenomenon which might also apply to a great number of hypnotic phenomena. By clever use of the Japanese Illusion, by means of which the subject is confused, he reached the conclusion that the success of hypnotic anesthesia depends upon accurate perception of the stimulus.

Numerous instances have been cited in which skin blemishes were produced or eliminated by hypnotic suggestion (84).

In Revue D L'Hypnotisme is reported an experiment by Rybalkin at the Hospital Marie St. Petersburg on a 16-year-old subject considered to be a hysteric. He was told under hypnosis, "When you wake up you will be cold. You will go

and warm yourself at the stove and you will burn your forearm on the line which I have traced. This will hurt you, a redness will appear on your arm; it will swell and blisters will form." Upon awakening, he carried out the command, even emitting a cry of pain as his arm touched the door of the cold stove. The following day a large blister formed on his arm (91).

J. Mabile (71), in a treatise entitled, "Pathologie Mentale Note sur les Hemorrhagies Cutanees par Auto-Suggestion," reported a case of hemorrhage by suggestion.

After the subject was hypnotized, he was given the suggestion that he would go to bed and fall asleep at eight p. m. and awaken at five the next morning. At precisely eight o'clock he fell into a profound sleep, during which the suggestion was made, ". . . a quarter of an hour after you awaken there will appear on your arm a V at the place which I am now marking . . . I wish to bleed." The phenomenon occurred within 15 minutes, producing a "V" covered with blood.

Summers (98) reports an experiment conducted by Schrench-Notzing and Rybalkin upon Camille, Liebeault's somnabule. They suggested to her in the waking state that the skin below her ear was red and inflamed, and that she evidently had been bitten by an insect. Within three minutes there appeared a patch of erythema with a distinct rim.

Ullman (100) produced a blister on the hand of the subject with the instruction that, "You've burned the back of

your left hand. A molten bit of shell hit it and glanced off."

Other blister producing experiments have been reported by Rybalkin (91), Doswald (25), Krafft-Ebing (58), Jendrassik (52), and Heller and Schultz (48). Jendrassik (53) and Krafft-Ebing (57) claim to have produced blisters corresponding to the shape of an object applied to the skin at the point where the blister was to occur.

By offering suggestions of itching and tactual stimulation along with suggestions of strong emotional disturbance, Heilig and Hoff (47) were able to produce Herpes Labialis or fever blisters. Ullman (100) produced a secondary burn and herpetiform lesions in a hysterical subject by direct suggestion.

Just as blemishes can be produced, so, too, can they be removed. Bonjour (14) reported success in 95 per cent of the cases in which he used direct suggestion to remove warts and condylomas. Bloch (13) reported success in 33.4 per cent of the cures by indirect suggestion in subjects afflicted with verucae vulgares.

As might be suspected, allergies yield to hypnotic suggestion also. Hansen (44) claims to have stopped asthmatic attacks and status asthmaticus by hypnotic suggestion. He also reports having eliminated attack in a subject by reducing sensitivity to the cause although skin reaction to the allergen remained positive. Wittkower and Petow (113) produced asthmatic attacks in a subject by hypnotic suggestion although the skin reaction to the suggested allergen was

negative. Using a psychopathic subject, Marcus and Sahlgren (73) obtained allergic reactions by suggestion.

Summary

The marvelously adaptive processes of the mind can be brought into play by means of hypnosis. Researchers have found that wide range of physiological processes can be influenced by this means. The key to accomplishing physiological reaction appears to be indirect suggestion rather than direct suggestion. When an entranced subject is told merely that his heartbeat will increase, nothing happens. But when he is given the suggestion that he is about to become involved in an automobile collision the organs rally to meet the crisis.

This has been the instrument by means of which heartbeat has been varied, in one case by as many as 20 beats. Suggestions of emotion, anxiety, pain and anger have produced increased rate of heartbeat. Suggestions of tranquility have produced decreases. Along with changes in heart action have been changes in blood pressure and blood content, texture, and circulation. In one unfortunate experiment a subject is reported to have died as a result of suggestions having been given to him under convincing circumstances that he was bleeding to death.

Suggestions of work or excitement have been employed to obtain increases in the rate of respiration. Suggestions

of tranquility have reduced the rate.

Research has shown that infra-red radiation of the brain increases upon awakening of the hypnotic subject. This is brought about by an increase in the dialation of blood vessels. Hypnotically induced blindness and deafness produce no change in cortical electro-activity although these sensory abilities are lost to the subject during the period in which the suggestion remains in effect. The brain has been found to exhibit marked changes in peripheral potential while the subject is entranced which are not found under drug narcosis.

Hypnosis has been found to be a means by which muscular performance can be improved when indirect suggestion is used. Fatigue has been reduced by the same method.

Suggested emotions also bring about changes in basal metabolism which are found in the actual emotional states. Equally effective have been suggested changes in body temperatures.

Suggestions of food and emotional states have been used successfully to influence action and secretions of the digestive system. Other vital organs have also responded to indirect suggestion.

Research in the use of hypnosis in childbirth has disclosed that the mental state of the patient profoundly affects contractions. Whether this is done through the glands or nerves is not known. An incidental discovery in the use of hypnosis for childbirth is the need for trained personnel.

It has been found that hypnosis is effective as an anesthetic in other applications. Dental patients have been found not only devoid of pain but also able to inhibit bleeding of extracted teeth.

The influence of hypnotic suggestion on skin reaction has been found to be far reaching. It can be used not only as a means of inhibiting pain but also to produce blisters and other skin irritations.

Some researchers claim to have found emotional bases in allergies. The claim has been made that hypnosis has been used to cure warts, condylomas, skin conditions of youth, and asthma.

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CHAPTER VI

HYPNOSIS AND THERAPY

The wide range of phenomena available to the practitioner makes hypnosis a valuable tool in the treatment of personality disorders and those related to personality.

Needless to say, anyone attempting treatment by this means should be professionally qualified for the task.

The following chapter is a discussion on the nature of the psyche and the role of hypnosis in treatment of disorders.

Neurosis

Adopting Freud's theory of the mind, that it consists of two divisions, the Id, or subconscious, and the Ego, or conscious, over which presides the censor-like Super-Ego, the researcher will find much in hypnosis to abet his labors. For by this means can be set aside to some extent that element of control exercised by the Super-Ego and a glimpse obtained of the undercurrents of feeling and emotion which otherwise are camouflaged by symbolism. Such an employment of hypnosis should lead to reconsideration of personality theories which find their bases only in the manifestations of the Ego, for, such theories, being based on a part of the whole, can only be considered fragmentary.

Psychoanalysis has consistently revealed that underlying the veneer of socially acceptable Ego manifestations course

dark currents of primitive and erotic savagery. To be complete, then, a theory of personality must not only consider the observable but also the obscure. Actions must be interpreted in terms of motivations if the individual is to be understood. The role must not be permitted to lead the investigator afield from the self (37).

No one has yet discovered the limits of the human mind. No one knows its capacity for acquiring information. No one knows the extent to which it governs the organism. What is known, however, is that all previous estimates of mental ability have been shown inadequate in the light of recent findings made possible by use of hypnosis (10)(11)(12)(13)(14).

Cultural norms which have developed over the years have made of us creatures of symbolic thought. Those thoughts, however natural to the organism striving to survive and reproduce, which fail in conformity with the pattern of culture, survive in translation to symbolism, often with destructive effects.

The psychoneurotic may be considered as one in whom the conversion to symbolism of thoughts contrary to cultural norms has created a role for him just as unacceptable to the culture as the original one. Or, he may be one in whom the rigors of conversion have been directed inwardly to attack with punishing vengeance a vital organ of the body. Kaplan and Baron (25) point to post-hypnotic suggestion as a means of demonstrating the influence of unconscious

stimulation.

It is impossible to estimate the number of psychosomatic "suicides" which have been committed in the process of symbolization.

Symbolism, per force, begins early in life, possibly at the first application of a law of conduct to the organism, and continues throughout the life of the organism. (18). Although the conscious mind might not recognize either the symbol or its cause, the subconscious mind never forgets. When symbolism becomes inconsistent with the adaptive purpose for which it was intended, adjustment becomes necessary. Because origins of the symbol, or patterns of symbols, might be buried beneath the repressed experiences and impressions of several years, analytical probing becomes a lengthy task, requiring often months of valuable time.

Therapy

Many have found hypnosis a more direct avenue to the source of conflict between the Id and Super-Ego, and have thus been enabled to shorten the time required. Because research has shown that the human mind absorbs and reacts to all life experiences, regardless of whether these experiences receive conscious acknowledgement, it presents a ripe field for exploration (47).

Several phenomena enter into the situation when hypnosis is employed, which enhance its use as an exploratory

device. The nature of the subwaking mind, insofar as it is understood, and the influence invested in the hypnotist by the subject, place upon the investigator a heavy burden of responsibility. The tool of healing can also be used for destruction. No two organisms react alike to the molding forces to which they are exposed. Life experiences differ for each. Apperceptions are varied to an infinite degree.

For these reasons, one who undertakes to explore the realm within which balances are achieved must be governed by caution. He must be constantly aware of the variability of human behavior and prepared to cope with it. He must be prepared to respect the individual as an organism in which dynamic forces continually operate to maintain equilibrium. And he must have an understanding of the etiology of these dynamisms. Without such knowledge one who undertakes mental exploration of a subject in the trance state incurs the risk of upsetting these forces so vital to the well being of the organism. He may do this quite unintentionally. The extreme receptiveness of the subject may betray the operator. Whether the damage is done intentionally or not is unimportant--the fact remains that it has been done. Such damage may never become observable to the operator or to the subject.

