5-1986

Demand Characteristics in the Hypnotic Elicitation of Multiple Ego States

Laura M. Sturgis
Utah State University

DEMAND CHARACTERISTICS IN THE HYPNOTIC ELICITATION OF MULTIPLE EGO STATES

by

Laura M. Sturgis

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah
1986

ACKNOWLEDGMENTS

I would like to thank Dr. John Carlson, Chair, University of Hawaii-Manoa, for his kind cooperation in extending use of the psychology department's students and facilities, without which the data collection for this study would not have been possible. I would also like to thank Dr. Tony Marsella for his review and endorsement of my proposal which enabled me to secure Human Subjects Committee approval to conduct the research at UH-Manoa.

Special thanks from the bottom of my heart go to my hypnotists--Julia Anderson, Hanz Bolen, Dr. Helen Comeau, Suzanne Gately, Janie Ing, and Dr. Donna Tsukamoto--for donating their time and energies to assist in gathering the individual hypnosis data. Thank you all for your perseverance when your phone calls were not being answered or subjects were off on vacations to the mainland!

A warm mahalo goes to my co-chairs, Dr. Bill Dobson and Dr. Richley Crapo, whose helpful suggestions, support and reassurance made what felt like a solo long-distance trek more like a guided journey. You helped to convert mountain peaks into less imposing foothills to travass!

Finally, I would like to thank my friends who spurred me on with encouraging words, and my parents and family for their acknowledgment of the culmination of my successful educational efforts.

Laura M. Sturges

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Demand Characteristics in the Hypnotic Elicitation of Multiple Ego States

by

Laura M. Sturgis, Doctor of Philosophy

Utah State University, 1986

Major Professors: Dr. William R. Dobson
Dr. Richley Crapo
Department: Psychology

Hypnotic elicitation of multiple ego states was explored using Hilgard's "hidden observer" paradigm. Twenty subjects in two groups: hypnosis and simulation, were utilized to examine the impact of experimental demand characteristics on the production of multiple ego states. Self-report and hypnotist-report measures were obtained in a test-retest design. Multiple t-tests and chi-square analyses were computed with significant differences on key multiple ego state items found between groups. Results demonstrated retest reliability, but not inter-rater reliability of this dissociative phenomena, since hypnotists failed to discriminate real from "faked" hypnotic involvement. Exploration of multiple ego states using non-hypnotic control conditions and multiple dependent measures is suggested for future research. (157 pages)

CHAPTER I

INTRODUCTION

Hypnosis and Dissociative Phenomena

Early historical and theoretical interest in psychological dissociation can be traced to Janét (1889) and his contemporaries (James, 1890; Prince, 1906; and Sidis, 1902) in their studies of patients with hysteria and multiple personalities. Hypnosis was one of the primary methods used by Janet and other investigators to explore this split in conscious ego functioning. More recent theoretical reformulation and scientific inquiry into dissociated mental states has been conducted by Hilgard and colleagues (Hilgard, 1979; Hilgard, 1977; Hilgard, Hilgard, MacDonald, Morgan & Johnson, 1978; Hilgard, Morgan & MacDonald, 1975; Knox, Morgan & Hilgard, 1974) using the "hidden observer" paradigm which derives essentially from Janét's concept of desegregation. Hilgard's neodissociation metaphor seeks to explain the operation of multiple cognitive control systems, or splits in conscious awareness, which occur in both normal and altered states of awareness, such as hypnosis.

The hidden observer model typically tests for dissociative reactions of subjects using either an hypnotic analgesia or hypnotic deafness item. Subjects are generally selected for high hypnotic susceptibility, although comparison and control groups using medium and low

susceptibles, as well as simulating subjects, (Hilgard, et al., 1978; Nogrady, McConkey, Laurence & Perry, 1983) have been utilized. After an hypnotic induction, which may involve difficult hypnotic items, such as hallucination, age regression, or other dissociative items such as automatic talking or writing (Hilgard, et al., 1975), the subject is given appropriate suggestions and tested for either analgesia or deafness. When lack of behavioral or self-reported pain from immersion of the arm in extremely cold water, or hearing tested by lack of behavioral reaction to loud, sudden noises, is confirmed, the subject is then offered the suggestion that perhaps there is (or may be) a part of them which is experiencing the sensation of which their hypnotized part is unaware. The hidden part then communicated its knowledge through automatic key pressing (Hilgard, et al., 1975) or verbal reports (Hilgard, et al., 1978; Knox, et al., 1974). In addition, some studies have incorporated postexperimental inquiries to determine the phenomenological components of the hidden observer response.