The relationship of the psyche and vegetative processes is one of delicate balance. When the scales are tipped, disequilibrium manifests itself with telling effect on the organism. The symptom may appear in either field--that of

vegetative process, as organic disorder. Several disequilibria may be present within the organism at the same time, manifested in a complicated skein of behavioral and organic symptoms.

The etiology of neurotic symptom formation has been studied on many occasions in the laboratory through the use of hypnosis. Hilgard, Kubie and Pumpian-Mindlin (21:92) summarize their findings as follows:

The observed clinical facts are (a) that conscious processes can be rendered unconscious (repressed) and (b) that as an inherent part of the repression, resistances form which make it impossible for the repressed processes either to become conscious spontaneously or to be unveiled by direct self inspection, with the result (c) that energetic forces which originally were part of the previously conscious processes become detached from them when they are repressed (primary dissociation) and then (d) become manifest in the various disguised forms (of which displacements are one example) which we encounter in the psychopathology of everyday life in personality structure and in neurotic symptoms.

The conflict productive of abnormal behavior occurs below the realm of conscious thought. For this reason, it is impossible for the subject to acquire insight and integration by self-analysis. Huston, Shakow, and Erickson (24) lend emphasis to this in the experimental induction of a conflict. In their experiment the subject was persuaded he had accidentally burned a hole in a girl's dress with a cigaret. They report that the following day he was upset, complained of a headache and gave up smoking. Without knowing the reason, he was hostile toward the hypnotist who experienced

difficulty in getting his consent to be rehypnotized so that the amnesia for the earlier hypnosis could be removed and he could be given an understanding of how the complex had developed. The experimenters found that experiments of this kind are successful only when the subject exhibits amnesia for the period in which the "complex" was induced.

The purpose of psychoanalysis is to bring the contributing factors to light. It is a long and tedious task. The origins and compromises involved in neurotic behavior fall beneath the level of conscious thought because of their inacceptability to the conscious mind. They are obscured in a cloud of resistances which seethe when detection is near. Forgotten appointments, hostility toward the analyst and other rationalizations too numerous to list form the barriers which must be surmounted. As the quail leads the hunter astray from her young so does the subconscious mind seek to confound the investigator in a search which may require weeks, months, even years.

The three stages of psychoanalysis are: (a) Mental catharsis (b) Abreaction (c) Sublimation (46). Hypnosis has been particularly helpful in accomplishing the first two of these objectives.

Consider the characteristics of the mind in trance. Watkins (46:76-77) says that:

It is not true that hypnosis eliminates resistance--that patients can be easily turned into their opposites or made into criminals. Nor is it true, as

some psychoanalysts have written, that the Ego abdicates when under trance. The hypnotized patient is not mere putty in the hands of the therapist. He exhibits a definite personality structure. He has his likes and dislikes. He demonstrates attitudes, and his points of resistance are such that he can, when necessary, say "no" to the therapist very definitely and firmly. However, one gathers the impression when working with a patient under trance that his entire mental life is more subject to a study, his behavior and personality softer and more moldable.

The hypersuggestibility, of course, is the key to the whole discussion. It is this one factor which makes possible all the other phenomena of hypnosis. It is this which makes acceptable to the mind, as Sidis (43) has observed, ". . . any suggestion, no matter how ridiculous or painful the suggestion is."

This is not to say that the subject under hypnosis is without either conscious or unconscious mechanisms with which to defend himself--considering that even neurotic behavior is within itself adaptive. As Erickson (16) has well demonstrated in a series of experiments which will be discussed later, the subject under hypnosis can very well say "no" when suggestions are offered which tend to create disequilibrium for himself. Brenman, Gill, and Knight (7) have offered conclusions which indicated that the defense mechanisms are strongly at work even when the subject is under deep hypnosis. Spontaneous fluctuations in depth have been interpreted as an example of this. Schneck (39) reports a case in which the patient was unable to close his eyes despite deliberate attempts to do so. He interpreted it as

a conversion reaction.

Hull (23:391) says the difference between the hypnotic state and the normal state is quantitative rather than qualitative. "The only thing which seems to characterize hypnosis as such and which gives any justification for the practice of calling it a 'state' is its generalized hypersuggestibility."

Because of the resistances offered by the subconscious mind and the length of time required to overcome them under normal conditions of psychoanalysis, researchers have frequently had occasion to turn to hypnosis with remarkable success. The wide range of hypnotic phenomena places at the disposal of the analyst tools which frequently enable him to pursue quickly and unerringly to the source of the conflict.

According to Karpf (26:25), Freud found in his work with Brill that:

Under hypnosis hysterical patients could be made to recall crucial experiences connected with their symptoms, which, it seemed, they could not recall in the normal state; and furthermore, that the recall of such experiences apparently resulted in the disappearance of the hysterical symptoms, especially if the recollection was accompanied by a vivid reproduction of the original emotion associated with the experiences.

Beigel (4) holds there are several problems which offer no point of attack unless hypnosis is used, and several others which cannot be effectually approached by the classic method of experimentation. Specifically mentioned are the areas of thinking, learning, perception, apperception, and

imagination.

According to Hilgard, Kubie and Pumpian-Mindlin (21), hypnosis provides a "bridge" by means of which the threshold of unconscious mentation can be crossed in order to study more closely unconscious forces and their symbolic representations in life.

Hypnotism is not the miracle tool with which wonders can be accomplished. It is merely a means by which the subject is rendered more pliable--a method to facilitate study. There is no therapeutic value in the trance itself.

Until that state of hypersuggestibility is brought into play by the hypnotist, the entranced mind is in repose, or as Beaunis (3:302) reported, "When we ask a hypnotized subject . . . 'What are you thinking about?' the almost invariable answer is 'Nothing'. We have here a veritable condition of inertia, or rather one of intellectual repose."

Once the subconscious mind has been prevailed upon to give up its experiences and the patient can be appraised of their cause and development, they can be integrated into the pattern of conscious mentation and a satisfactory adjustment frequently can be made.

Derbolowsky (15) suggests that hypnoanalysis is indicated only in the mild cases offering good chances of cure including dramatic manifestations. He says it lends itself especially to the hysterias. However, he feels hypnotherapy is contraindicated in grave cases.

Two approaches to the use of hypnosis are available to the practitioner. They are the stern, commanding "father" approach and the more persuasive "mother" approach, in which the subject is more or less led gently into trance. Either of the two can be facilitated by the use of drugs to condition the patient to hypnosis. In choosing a method of induction, the therapist should always bear in mind that no two subjects are alike. Fulfilling the individual needs of the subject during trance induction and especially after trance has been achieved, should form the basis of hypnotherapy.

In the therapeutic application of hypnosis, as in other applications of it, depth is the key to success. As has been discussed in earlier pages of this thesis, the extent to which various phenomena of hypnosis can be brought about depends greatly on trance depth. This is also desirable for stripping away conscious resistances to unearth repressed material, for the reconstruction from existing elements of personality a healthy new personality and for the intrusion into the troubled mind suggestions to alter memories or attitudes.

The material elicited from the subject under these conditions is much richer in emotional content and detail. A word of caution, however, is necessary. The subject under hypnosis may often hallucinate, either spontaneously or as a result of cues unintentionally offered by the operator. Hallucinations so offered may lead the therapist astray.

He may unwittingly create another personality and devote his efforts needlessly to integrate it into the total personality structure. This aspect of behavior dictates an exceedingly cautious approach to hypnotherapy.

Direct suggestion has provided a valuable tool to the therapist. In using it, he is able to persuade the subject, in a patient, logical manner, to change attitudes toward a great number of things which cause him distress. Attitudes toward sex, alcohol, persons or groups--even life itself--can be reoriented in this manner.

A danger inherent in the use of direct suggestion is the possibility of eliminating the symptom and leaving the cause. For this reason a sound knowledge of psychodynamics should be available to the therapist before he undertakes hypnotherapy. He should be ever aware that all forms of behavior have their origins. The purpose of therapy is to find the origin. Otherwise, one symptom may be "cured" only to reappear elsewhere in a new form.

It has been noted that hypnosis provides a fertile ground for interviewing the patient to uncover suppressed or repressed material with a view toward providing the patient with an insight to his troubles and effecting readjustment. The reintegrative technique may be supplemented by other forms of hypnotherapy.

Of much interest is the ablation technique mentioned by Karpf (26) in his account of the works of Freud and Breuer.

Traumatic experiences may lie repressed in the subconscious but not dormant. They are dynamic forces continually at work fomenting disequilibrium. The revivification of these experiences is frequently observed in patients under narcosis in whom the withdrawal of inhibiting factors permits the sudden release of emotion and behavior. Similar abreactions can be produced hypnotically. They may also be produced by the combined use of hypnosis and narcosis.

Horsley (22:144) observes that:

Abreactions of the most dramatic kind may occur when a narcotic is given to a patient who is already under hypnosis, in such cases the patient shows a striking difference in reaction, becoming more emotional, as though responding from a subthalamie level.

Abreaction has been used successfully in a number of cases for the intensification of emotional feelings to the point that sexual fantasies, naked anxiety, or pronounced rage reactions come to the fore, even to the point of being acted out. Such a use of abreaction is not without risk, as Rosen (35) has pointed out.

Memory alterations can be accomplished with hypnosis. The traumatic experience can be reenacted and a new interpretation given in the reintegration process in order that the unpleasant aspects be removed. Watkins (47) however, does not feel this technique to be as dependable as resolution of the conflict through emotional insight.

Schneck (41) believes spontaneous sensory and motor phenomena during hypnoanalysis may prove helpful in under-

standing the patient and provide a clue as to the direction therapy must take.

Also found useful in hypnotherapy is the analysis of posture. Guze (19) finds that chronic postural conditions may act to elicit an emotional state with which it was originally associated, and that such postures may act redintegratively, in rearousing traumatic memories by direct suggestion.