Watkins and Watkins (1979) view ego dissociative functions along a continuum where multiple ego states are at the healthy, adaptive end of the spectrum and multiple personality exists at the opposite pathological extreme. The Watkins' used Hilgard's hidden observer model based on the proposition that the hidden observer appeared similar

in function to clinically observed multiple ego states. More specifically, the splitting in awareness of hypnotically deaf subjects (absence of flinching or signs of auditory awareness) and hypnotically analgesic subjects (no withdrawal of the arm or facial grimacing in response to extremely cold water) in Hilgard's hidden observer studies seemed similar in nature to the conscious splitting of sensory awareness and perception which could be used to demonstrate the operation of multiple ego states. A subsequent investigation by Watkins and Watkins (1979-1980) activated 17 ego states in 10 highly susceptible subjects, some of whom had evidenced the same multiple ego states in clinical psychotherapy sessions previous to the experiment.

Based on the nature of suggestions administered during hypnotic ego state or hidden observer inductions, the question of leading the experimental subject into "believed in imaginings" (Sarbin & Coe, 1972) or a delusory state (Sutcliffe, 1961) about the reality of their multiple levels of awareness, has been raised by several researchers. This issue, namely that of demand characteristics in the hypnotic elicitation of multiple ego states or hidden observers, has been hotly debated. Reports have ranged from partial support (Laurence & Perry, 1981; Laurence, Perry & Kihlstrom, 1983; Perry & Laurence, 1980) to absolute and categorical refutation of the existence of hidden observers, and relegation of the phenomena to

laboratory artifact (Spanos & Hewitt, 1980; Spanos, Jones, & Malfara, 1982).

These recent investigations into the hidden observer phenomenon have attempted to clarify some of the hoary experimental threats to the internal validity and correct some of the methodological flaws of earlier studies. They can be organized more systematically in regard to their contributions towards differentiating the effects on hypnotic performance of 1) hypnotic susceptibility level, and 2) demand characteristics attributable to the induction and interview instructions. Both sources of data have lent either direct or indirect support for the contention of the pre-existence of the hidden observer. First, let us examine and interpret findings relevant to the susceptibility factor.

Typically, highly susceptible subjects have been selected for experiments in hypnotic elicitation of multiple ego states or hidden observers. If the hidden observer were a viable pre-existing entity, then not only would highly susceptible subjects demonstrate such a sensory/perceptual/cognitive split, but low and medium susceptibles would be expected to report valid experiences of the hidden observer, but at lower frequencies. In fact, the finding that not all highly susceptible subjects experience a dissociated part, whether it be labeled as hidden observer or multiple ego state, (Hilgard, 1974,

Hilgard, et al., 1975; Hilgard, et al., 1978; Knox et al., 1974) argues for the position that it is not simply an artifact of high susceptibility.

In a review of the hidden observer literature, Nogrady, et al., (1983) report that the incidence of the hidden observer response has ranged from 4% for unselected (mixed susceptibility) group of hypnotized subjects, from 39% to 88% for groups of highly susceptible subjects, to 75% for a group of simulating low susceptibility subjects, based on self-reported experience. In a recent study by Laurence and Perry (1981), in which 39% demonstrated a hidden observer effect, Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) scores were compared with data from the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C). Results for the groups were nonsignificantly different. The mean for the hidden observer group on the HGSHS:A was 10.60, compared to 10.56 for the no hidden observer group. On the SHSS:C, means were 10.56 and 10.86, respectively. In summarizing the results of the above research, questions about susceptibility level arouse less concern as a confounding factor.

In reference to the issue of demand characteristics and multiple levels of awareness, a study by Perry and Laurence (1980) revealed that 5 of 10 highly susceptible subjects reported in a postexperimental inquiry of age regression to 5 years old that during the experiment

they experienced duality in their awareness, either simultaneously or alternately, in which they felt they were both adult and child. A follow-up investigation (Laurence & Perry, 1981) explored further the relationship between duality in age regression and the hidden observer response. Findings showed that all subjects who described a hidden observer effect also showed duality during age regression. They described their experience as "detached self-observation" when they shifted focus from their adult to child ego state. Conversely, subjects who experienced no duality subsequently did not manifest a hidden observer effect.

In general, subjects reported post-experimentally that the hidden observer phenomenon was experienced as occurring voluntarily, and represented an objective, matter-of-fact, and reality-bound observation of the happenings. They also reported that their experience of having multiple levels of awareness was familiar and similar to their tendency to engage in self-observation outside of the hypnotic setting (Laurence & Perry, 1981). Thus, the differences between real and simulating subjects suggests that the hidden observer response cannot be explained solely on the basis of demand characteristics, and in fact, evidence suggests the capacity for objective self-observation in conjunction with moderate to high levels of subjective involvement may be a relatively common phenomena in subjects with good skills in concentration and imagination. This capacity

for dual awareness is suggested to be related to the personality style of being both self-conscious and able to relinquish control over the situation by immersing oneself in the moment, simultaneously. Although somewhat paradoxical, upon reflection one can usually recall this flexibility in dual awareness as a not at all unusual occurrence.

In reference to the question of demand characteristics, Hilgard, et al., (1978) in a post-experimental inquiry on the phenomenological aspects of the hidden observer effect discovered that 50% of subjects reported they had been skeptical of the existence of such a part prior to experiencing it, while the remaining 50% felt the hidden observer was congruent with earlier self-role perceptions. And, of the subjects not reporting a hidden observer, at least one-third were accepting of the possible existence of a hidden observer. The lack of congruence between pre-experimental expectations and actual hypnotic experience of subjects argues against the contention of Spanos and Hewitt (1980) and Spanos, et al., (1982) that the hidden observer effect is pure laboratory artifact.

Additional information about two distinct types of experiences of the hidden observer (Laurence & Perry, 1981) among highly susceptible subjects merits description and interpretation. One group, which did not experience pain during analgesia suggestions, nonetheless indicated they

registered the pain when hidden observer instructions were administered; and they also experienced simultaneous or alternating awareness of adult and child identities during age regression. This group, then, evidenced dual awareness during both regression and during the hidden observer item.

A second group denied the pain registering part, thus manifesting duality in their awareness and the hidden observer response. However, they experienced full immersion in their child selves during the regression, appearing oblivious to their adult identities. The latter group experienced a unified awareness during the age regression, but a split or dissociation when they received hidden observer instructions.

In the above experiment, the differential responsivity on the regression vs. hidden observer items, both of which explore the operation of similar dissociative processes, leads one to believe that there may be inherent differences among highly susceptible subjects which result in response variability along dimensions of attention, levels of awareness and imagery which could account for the differences in cognitive processing. Clearly, demand characteristics, assumed to be identical for all subjects, were not responsible for the unanticipated distinction between the two types of response patterns.

Research Implications

Given the possibility that it is typical or probable that a single individual has multiple ego states, then wide-ranging implications for the evaluation of past and future research in human behavioral sciences exist (Watkins & Watkins, 1979). In psychological research, for example, it is frequently the case that subjects will be given pre- and post-measures using the same instrument. The assumption is that the person who took the initial test, the one exposed to the experimental procedure, and the one taking the final evaluation were one and the same person. But, ego state A may have taken the pre-test, ego state B may have been the one who participated in the treatment, with ego state C taking the final test. Other combinations, using two or more ego states for a single individual, can be imagined. That such a situation exists which could invalidate research efforts has heretofore not been considered or controlled for in psychological research Subtle shifts in mood, attitudes, and behaviors signaling shifts from one ego state to another may go unrecognized by the experimenter. We assume as researchers that we are dealing with a single psychological entity and make no allowance in our conceptual framework for the operation of unseen, impalpable, dissociative elements. Therefore, it is important that research efforts be directed towards

elucidation of the nature and frequency of multiple ego states in clinical and experimental settings.