Wolff (48) found in a study of the effect of emotions on handwriting that hypnosis produced a lower emotional degree in certain aspects except in cases where the subject was brought into moral conflict. The latter produced violent reactions.

Spiegel, Shore, and Fishman (44) induced in a soldier a return to a series of earlier ages in his own life, using batteries of psychological tests at each age. On each he performed as though he actually were at the imposed age. Their experiments tend to demonstrate that a part of us remains whatever we have been in the past. Kline (27) has reported the use of diagnostic tests such as the Rorschach and the Thematic Apperception Test in hypnoanalysis. Schneck (40) has used automatic writing to achieve insights.

Post-hypnotic suggestion offers an advantage to the therapist. Anything that can be suggested in the trance state can also be suggested posthypnotically. Guze (19), in his belief that basic response patterns lie at the core of the posthypnotic acts (such as self acceptance, resistance

to impulses, means of dealing with guilt, reaction time to complex stimuli, etc.) feels that these acts may provide good material from which can be fashioned diagnostic tools.

Brill (8) reports treatment by Breuer of a girl who became ill while nursing her father and observed, "The significance of the case lay in the fact that in the waking state, the patient knew nothing about the origins of her symptoms, but once hypnotized, she immediately knew the connections between her symptoms and some of her past experiences."

Erickson and Kubie (17) found the use of hypnosis and waking states effective in bringing about integration of past experiences of a woman employee of a mental hospital who suffered the depressive phase of manic depressive psychosis. Hypnotized without her knowledge, she was gradually directed to regress to a vaguely defined period of her life between the ages of 10 and 13, in which the therapists uncovered serious misconceptions of sex given by her mother. During a series of interviews in hypnotic and waking states, the misconceptions were corrected and the inhibitions and repressions were removed by means of a technique which aided her in organizing her ideas before presenting them to the therapist. She developed a satisfactory insight.

Rosen (35) offers the report of four patients whose somatic symptoms seemed to indicate need for immediate medication or surgery, who were subjected to hypnotherapy.

All except one showed marked improvement within a short period of treatment. The technique consisted of letting the patient build up a fairy tale atmosphere by giving free reign to fantasy. The therapist let the patient know he appreciated the patient's emotional problem. A permissive atmosphere was provided so that the patient could go along or not with the technique as he liked. No direct suggestions were made.

One patient of Rosen's, a 37-year-old woman, suffered from "apparent" focal epilepsy. The patient had frequent attacks resembling the malady for several years. Exploratory surgery failed to reveal any focal point, and her attacks, though they stopped in the daytime, continued during the night. She was admitted for a second surgical operation but hypnotism revealed that the attacks were primarily of emotional origin, which led to her being treated by psychotherapy, both during the hypnotic state and in waking states. As a result, she was freed from attacks.

Of the many other behavioral manifestations treated successfully by hypnosis are bedwetting, headaches, tics, vomiting, poor appetite, to mention a few (31). Paley (33) has used hypnosis in treatment of alcoholism. Schneider (42) obtained success in relieving a 16-year-old bedwetter of his symptoms in the first of 11 analytical sessions. The symptoms did not reappear.

Salter (36) claims one can use autohypnosis in relieving

himself of nail biting, stuttering, sleeplessness, smoking, excessive nervousness, and overeating.

Zeckel (49) reported successful use of hypnosis in diminishing suicidal tendencies. He reported the lifting of isolation as a defense was the main agent through which a therapeutic result was reached. Schmidhofer (38) has used mass hypnosis of actively disturbed psychotic naval patients which brought about symptomatic relief for many. Through perpetuation of the principles of therapeutic relaxation, the patient develops his capacity not only for maintaining but also for improving his psychotherapeutic gains.

Numerous reports are available on removal of hysterical symptoms. Lundholm and Lowenbach (28) have reported having observed a case of hysterical blindness cured by hypnosis. Ullman (30) demonstrated the effective use of hypnosis in the cure of a 27-year-old combat soldier blinded by an explosion. Successful treatment has been reported in a three-year-old case of paralysis which resisted medical treatment.

Abramson* has reported the use of hypnosis experimentally as a technique in the treatment of dysmenorrhea and appetite control. Abramson (2) and Abramson and Heron (1) also used it in preparing patients for childbirth. Reiter (34) has successfully treated a patient with obesity and myxedema whose basal metabolism was 75. By daily hypnotic suggestion of increased blood flow in the thyroid gland, an increase of the basal metabolism to 110 occurred with the resultant reduction of body weight to normal.

*Appendix A.

Zwicker (50) sees hypnosis as a means of calming the vegetative disturbances and the deeper levels of personality in treatment of thyroid disturbances--considering the close connection between the body and the psyche. He reports successful use of hypnosis before, during, and after operation in the case of a 44-year-old woman suffering from a severe Basedow when the usual iodine dose had to be dispensed with because of an over-reactivity to iodine.

That the skin is a mirror of the mind has been demonstrated experimentally on numerous occasions. Hall, Smith, and Norton (32) have found psychic factors at work in 78 per cent of a random sample of patients with skins that were not healthy. One of the most noteworthy of the uses of hypnosis in this field was the cure of a case of ichthyosiform erythrodermia, or "fishkin disease" in which the skin is rough, dry, and scaly. In this particular case hypnosis cleared up the arms in eight days. Legs were greatly improved after a month. Progress was more rapid at the beginning of the treatment than toward the end. There was no relapse.

Bonjour (5) has reported that warts, condylomas can be cured by suggestion in 95 per cent of the cases. Bloch (5) reports successful use of hypnosis in effecting cures of *verrucae planae juvenilis* and *verrucae vulgares*.

Hansen (20) has reported inhibiting asthmatic attacks through the use of hypnosis.

In his lectures, Brill (9) recounts experiences at

Vanderbilt in which he hypnotized two patients, curing atasia abasia and a tic. However, the symptoms returned two weeks later. He also related the use of hypnosis in relieving a patient afflicted with headaches. His headaches would return unless he were in a city where there was a hypnotist.

It should be emphasized again here that there is an increasing number of cases coming to light in which the subject has been unintentionally harmed either by carelessness or ignorance on behalf of the hypnotist. The word "harmed" is a gross understatement in the case related by Dr. Lloyd Tuckey (45) concerning the report by Dr. Hack Tuke of a case in which a man was killed while under hypnosis. The incident occurred when the subject, blindfolded, was told he was bleeding to death while warm water was allowed to trickle down his arm into a basin. Death resulted from a heart syncope.

The therapist should also take care to remove suggestions offered during the trance which were not intended to carry over into the waking state. The surgeon keeps track of the instruments used in the course of his operations. He avoids leaving the instruments in the patient when the incision is closed. Suggestions offered during the trance state are very similar to the instruments used by the surgeon. They must be removed before the trance is terminated. Otherwise, the patient may be burdened unnecessarily with compulsions which have been literally forced upon him.

Summary

The mental state of a subject at any given time represents his attempt to reach a psychic balance. So delicate is the nature of that balance that only those who understand its dynamics should tamper with it for fear the scales might be upset in some way.

The purpose of psychoanalysis is to discover forces which threaten the balance. Hypnosis provides a quick means of achieving insight. It also lends to the analyst a means of counteracting these forces. Dissociated experiences can be integrated into the pattern of conscious mentation. In addition to the integrative technique, abreactions are also successfully used.

Not only has hypnosis been employed successfully in the treatment of personality disorders, it has been effective in treating a number of other disorders which have their basis in personality.

The increasing number of cases coming to light in which the subject has been abused as a result of having undergone hypnosis dictate professional handling.

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CHAPTER VII

LEGAL REGULATION OF HYPNOSIS

Hardly a treatise on hypnosis is written in which the author fails to caution against amateur usage. His reasons are sound. Great harm might conceivably be done by one ignorant of the psychological demands of the subject. Recognizing this, England has taken steps to prevent the lay use of hypnosis. However, little has been done to limit the practice in America. Certain publications of recent months have done much to stimulate interest in hypnosis. It has become almost a parlor game.

Legislation Abroad

England's Hypnotism Act to regulate the demonstration of hypnotic phenomena for purposes of public entertainment was passed in 1952 and went into effect April 1, 1953. The act defined hypnotism in the following manner:

Hypnotism includes hypnotism, mesmerism and any similar act or process which produces or is intended to produce in any person any form of induced sleep or trance in which the susceptibility of the mind of that person to suggestion or direction is increased or intended to be increased but does not include hypnotism, mesmerism, or any such similar act or process which is self-induced.*

The act gave licensing authorities the power to regulate or prohibit exhibitions, demonstrations or performances of hypnotism in places of public entertainment and made it an

*Appendix K

offense to demonstrate hypnotism on a person under 21 years of age. There is nothing in the act to prevent the practice of hypnotism for scientific or research purposes or for the treatment of mental or physical illness.

The act was first applied 13 months later against a lecturer who demonstrated hypnotism at a meeting of the International Friendship League in Manchester. The Manchester Guardian (3) reported that, inasmuch as the act stipulated that, "No person shall give an exhibition, demonstration, or performance of hypnotism on any living person at or in connection with an entertainment to which the public are admitted . . ." the defense argued successfully that the lecture was not entertainment, and that the act was to prevent the prostitution of hypnotism by persons who wanted to make money from it in theaters.

Prior to passage of the act, hypnotism had been banned by the British Broadcasting Company. The ban came after a hypnotist, auditioning for a show, entranced four of the six auditioning judges, the girl emcee who introduced him, and a secretary viewing a monitor in another room of the building. Network officials commented, "We consider it too dangerous."

Following this incident, John F. Royal, then president of the National Broadcasting Company in New York, announced hypnotism would also be banned from that network. However, numerous shows have been televised since then in which hypnosis

has been performed.

Also prior to passage of the British Hypnotism Act of 1953, a House of Commons Committee on Hypnotism was informed of a 12-year-old girl who suffered the effects of mishandled hypnotism after three years and of a draftsman hypnotized two years prior who fell asleep whenever anyone whistled the tune, "So Tired." (1)

A professional hypnotist, Ralph Slater, was ordered by an English jury in 1952 to pay damages totaling 1,132 pounds to an English shopgirl on her claim that he had neglected to bring her completely out of a trance. The jury also ruled that the hypnotist had assaulted the girl during a stage performance in that he had burned her fingers, jerked her neck and stuck his fingers in the back of her neck.

The 23-year-old subject testified that, "He . . . seized me by the neck and jerked my head forward . . . It hurt me . . . I remember him saying: Now, No. 1, you are sitting in your chair and it is going to get very hot until you cannot bear it any longer. I felt my chair getting terribly hot and I jumped up quickly. The audience laughed . . . He said: You are going to feel like a little baby and you will want your mother and will cry badly. I felt frightened and started to cry. I shouted out, 'Mummy, mummy, mummy.'"

For 18 months thereafter, the subject claimed, she was subject to fits of depression, crying and fright. Treatment required 23 visits to a psychiatrist (4)(6)(3).

Although Denmark has no legislation against the practice of hypnosis, the Danish Medical Practice Act of March 14, 1934, supplemented by the Law bekendtgørelse 236 of 1955, are found provisions against "unqualified practising" which could be employed to prohibit unqualified persons from employing hypnosis in medical treatment.*

There also is a circular issued by the Ministry of Justice on January 19, 1945, in which the use of "hypnosis, clairvoyance, spiritualism, and suggestion," is virtually prohibited at public performances but permitted at closed meetings of associations. The circular states that hypnosis may be used when a credited doctor has declared that no danger is involved to the persons to be hypnotized (or the medium) and that no one in the audience be called upon to be hypnotized. The circular advises, however, that no doctor make such a declaration.

The Academie des Sciences and the Academie de Medecine in Paris both state that no legislation has been advocated at any time with a view to forbidding the use of hypnosis as a theatrical stunt. The Bureau Legislatif, Presidence du Conseil (which is the office of the Prime Minister) states that there is no law on record regulating hypnotism in the theater. In addition, the Prefecture de Police (Police Generale des Spectacles) indicated that hypnotism is tolerated as a theatrical stunt but is subject to authorization granted by the Cabinet du Prefet, Service des Spectacles, to the organizer of the show or to the proprietor of the theater where

*Appendix I.

the performance is taking place.*

The French Academy, however, was quoted in 1930 as having advocated a ban on the exhibition of hypnosis. A dispatch from the New York Times (5) bureau in Paris quoted the Academy as saying it cannot help but have a bad influence, it stimulates neurotic tendencies, stimulates abnormal curiosities and "gives the false impression that hypnosis permits the outside will to operate on the deportment of others, which is contrary to the truth."

State Legislation

Only six states in this country have statutes which specifically regulate the act of hypnotism. These states and their respective statutes are as follows:

Revised Statutes of Nebraska (1943):

28-1111. Whoever shall hereafter take part in, practice, assist or become a subject in giving a public, open exhibition or seance or show of hypnotism, mesmerism, animal magnetism, or so-called physical forces for gain shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not less than ten dollars nor more than one hundred dollars, or be imprisoned in the county jail not less than ten nor more than thirty days.

General Statutes of Kansas:

38-703. That any person or persons who shall within this state induce or permit any child under eighteen years of age to practice or assist or become a subject in giving public open exhibitions, seances, or shows of hypnotism, mesmerism, animal magnetism, or so-called physical forces shall be guilty of a misdemeanor, and on conviction be fined not less than ten dollars nor more than one hundred dollars, or be imprisoned in the county jail not less

*Appendix E.

than ten days nor more than three months, or by both such fine and imprisonment.

Idaho Code:

18-201. All persons are capable of committing crimes except those belonging to the following classes:

1.
2.
3.
4.
5. Persons who have committed the act without being conscious thereof.

Oregon Revised Statutes (1953):

167-705. Any person who in any manner expose to public view any person in a state of trance, sleep, or entire or partial unconsciousness, which was induced by hypnotism, mesmerism, or any other form of the exertion of the will power or suggestion of another person over such subject, or consents to or aids or abets such exhibition either in person or through his agents, servants, or otherwise, or hypnotizes any person for the purpose of being so exposed to view, shall be punished upon conviction by a fine of not less than \$100 nor more than \$1,000, or by imprisonment in the jail of the county where the offense was committed for a term equal to one day for each \$2 of the fine, or both.

Code of Virginia (1950):

18-348. If any person shall hypnotize or mesmerize or attempt to hypnotize or mesmerize any person, he shall be guilty of a misdemeanor. But this section shall not apply to hypnotism or mesmerism performed by a licensed physician or surgeon, or at his request, in the practice of his profession.

Wyoming Compiled Statutes (1945):

58-116. Any person who shall hypnotize or mesmerize any person under the age of twenty-one (21) in any public exhibition, show or play, or for the purpose of displaying such hypnotized or mesmerized person at any public exhibition, show or play, shall be guilty of a felony and upon conviction thereof shall be imprisoned in the penitentiary not less than one (1) year and not more than five (5) years.

58-117. Any person who shall hypnotize or mesmerize any person under the age of twenty-one (21) years for any purpose other than for the purpose of displaying such hypnotized or mesmerized person at any public exhibition, show, or play, shall be guilty of a misdemeanor and upon conviction thereof shall be fined not less than fifty dollars (\$50.00) and not more than one hundred dollars (\$100.00), to which fine may be added imprisonment in the county jail for not more than six (6) months; provided, that this section shall not apply to persons hypnotizing or mesmerizing any person for the purpose of medical or surgical treatment with the consent of the parent or guardian of such person so hypnotized or mesmerized.

Besides the six states previously listed, several states have statutes regulating the sale of hypnotic drugs. These states include Colorado, Delaware, New York, Pennsylvania, and California.

On the other hand, the states of Maine and Massachusetts specifically exempt hypnotists from their statutes relating to the illegal practice of medicine.

There have been few cases in the last ten years involving the question of hypnosis. Most of the cases appear to have arisen around the turn of the century when the idea of defending against a crime by contending hypnotic influence was first attempted. This effort being unsuccessful, the number of cases dwindled. One of the latest cases arose under the Nebraska statute. This case, Dill V. Hamilton, 137 Neb. 723, 291 N. W. 62 (1940), construed section 28-1111 and held that the section does not prohibit spiritualistic seances unless they are public, open, and for gain and therefore does not violate the constitutional guaranty of freedom of religion.*

*Appendix B.

Summary

Despite the profound mental and physiological changes which can be brought about by means of hypnosis there is little legislation in America to control its use. More effective control is found in other countries--particularly England and Denmark--where hypnosis is recognized as a means of cure.

England has regulated the use of hypnosis for purposes other than healing since 1953. Prior to passage of the Hypnotism Act the use of hypnotism as radio entertainment was banned as, "too dangerous." The House of Commons Committee on Hypnotism reported cases in which subjects were abused by mishandled hypnosis. A professional hypnotist was successfully sued by a subject who claimed mental and emotional damage from his performance.

Denmark discourages the public performance of hypnosis and its use in medical treatment by unqualified persons.

Although France permits stage demonstrations of hypnosis, a ban was proposed 28 years ago by the academies of science and medicine. However, present day performances are under police control.

Only six states have laws banning public performances of hypnosis. They are Nebraska, Kansas, Idaho, Oregon, Virginia, and Wyoming. On the other hand, Maine and Massachusetts exempt hypnotists from their statutes relating to the illegal practice of medicine.

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CHAPTER VIII

SUMMARY

History presents an interesting record of the extent to which suggestion has been employed as a means of influencing human behavior. As black magic it has been used for destructive purposes in ancient cultures of the world. As white magic it has been the instrument of healing.

Its employment has been by men of prestige in society, the kings, priests, shamans, angagoks, sorcerers. They have been the link between man and the supernatural. And, having been that link, man has enhanced their positions by imputing supernatural powers to them.

As fantastic as it may seem, there are many cultures today in which men retain great position and influence because of the supernatural powers ascribed to them. The stone age culture of Australia and the primitive culture of the Eskimos are examples. For that matter, one can find many examples of belief in the supernatural in our own modern culture. The so-called faith healers still do flourishing business in the tent revivals and television studios of today.

The medium of their success has been the suggestibility of people. The individual reacts to heterosuggestibility, in which the suggestion of another is incorporated into the behavior pattern of the individual, and to homosuggestion, in which one's own thoughts become the compelling force.

Historically, hypnosis emerged from folk lore to become

the compelling force.

Historically, hypnosis emerged from folk lore to become an instrument of modern medicine at the bidding of Franz Anton Mesmer. Mesmer's fluidist quackery interested others, particularly James Braid, who gave Mesmerism its formal name of hypnotism, and John Elliotson, who experimented with the mental conditioning as an anesthesia for surgery.

However, it was James Esdaile who put hypnotism to its severest test on the operating tables of India and gave it his stamp of approval. Later, it became a phenomenon of much curiosity among the Nineteenth Century physicians and philosophers. They experimented with it feverishly and wrote many papers on their experiments. But, like researchers of today, they were unable to explain what happens as the individual undergoes trance induction.

Theories as to the nature of hypnosis are abundant. It was originally thought to be a form of hysteria. However, research has shown so frequently that persons of normal personality make-up are susceptible that this theory has been discarded.

The two most frequently mentioned theories of today are those of subordination and sex. Some researchers have found that the subject undergoing trance induction equates the relationship with the hypnotist as one's relationship with his father. Others find sexual elements in the situation.