Statement of the Problem

The issues of differences between experimental vs. control groups in the hypnotic elicitation of multiple ego states attributable to the confounding factor of hypnotic susceptibility level have been adequately addressed in the literature, as previously described. The problem of demand characteristics, however, is not as easily resolved, as cues indicating the experimenter's intent are inherent in any setting. Nonetheless, several studies have used less directive language (Laurence & Perry, 1981; Nogrady, et al., 1983) which sought to minimize cues to the subjects indicating experimenter's expectations that multiple levels of awareness were expected. Post-experimental interviews using videotaped playback of the hypnosis sessions (Laurence & Perry, 1981; Nogrady, et al., 1983; Perry & Laurence, 1980) have also yielded highly critical information regarding the phenomenology of the hidden observer experience, and have contributed valuable data necessary for the accurate interpretation of findings. These studies lent support to the validity of the hypnotic elicitation of hidden observers in experimental settings and did not provide evidence to indicate the effects were attributable to the operation of demand characteristics.

However, past research efforts have demonstrated results based on informed, not blind experimental hypnotists, which limits the generalizability and external validity of said findings. In addition, the problem of reliability has not been adequately treated, although replication of major components of the hidden observer phenomenon have been reproduced both within and between the Stanford (Hilgard, et al., 1978; Hilgard, et al., 1975) and Concordia University (Laurence & Perry, 1981; Nogrady, et al., 1983; Perry & Laurence, 1980) laboratories. Another major omission in past research efforts has been the lack of inclusion of non-hypnotic control groups for the experiment to qualify as a true empirical design although low susceptibility simulating subjects (Nogrady, et al., 1983) have been employed as a quasi-control. Also, objective data garnered from the hypnotist's observations of subjects in conjunction with subjective reports, have not been compared and contrasted as evidence for the reliability across time and raters.

Purpose and Objectives

The current investigation will differ from previous experimentations in several important respects and will control certain factors as possible confounding variables. First, hypnotic multiple ego state induction and interview instructions similar to those used by Watkins and Watkins

(1979-1980), which were modeled after the hidden observer reference studies by Hilgard and colleagues (Hilgard, et al., 1975; Hilgard, et al., 1978; Knox, et al., 1974), will be incorporated. These instructions use less directive wording and do not convey strong expectations to demonstrate multiple ego states.

A simulating subjects group will be utilized as a quasi-control (Orne, 1969). The addition of the quasi-control group for comparison purposes will provide a more scientific, unbiased effort to obtain information about the validity of hidden observers/multiple ego states as distinguishable from hypnotic demand characteristics.

In contrast to previous studies, the current investigation will utilize several blind experimental hypnotists naive as to the experimental hypotheses. This methodology offers a more objective, unbiased approach to data collection than use of the primary investigators as hypnotists, prototypical of past inquiries. The possibility that subtle cues to subjects about desired behavioral outcomes would thereby be minimized. Thus, possible error attributable to demand characteristics would be reduced and results would hold greater generalizability across hypnotists and laboratories.

Two dependent measures--a self report of induction experiences from the subject, and hypnotist report of behavior observations will be utilized to obtain data

pertaining to the reliability, and to a lesser extent, the validity of the multiple ego state phenomenon.

Test-retest and inter-rater reliability scores will be collected on those subjects giving evidence of at least one additional ego state to examine the replicability and robust quality of the findings.

Next, we will explore the underlying tenets of dissociative ego state functioning from the neo-Freudian perspective of Paul Federn, as well as more contemporary theorists such as Watkins and Hilgard. This will provide the theoretical foundation for the pre-existence of multiple ego states as they have been observed and reported based on clinical case studies and therapy with multiple personalities.

CHAPTER II

LITERATURE REVIEW

Diagnostic and Etiological Considerations of Multiple Ego States and Multiple Personalities

The contributions to ego psychoanalytic theory of Paul Federn (1871-1950), a disciple of Freud, have remained relatively unrecognized in psychoanalytic and lay circles. Federn's theoretical views on the ego and libido departed significantly from Freud's and have been described by Edoardo Weiss (1966). However, the novelty of his formulations remained obscured due to his life-long loyalty to Freud and was overshadowed by the latter's profound historical prominence.

An ego state, according to Federn (1952), is a subdivision of the ego representative of an integrated complex of attitudes, emotions, motivations, knowledge, behavior, etc. Watkins and Watkins (1979-1980) define an ego state as a body of behavior and experience which is bound together by some common (psychological) principle and separated from such other states by a boundary which is more or less permeable. (See Figure 1.) In terms of the Watkins' reformulation, each individual ego state is thereby unified by libidinal ego forces and simultaneously separated from other ego states by boundaries cathected with ego mortido.