Then there are offered theories of dissociation,

conditioned reflexes, death instinct, pleasure seeking, and others.

Whatever the answer may be, researchers are fairly well in agreement that the subject is extremely cooperative with the hypnotist to the extent that the latter assumes god-like proportions. In this relationship the subject presents a personality with a behavior pattern, which, like that of the conscious level, is meaningful and goal directed.

The extent to which hypnotic phenomena can be elicited depends on the depth of the trance. The most bizarre results are obtained from the deepest of trances. As the subject descends the continuum into depth trance he offers responses which serve to inform the operator of his mental status. Once the deep somnambulistic trance is achieved the subject readily accepts and incorporates in his behavioral pattern the most bizarre of suggestions.

The instruments by means of which these levels of trance are achieved are suggestions. The normal conditions of suggestibility are fixation of attention, distraction of attention, monotony, limitation of voluntary movement, limitation of the field of consciousness, inhibition, and immediate execution.

There are several means of determining whether the subject will enter trance readily. Tests of suggestibility, given in the waking state, include the use of Cheveraul's pendulum, implied odors, implied heat, and postural sway.

However, one's reaction to the tests may differ from time to time. It is believed by some that the susceptibility of the individual varies at different times from zero to 100 per cent.

Experimental findings reveal that children are more suggestible than adults. Girls are more susceptible than boys and women more so than men. The peak age appears to be eight years. Ability to enter deep hypnosis declines with age. It ranges from about 55 per cent of boys and girls under 14 to about 7 per cent of adults between the ages of 56 and 63.

Some subjects enter the trance state only with difficulty. Others are easily entranced. It has been clearly demonstrated that some persons cannot resist trance induction even though an active attempt is made to do so. It has also been demonstrated that some persons can be entranced without their knowledge or consent.

The methods of trance induction are many. Most of them involve monotony and repetition. However, the sleeping subject can be entranced without his knowledge. A means of trance induction frequently used by stage hypnotists, the application of pressure on the carotid artery and vagus nerve while the subject breathes deeply, poses real threat of harm.

Because of the heightened state of suggestibility of the subject, it has been found that cues unwittingly given during trance induction can be accepted as command and acted upon.

This may happen without the operator or subject being aware of what has taken place.

Once the subject has been placed in trance, posthypnotic suggestions can be given which will facilitate future trance inductions.

Researchers readily agree that the act of induction itself poses no threat of harm to the subject with the exception of the one mentioned above in which the blood supply to the brain is interrupted momentarily. The possibility of harm lies in the suggestions that are introduced to the subject once he has entered trance state.

The entranced mind readily seizes and acts upon suggestion offered it. This element, a soft, malleable, and normally unresistive mind and the presence of an almost god-like figure, the hypnotist, whose word is command, can produce individual behavior of a remarkable nature. Perception can be enhanced to a fantastic degree of discrimination. On the other hand, it can be suppressed to the point of uselessness, as in trance induced blindness or deafness.

Remarkable results also have been obtained in the fields of memory and learning--leading to the conclusion that all previous estimates of mental ability fall far short of truth.

The deeply entranced subject can be regressed to early periods of life--even infancy. Behavioral characteristics, including speech, conform to the age of regression. Recall of events at the age of regression is clear--indicating that

the mind never forgets. In many instances the regression is accompanied by revivification. This has proved dangerous to some subjects when regressed to the moment of traumatic experiences.

During the act of regression experiences long repressed can be brought to light. They can also be further repressed. Amnesias can be induced that will render them inaccessible. The amnesias can be maintained for long periods of time.

The subject will also accept suggestions in trance to be acted upon at a later time and in the waking state. The range of suggestions that can be perpetuated by posthypnotic suggestion appears limited only by the range of suggestions that can be introduced into the trance state.

The many phenomena of hypnosis have not always been treated kindly by the hypnotist, often unintentionally. One amateur hypnotist was reported to have created mass hysteria in a class of school children by his attempts at induction. Another was reported to have caused paralysis in the limbs of his subject two years after the induction as a result of failure to remove a posthypnotic suggestion that the subject would be unable to move his legs. Still another hypnotist caused his subject extreme discomfort by regressing her to infancy and failing to remove properly suggestions introduced in the trance state. As a result the young woman suffered the lack of bladder and bowel control normally displayed by a two-year-old and required treatment by a psychiatrist.

Claims of reincarnation were blamed in the death of a 12-year-old boy who was reported to have left a note that he took his own life to investigate the reincarnation theory in person.

Laboratory experiments have shown that persons can be persuaded to harm themselves and others. In one such experiment, that went awry, the subject hurled nitric acid into the face of an experimenter who failed to take adequate precautions. In another experiment the subject, an army private, was persuaded to attack an officer under the delusion that the officer was a "dirty Jap." This experiment also took a dangerous turn when the subject produced a knife which he carried unknown to the experimenter. In a similar experiment another enlisted man was persuaded to attack his best friend under the delusion that the friend was really a Nazi spy.

Experiments have been offered which affirm that persons can be persuaded under hypnosis to reveal information which they would not divulge under normal conditions. In one such experiment a bank robbery suspect was persuaded to reveal the location of the money he had stolen.

Subjects have been persuaded to pick pockets and to steal other items while under hypnosis. Hypnosis has also been used to perpetrate fraud and seduction and to influence military desertion. It has been cited as a grounds for divorce by a housewife who claimed her husband used hypnosis to obtain a favorable property settlement from her.

A great number of physiological changes have been accomplished through the use of hypnosis. Researchers in this field also have found indirect suggestion to be effective means of accomplishing their objectives.

Heartbeat has been increased and decreased. In one experiment the subject was persuaded so convincingly that he was bleeding to death that his heart stopped beating and he died. Along with changes in heartbeat, researchers have obtained changes in blood pressure, content, and texture. Claims have even been advanced that the menstrual flow can be regulated by hypnotic suggestion.

Suggestions of work and rest have produced changes in respiration. Fatigue has been inhibited and improved work performances obtained through suggestions.

Suggestions of emotion and body temperatures have produced changes in metabolism corresponding to those states under actual conditions. Other involuntary processes such as intestinal motility, gastric secretions, and kidney action have been influenced.

The anesthetic qualities of hypnosis have proved particularly helpful in childbirth. Investigation in this field has also revealed that uterine contractions can be greatly influenced when the subject is under hypnosis.

Hypnotic anesthesia has proved an aid to dentists in alleviating the pain and anxiety of the patient. The dentist can also employ suggestion to inhibit bleeding once an extract

has been made and to inhibit salivation in order that he might have a "dry" field in which to work.

The old saying that "The skin is a mirror of the mind" has been borne out repeatedly in hypnotic experiments. Numerous examples of blister production by suggestion alone have been found. Allergic reactions have also been obtained.

Hypnosis has proved a valuable instrument in psychotherapy. It enables the therapist to strip away resistances and find the causes of neuroses. However, in employing hypnosis for this purpose one should equip himself with a keen knowledge of mental dynamics. It is possible to do more harm than good without it. Once the subconscious mind has been prevailed upon to give up its experiences and the patient can be appraised of their cause and development, they can be integrated into the pattern of conscious mentation and a satisfactory adjustment frequently can be made. A danger inherent in the use of direct suggestion is the possibility of eliminating the symptom and leaving the cause.

Despite the powerful influence that can be exercised by means of hypnosis there is little to prevent its use by unqualified persons. England adopted legislation in 1953 which prohibited such usage. Denmark, likewise, has deterrents.

Only six states of the United States of America have legal restrictions banning its use by lay practitioners. They include Nebraska, Kansas, Idaho, Oregon, Virginia, and Wyoming. The states of Maine and Massachusetts specifically except hypnotic

from their statutes relating to the illegal practice of medicine.

Conclusions

There is too much evidence to the contrary for hypnosis to be considered as a parlor game. The evidence argues strongly for restrictions in its use. In the case of hypnosis the observation that, "An ounce of prevention is worth a pound of cure," is apropos.

All too often arguments for or against restrictions on the use of hypnosis are based on the assumption that the restrictions are solely to prevent its use for asocial purposes. There are two opposing schools of thought as to whether it can be used in this manner. After considerable research on the subject it is the writer's judgment that it can be used and has been used for asocial purposes.

A large number of laboratory experiments have been performed in which the subject has been persuaded to commit crime while under hypnosis. In the earlier pages of this thesis are cases in which the subject was persuaded under hypnosis to steal, to pick pockets, and to commit assault on the person of another.

There are some rather classic cases of theft having been attempted or committed by subjects under hypnotic influence. These have already been mentioned in earlier chapters of this thesis. Also mentioned earlier have been laboratory experiments in which the subject was persuaded to steal or pick pockets.

There has been considerable interest in the sexual nature of hypnosis. Many theories have been developed around this relationship between the hypnotist and the subject. It has been observed by some that the relationship is equated with seduction when it exists between male and female. In at least one documented case, which, incidentally, stood the test of criminal trial, a hypnotist posing as a physician was found guilty of having exploited a woman "patient" while she was entranced. During the course of his research, the writer encountered other similar cases which he did not record, not being certain at the time that the need for them would arise. They are offered here as a matter of interest but without documentation. One case is recalled in which a hypnotist at Martinez, Calif., was sentenced in 1947 to five years imprisonment for taking liberties with a woman subject under hypnosis. In a more recent case, an amateur hypnotist at Mobile, Ala., testified in court that he placed his wife under hypnosis and discovered that she had committed adultery with his best friend. He claimed that the friend, also an amateur hypnotist, entranced his wife to accomplish the seduction.

There are undoubtedly cases in which hypnosis has been used for exploitation of the subject without public knowledge. Few hypnotists who would use for this purpose would be foolish enough to reveal what they have done.

Those opposed to the belief that hypnosis can be used for asocial purposes point to the laboratory situation as an

artificial one in which the subject is likely to perform with more freedom than he would otherwise. There are other opponents who report that they have attempted experiments in this field with failure the only results. In view of the reported findings the writer feels that neither argument is tenable.

However many cases of record there may be on the uses of hypnosis for asocial purposes, the writer feels that this is a consideration of minor importance. There are few people adequately trained in hypnosis to accomplish this readily. If legislation were needed to discourage hypnosis for this purpose, its main objective should be to protect children--found to be the most susceptible. Except for children and the relatively few people known as natural somnambules, the amateur hypnotist would be hard put to accomplish an induction without the knowledge of his intended subject.

The greatest danger in the use of hypnosis lies in the possibility of unintentional psychic damage that can be done rather than in its possible employment for asocial purposes.

There are numerous cases on record, even by experienced researchers, in which the subject has been damaged unintentionally. If the true number of such cases were known it would probably stagger the imagination. But this will never be possible because all too often, suggestions may be offered and accepted without knowledge of the subject or hypnotist.

The Freudian concept of the mind has been discussed in earlier pages of this thesis. It will be reviewed briefly to

emphasize the danger of tampering with the psyche. For all practical purposes it recognizes two divisions of thought, the Ego, or conscious level, and the Id, or unconscious level. The interaction of the two is governed by the censor-like Super Ego. Underlying the area of consciousness is an area of unconsciousness which influences perception.

Culture plays a powerful role in determining which thoughts are to be banished from the consciousness as the organism develops. It must be remembered that self preservation is a primary objective of the organism. However, the culture to which it is exposed dictates to a large extent the rules which the organism must abide by in preserving itself.

Many times the unconscious forces defy control of the Super Ego and rise to the surface as compulsions. In some instances the Super Ego manages to alter the manifestations in such a manner that they become at least more acceptable to the Ego than they would have been in their original form. This protection against unacceptable thoughts may involve actual self-punishment in cases of severe repression or it may involve aberrant behavior.

The so-called "well-adjusted" person is one who appears to have achieved an optimum of control in maintaining a balance of forces. If the whole truth were known the number of these persons would probably be pitifully few. Research has shown repeatedly that beneath the veneer of respectability seethe shocking currents of thought. They are constantly in conflict

with the unconscious sense of order.

The individual who submits to hypnotic experimentation exposes himself to the possible introduction of suggestion which tends to upset this equilibrium. Artificially implanted neuroses are not new to the psychoanalyst. Some cases are cited in previous chapters of this thesis. No doubt, others exist. As a result the subject often faces a situation with which he is unable to cope. It is not at all unreasonable to assume that one afflicted with suicidal tendencies--a borderline case, for example--could be pushed into self-destruction by the unwise employment of suggestion.

The amateur who chooses to play the role of healer can also cause extensive damage to the subject. Physical and mental illness are an indication that equilibrium has been disturbed. Treatment of causes requires the knowledge of those who have been trained for this purpose. The symptom may be removed by the dabbler without giving thought as to the cause. It has been found that under this superficial treatment the symptom often reappears even in its original form or in another form.

Pain--even the pain of a headache--is a symptom of disorder and should be treated as such. Stage fright may be symptomatic of a deep-seated neurosis and should be so respected. The patient is harmed more than he is helped by one who removes the symptom and leaves the cause intact.

Research with hypnosis as an anesthesia in child-birth indicates it might possibly be used as an agent of abortion.

Again, the writer includes as a matter of interest, but without documentation, the claim of an early French experimenter that hypnosis has been used for this purpose. The same experimenter claimed that the time of delivery could be influenced almost to the minute. Certainly recent experiments have shown marked differences can be accomplished in the uterine contractions of a woman in labor while under hypnosis. The writer suggests that it is highly undesirable that one be permitted to experiment in this field without the benefit of professional preparation.

In using hypnosis as party entertainment, a matter of taste becomes involved. It has been the tendency of amateur hypnotists observed by this writer to persuade the subject to do something he wouldn't ordinarily do in order to demonstrate that the subject is, indeed, hypnotized. The sight of a subject eating an onion while under the impression that it is an apple has caused great hilarity. However, no attempt was made beforehand to determine whether the subject had an allergy or a stomach condition which would make it inadvisable for him to eat this particular food.

The subject can be persuaded to perform other acts which might cause him acute embarrassment in the waking state. He might be persuaded to divulge information about himself or others which also could prove embarrassing. One maintains his role in society for his own protection. Anything which can be used to destroy that role and place the subject in social

jeopardy is too serious an instrument to be considered as entertainment.

From foregoing chapters it should be obvious that regression experiments pose a certain amount of risk for the subject. In the course of regression, revivification sometimes takes place--often of a dramatic nature. Another hazard of regression is the possibility that the hypnotist will not adequately remove the suggestions given and they will carry over into the waking state.

In at least one case of record, the hypnotist was held legally responsible for the damage he caused his subject. In this particular case, referred to earlier in this thesis, the hypnotist was a professional entertainer who was successfully sued in a London court by a subject who claimed he had caused psychic damage. The amateur hypnotist who would entertain others at the expense of his subject makes himself extremely vulnerable.

Recommendations

It has been demonstrated that hypnosis has provided a valuable tool to the healing arts. There are likely many applications of it which have not yet been considered. They will be found only through research.

Probably the most pressing need of hypnosis is an explanation of what it is. Although many theories have been offered, no one has yet satisfied all the questions that arise

concerning the nature of hypnosis. The answer to this may provide many new insights as to the functioning of the mind. The knowledge that under certain conditions the mind can be persuaded to performances which are normally alien to it is certainly intriguing.

Research in almost any area of human activity as it is modified by hypnosis is certain to turn up new knowledge of the mind. Erickson's experiments in time distortion, for example, give birth to a host of questions concerning this fascinating phenomenon. One yearns for the mental efficiency in the waking state that he has discovered can be achieved by the entranced subject. But this is only one of the many fields that deserve attention. There are the fields of perception, anesthesia, control of voluntary and involuntary processes, to name only a few.

Research is needed in new applications. Hypnosis has already found a friend among those who practice the healing arts. How much greater service it can perform will be determined in the laboratory. It may sound fantastic, and the writer admits that it does, but hypnosis could be an ally of the space researcher. Considering that some subjects can be entranced so deeply that their physiological processes are almost suspended (to the point that the heartbeat cannot be detected by stethoscope) hypnosis might be the means of providing physiological and psychological stability to those projected into space for brief periods.

One can speculate endlessly on the opportunities hypnosis offers in research. Only when research is undertaken will speculations be confirmed.

Those who experiment in hypnosis should certainly have some training in the field. The training should be directed more toward psychodynamics than toward trance induction. With practice, one can achieve a fair degree of skill at induction. As has been said before, there is little or no danger in the trance itself. The danger lies in what takes place between the subject and the hypnotist once the trance has been accomplished.

Dorcus* believes that the training should include a doctorate in psychology, or in medicine or dentistry, and least two semesters in hypnosis. Kline** feels training should be to the "point of acceptable standards" in psychology, medicine or "allied fields." He believes the training should be "under direction and supervision of recognized personnel."

Among institutions which offer training in this field are the University of California at Los Angeles, Long Island University, Marquette, Tufts, and the University of Alabama.

So far, there is no instrument by means of which such training can be enforced. LeCron*** observes that, "Researchers may not advocate legislation . . . but they are unanimously for it."

*Appendix C.

**Appendix G.

***Appendix H.

Young* believes that it will take a "first rate tragedy" to jar the public into legislation. Schneck** pointed out in 1956 that The Society for Clinical and Experimental Hypnosis has avoided pressure for legislation "until understanding and cooperation could be obtained from the public in general and from the medical, psychological, and allied professions specifically."

It is the writer's belief that there is a genuine need for legislation restricting the use of hypnotism to those licensed in the healing arts, including medicine, dentistry, psychiatry, and psychology, and to those engaged in research in these fields. Like the British Hypnotism Act of 1953, it should prevent public demonstrations for entertainment purposes. The legislation should be sponsored in the state legislatures by the associations concerned. State legislation is recommended rather than Federal legislation in the belief that less difficulty will be encountered at this level. Enforcement would also be easier.

Once hypnotism is lifted from the stage to the clinic and laboratory by the dignity of law it should shine more brightly as an instrument for the welfare of society.

*Appendix M.

**Appendix J.

APPENDIX A

Milton Abramson, M. D
Practice Limited to
Obstetrics and Gynecology

March 19, 1956

502 Medical Arts Building

Minneapolis 2, Minnesota

Facsimile

Mr. G. R. Wells
The Joplin Globe
426 Lyon Street
Carthage, Missouri

My dear Mr. Wells:

In answer to your letter of March 5, 1956,
I have used hypnosis in the past experimentally
as a technique for the preparation of patients for
childbirth, for appetite control, for dysmenorrhea,
etc. I agree wholeheartedly with you when you say
that the technique should not be used by persons
who have not been trained to use it. I also feel
that hypnosis, inasmuch as it is a medical tech-
nique should not be used as a form of entertainment.
It would be my impression that these two thoughts
of yours could very well be incorporated in a code
of ethics designed to protect whoever might
become involved in its use.

Yours very truly,
Milton Abramson, M. D.

APPENDIX B

COMMITTEE ON LEGISLATIVE RESEARCH
State Capitol--Jefferson City, Mo.

Research Memorandum

Facsimile

No. 309 Date Oct. 19, 1955 To: Representative Robert E. Young

SUBJECT: Hypnosis

While the subject of hypnosis is fraught with controversies, both from the medical aspect, and its possible intromission into the legal field as a defense to a crime, there has been relatively little legislation upon the matter. At the present time, only six states have statutes which specifically regulate the act of hypnotism. These states and their respective statutes are listed as follows:

Revised Statutes of Nebraska (1943)

28-1111. Whoever shall hereafter take part in, practice, assist or become a subject in giving a public, open exhibition or seance or show of hypnotism, mesmerism, animal magnetism or so-called physical forces for gain shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not less than ten dollars nor more than one hundred dollars, or be imprisoned in the county jail not less than ten nor more than thirty days.

General Statutes of Kansas

38-703. That any person or persons who shall within this state induce or permit any child under eighteen years of age to practice or assist or become a subject in giving public, open exhibitions, seances or shows of hypnotism, mesmerism, animal

magnetism or so-called physical forces shall be guilty of a misdemeanor, and on conviction be fined not less than ten dollars nor more than one hundred dollars, or be imprisoned in the county jail not less than ten days nor more than three months, or by both such fine and imprisonment.

Idaho Code

18-201. All persons are capable of committing crimes, except those belonging to the following classes:

1.
2.
3.
4.
5. Persons who committed the act without being conscious thereof.

Oregon Revised Statutes (1953)

167-705. Any person who in any manner exposes to public view any person in a state of trance, sleep or entire or partial unconsciousness, which was induced by hypnotism, mesmerism, or any other form of the exertion of the will power or suggestion of another person over such subject, or consents to or aids or abets such exhibition either in person or through his agents, servants or otherwise, or hypnotizes any person for the purpose of being so exposed to view, shall be punished upon conviction by a fine of not less than \$100 nor more than \$1,000, or by imprisonment in the jail of the county where the offense was committed for a term equal to one day for each \$2 of the fine or both.

Code of Virginia (1950)

18-348. If any person shall hypnotize or mesmerize or attempt to hypnotize or mesmerize any person, he shall be guilty of a misdemeanor. But this section shall not apply to hypnotism or mesmerism performed by a licensed physician or surgeon, or at his request, in the practice of his profession.

Wyoming Compiled Statutes (1945)

58-116. Any person who shall hypnotize or mesmerize any person under the age of twenty-one (21) years in any public exhibition, show or play, or for the purpose of displaying such hypnotized or mesmerized person at any public exhibition, show or play, shall be guilty of a felony and upon conviction thereof shall be imprisoned in the penitentiary not less than one (1) year and not more than five (5) years.

58-117. Any person who shall hypnotize or mesmerize any person under the age of twenty-one (21) years for any purpose other than for the purpose of displaying such hypnotized or mesmerized person at any public exhibition, show or play, shall be guilty of a misdemeanor and upon conviction thereof shall be fined not less than fifty dollars (\$50.00) and not more than one hundred dollars (\$100.00), to which fine may be added imprisonment in the county jail for not more than six (6) months; provided, that this section shall not apply to persons hypnotizing or mesmerizing any person for the purposes of medical or surgical treatment with the consent of the parent

or guardian of such person so hypnotized or mesmerized.

Besides the six states previously listed, several states have statutes regulating the sale of hypnotic drugs. These states include Colorado, Colo. Revised Statutes (1953), 48-3-1 to 5; Delaware, Delaware Code Anno., 16-4901 to 4905; New York, McKinney's Consol. Laws of N. Y. Educa. 6814; Pennsylvania, Purdon's Pa. Statutes Anno. 35-940 to 35-941; and California, Deering's Cal. Codes, Health and Safety 2.

On the other hand, the states of Maine and Massachusetts specifically except hypnotists from their statutes relating to the illegal practice of medicine. (Anno. Laws of Mass. 112:7; Revised Statutes of Me. (1954) Chap. 66, Paragraph 8).

There have been no cases in the last ten years involving the question of hypnosis. Most of the cases appear to have arisen around the turn of the century when the idea of defending against a crime by contending hypnotic influence was first attempted. (40 LRA 269). This effort being unsuccessful, the number of cases dwindled. One of the latest cases arose under the Nebraska statute quoted, supra. This case, Dill v. Hamilton, 137 Neb. 723, 291 N. W. 62, (1940), construed section 28-1111 and held that the section does not prohibit spiritualist seances unless they are public, open and for gain, and therefore does not violate the constitutional guaranty of freedom of religion.

Wm. R. Nelson
 Director of Research
 Committee on Legislative
 Research.

APPENDIX C

G. R. WELLS
The Joplin Globe
426 Lyon Street
CARTHAGE, MISSOURI

Facsimile

March 21, 1956

Psychology Department
University of California
Los Angeles, Calif.

Gentlemen:

This is to solicit your advice in the preparation of a Master's thesis on ethical considerations in the use of hypnosis, which I shall submit to the psychology department of Kansas State College in Pittsburg.

From correspondence with Mr. Leslie Le Cron, I learn that you offer courses in hypnotism, and that similar courses are offered at Long Island University, Marquette, Tufts, and the University of Alabama.

I am seeking answers to two questions:

What do you consider as prerequisites desirable for one who would engage in the practice of hypnosis?

Are you familiar with any colleges or universities, other than the ones mentioned above, which include instruction in hypnosis in their curricula?

You have my sincerest appreciation for any information which you might supply me on these subjects.

Yours cordially,

G. R. Wells

The individual should possess a PhD in Psychology, an M. D. or D. D. S. and should have had at least 2 semesters training.

I know of no other universities that offer training.

Sincerely,

Roy Dorcus

APPENDIX D

MILTON H. ERICKSON, M. D.
32 West Cypress Street
Phoenix, Arizona
Telephone Alpine 2-4254

Facsimile

April 6, 1956

Mr. G. R. Wells
The Joplin Glove
426 Lyon Street
Carthage, Missouri

Dear Mr. Wells:

Stated briefly and on the basis of thirty years of experience with hypnosis, it is my feeling that the use of hypnosis should be limited to professionally trained men, including psychiatrists, dentists and physicians and that the greater part of the use of hypnosis be limited to experimental work under the auspices of accredited institutions of higher learning. The use of hypnosis by clinical psychologists should require proper certification according to the requirements of the American Psychological Association.

I am heartily in favor of the action of the British Medical Association and I wish similar action would be taken in this country.

Sincerely yours,

Milton H. Erickson, M. D.

APPENDIX E

THE FOREIGN SERVICE
of the
UNITED STATES OF AMERICA

Facsimile

American Embassy, Paris
April 27, 1956

Dear Mr. Wells,

In your letter of March 21, you stated that in reading back issues of The New York Times you discovered an article written in 1930 which indicated that the French Academy of Sciences advocated legislation to forbid the use of hypnosis as a theatrical stunt. You further asked if we could find out for you whether there are French laws regulating the use of hypnosis.

We have checked with the Academie des Sciences and the Academie de Medecine, both of whom state that no legislation was advocated at any time with a view to forbidding the use of hypnosis as a theatrical stunt. The Bureau Legislatif, Presidence du Conseil (which is the office of the Prime Minister) states that there is no law on record regulating hypnosis in the theatre. In addition, we spoke with the Prefecture de Police (Police Generale des Spectacles) who indicated that hypnotism is tolerated as a theatrical stunt but is subject to an authorization granted by the Cabinet du Prefet, Service des Spectacles, to the organizer of the show or to the proprietor of the theatre where the performance is taking place.

I hope that this answers your question and will be of use to you in your Master's thesis in psychology.

Sincerely yours,

Russell L. Harris
Deputy Cultural Attache.

Mr. G. R. Wells
426 Lyon Street
Carthage, Missouri.

APPENDIX F

UNIVERSITY OF MINNESOTA
College of Science, Literature, and the Arts
Minneapolis 14

Dept. of Psychology

Facsimile

March 14, 1956

Mr. G. R. Wells,
426 Lyon St.,
Carthage, Missouri

Dear Mr. Wells:

When one considers that millions of persons have undergone hypnosis thruout history with practically no evidence that any harm has been done one is led to believe that the dangers of hypnosis are over-rated. My own feeling is that entertainments using hypnosis are not done in good taste in many cases and thus offend the audience and the subjects, This prejudices the people against hypnosis and they are then likely to reject it when it is offered to them professionally as a technique likely to help them in some difficulty. The same statement may be made in regard to many of the accounts of hypnosis in newspapers, magazines and novels and also on the radio and television.

Since legal restraint would not apply to the various media of communication the passage of laws in regard to entertainments would solve a very small percentage of the problem.

I think that our best solution of this problem as of many others is education of the public. This is, as you know, a slow and laborious process but in the long run probably the most effective.

So far as training of persons in hypnosis is concerned, several universities are giving such training for professional purposes. Examples are: University of California at Los Angeles, Marquette University, and the University of Alabama. At the moment this training is limited to physicians and dentists.

Thank you for the opportunity to express my opinion and you may use what I have written as you see fit.

Sincerely,

William T. Heron

APPENDIX G

G. R. WELLS
 The Joplin Globe
 426 Lyon Street
 CARTHAGE, MISSOURI

Facsimile

March 21, 1956

Psychology Department
 Long Island University
 Long Island, N. Y.

Gentlemen:

This is to solicit your advice in the preparation of a Master's thesis on ethical considerations in the use of hypnosis, which I shall submit to the psychology department of Kansas State college in Pittsburg.

From correspondence with Mr. Leslie LeCron and others I learn that you offer courses in hypnotism, and that similar courses are offered at the University of California at Los Angeles, Marquette, Tufts, and the University of Alabama.

I am seeking answers to two questions:

What do you consider as prerequisites desirable for one who would engage in the practice of hypnosis?

Are you familiar with any colleges or universities, other than the ones mentioned above, which teach hypnosis?

You have my sincerest appreciation for any information which you might supply me on these subjects.

Yours cordially
 G. R. Wells

(Answer)

1. Professional Training in Psychology, medicine or allied field to point of acceptable standards

2. Training in hypnosis under direction and supervision of recognized personnel

3. Long Island University - if you wish to receive announcements of LIU programs please send me a card with your request and list your academic background.

Dr. M. B. Kline
 11 Riverside Drive
 New York 23, N. Y.

APPENDIX H

Facsimile

LESLIE M. LE CRON
Consulting Psychologist
8712 Wilshire Blvd.
Beverly Hills, Cal.

Mar. 15, 1956

G. R. Wells
Carthage, Mo.

Dear Mr. Wells,

In my opinion the "dangers" of hypnosis are not as great as some believe, but there certainly are some. It is only rarely that one runs into a bad situation, and the amateur might have no difficulty with two or three hundred people, but he might with the first one. Rarity doesn't help if he does.

Researchers may not advocate the legislation you mention, but they are unanimously for it. I believe the U.S., Canada and Australia are about the only occidental countries that permit stage hypnosis. I would like to know more as to the six states you mention. Florida is the only one I know of that has any laws against it.

There is of course great need for instruction and it has been hard to obtain as schools have not taught it. Now a few are beginning, universities and dental schools - the medical ones do not. U.C.L.A., Long Is. U., Marquette, Tufts Dental and U. of Ala. Dental have courses. A couple of years ago a group of us began giving seminars in the large cities, and have conducted about a dozen, with more scheduled. Next week we have one in New York. One is planned for either K.C. or St. Louis this fall. I enclose one of our old announcements.

Sincerely,

APPENDIX I

THE FOREIGN SERVICE
of the
UNITED STATES OF AMERICA

The American Library,
American Embassy,
24 Østerbrogade,
Copenhagen Ø., Denmark

Facsimile

April 30, 1956

Mr. G. R. Wells,
The Joplin Globe,
426 Lyon Street,
Carthage, Missouri.

Dear Mr. Wells:

In reply to your letter of March 21 asking whether Denmark has legislation restricting the use of hypnosis to professionally qualified persons, we can inform you that it has not.

However, in the Danish Medical Practice Act of March 14, 1934 (Law 72, om udøvelse af lægegerning), supplemented by Law bekendtgørelse 236 of 1955 are found provisions against "unqualified practicing" which could be employed to prohibit unqualified persons from employing hypnosis in medical treatment.

There also exists a circular issued by the Ministry of Justice on January 19, 1945 in which the use of "hypnosis, clairvoyance, spiritualism and suggestion" is virtually prohibited at public performances but permitted at closed meetings of associations. The circular states that hypnosis may be used when a credited doctor has declared that no danger is involved to the person to be hypnotized (or the medium) and that no one in the audience be called upon to be hypnotized. The circular advises, however, that no doctor make such a declaration.

For further information you may wish to write to:

Danish Information Office,
588 Fifth Avenue, New York, N.Y.

Herr kontorchef Skovgaard,
Sundhedsstyrelsen,
Slotsholmsgade 9,
Copenhagen K., Denmark.

THE FOREIGN SERVICE
of the
UNITED STATES OF AMERICA

- 2 -

Herr overlaege Geert Jørgensen,
Frederiksberg Hospital,
Copenhagen F., Denmark.

The latter is a psychiatrist and will undoubtedly be able to give you information about the use of hypnosis in psychiatric treatment in Denmark.

Sincerely yours,

Robert W. Lindvall
Assistant Cultural Affairs Officer

APPENDIX J

JEROME M. SCHNECK, M. D.
26 West 9th Street
New York 11, N. Y.

Facsimile

Oregon 3-8250

March 19, 1956

Mr. G. R. Wells
The Joplin Globe
426 Lyon Street
Carthage, Missouri

Dear Mr. Wells,

I have your letter of March 5th. During my period in office (1949-1955) as President of The Society for Clinical and Experimental Hypnosis, it was my interest and policy to build up as significantly as possible the scientific status of hypnosis and to avoid pressure for legislation until understanding and cooperation could be obtained from the public in general and from the medical, psychological, and allied scientific professions specifically. I felt that premature publicity and push for legislation were likely to result only in failure and misunderstanding.

What the future holds remains to be seen. For any additional statement regarding possible movement toward legislative action I am referring you now to the Society's current president, Dr. Bernard B. Raginsky, 376 Redfern Avenue, Montreal, Canada.

Sincerely yours,

Jerome M. Schneck, M. D.

APPENDIX K

Facsimile

BRITISH INFORMATION SERVICES
30 Rockefeller PlazaReference for reply New York 20, N.Y.
P77/Enq.Telephone
Circle 6-5100Cable
Digestion, New York

May 3, 1956

Dear Mr. Wells,

Your letter to the United States Embassy in London requesting information on British legislation on hypnosis has been passed to this office for reply, reaching us on April 20th.

The Hypnotism Act (an Act to regulate the demonstration of hypnotic phenomena for purposes of public entertainment) was passed in 1952 and went into effect on April 1st, 1953.

This act defined hypnotism in the following way:

"'Hypnotism' includes hypnotism, mesmerism and any similar act or process which produces or is intended to produce in any person any form of induced sleep or trance in which the susceptibility of the mind of that person to suggestion or direction is increased or intended to be increased but does not include hypnotism, mesmerism or any such similar act or process which is self-induced."

The Act gave licensing authorities the power to regulate or prohibit exhibitions, demonstrations or performances of hypnotism in places of public entertainment, and made it an offence to demonstrate hypnotism on a person under twenty-one years of age. There is nothing in the Act to prevent the practice of hypnotism for scientific or research purposes or for the treatment of mental or physical illness.

We regret that we do not have copies of this statute in stock, but our Sales Section will be glad to order a copy for you from London if the delay of four or five weeks would not be too inconvenient.

Very truly yours,

Agatha Walsh,
Reference SectionMr. G. R. Wells,
The Joplin Globe,
426 Lyon Street,
Carthage, Missouri.

APPENDIX L

THE USE OF HYPNOSIS IN OBTAINING
A CONFESSION OF CRIME

By

J. A. Glaze and G. R. Wells

An intensive research into the hitherto comparatively fallow field of hypnotism was foreshadowed last month by an action of the British Medical Association. According to an Associated Press report the association not only has endorsed the use of hypnotism but also has directed that it be offered as a course to all pre-medical students in the future. It is not in the least unlikely that the American Medical Association will yield similar recognition in the foreseeable future. The mental conditioning long used by psychologists already is in use in this country in hypnodontics, in the treatment of burn cases, in easing childbirth, and for other anesthetic purposes.

So flexible a device as hypnotism must certainly have uses other than medical, however. An experiment conducted by this writer earlier this year has convinced him that one of those uses could be the detection of crime.

On February 18th the bank of a small town located in the county of this writer's residence was robbed of \$1,600 by a lone, unmasked man armed with a .22 caliber revolver. Within the hour three men were taken into custody by police in a neighboring town. The three were subsequently turned over to the sheriff for questioning and confinement in the county

jail. However, an intensive search failed to reveal the hiding place of the \$1,600. Without it, conviction would depend largely on accounts of the incident by witnesses. Such accounts frequently can become conflicting under adroit cross-examination.

An interrogation of the man identified as the actual perpetrator was undertaken by the sheriff and his deputies. The subject, whom the writer shall designate as "A" steadfastly denied complicity. Nearly two hours of questioning failed to elicit information which might have been used in securing a conviction. Subjects B and C, under questioning elsewhere, were equally adamant.

At the writer's suggestion permission was granted to attempt questioning under hypnosis. In commencing the experiment, the writer engaged his 47-year-old subject in casual conversation during which suggestions were occasionally introduced that subject A had been for a long time without sleep, that he appeared sleepy, that he apparently was "worn out."

After several moments of conversation the suggestion was made that the subject might have a few moments to take a nap before questioning would be resumed and that he would be refreshed and better able to defend himself if he did so. A few moments later the suggestion was made that he close his eyes, which he did. Another suggestion was then introduced that he breathe deeply. With this he complied also. Then the

writer advised the subject that he would begin counting and that the subject would be soundly asleep at the count of ten. The subject entered a deep slumber as planned.

After deepening the sleep further by reciting the alphabet with suggestions of deep sleep interspersed, the writer advised the subject he could talk. Responses to questions concerning his name, age, etc., were obtained preliminary to the next step. This was the suggestion that subject A would visualize a large clock.

Upon being advised that the clock had appeared, an attempt at regression was made by suggestions that the hands of the clock were moving backward. As this phase of the experiment proved successful the subject then was advised that the clock's hands would stop on the day the robbery was plotted.

When the subject advised that the hands had stopped, the question was asked, "What day is it?" The answer given was, "Tuesday."

Interrogation of the details of the robbery then was commenced and the order of events in sequence were obtained.

Two questions failed to elicit the expected response: A question concerning the complicity of B and C; and a question concerning the whereabouts of the money. The subject readily implicated B. But when asked about C, to whom he had a strong emotional attachment, the subject reacted convulsively. A similar reaction was obtained when he was questioned concerning the money.

Not wishing to awaken the subject the writer pressed neither issue. Rather, he introduced a suggestion that upon awakening the subject would desire to unburden himself of the entire account. The writer then awakened the subject by normal methods.

Upon awakening, the subject readily gave a statement, which he later signed, accounting for his activities and disclosing the whereabouts of the money to which he later led officers voluntarily. However, his statement failed to implicate C.

The statement was read, in part, to C, who then admitted his guilt and voluntarily dictated a statement which he signed. C's statement was then shown to A who admitted withholding the information concerning his friend's guilt. A new statement was drawn for A which he signed.

The two men have indicated they will enter pleas of guilty on trial. The third, although implicated by the others, has declined to make a statement and has retained a lawyer in his defense.

APPENDIX M