As the self develops from the moment of conception, the experiences, behaviors, feelings, ideas, memories, response potentials, etc., are stored as engrams, and

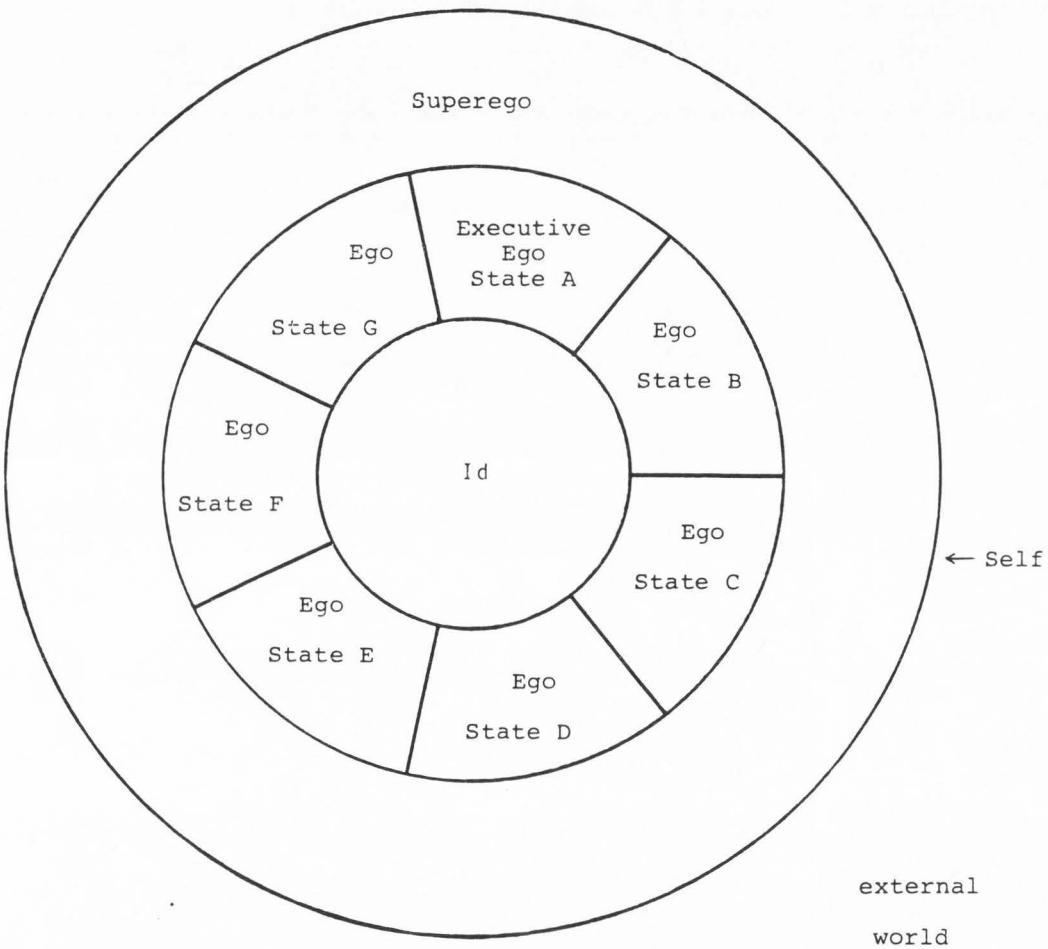


Figure 1. The Structure of the Self Adapted from Federn's Theoretical System.

organized as distinct complexes once the infant has developed a concept of the self as separate from other objects in the environment (Piaget & Inhelder, 1973). In the normal process of development, according to traditional psychoanalytic theory, intrapsychic conflict between the id, ego, and superego; or external threat from objects in the environment, leads to anxiety which is bound by psychological defense mechanisms. Theoretically, the ego would remain a single entity and resist fractionation into various ego states or multiple personalities if no intrapsychic or environmental conflicts precipitated the development of defense mechanisms to protect the ego from attack. Since the Watkins' believe this is rarely, if ever, the case, splits between psychic complexes inevitably develop, especially in cases where severe traumas necessitate the mobilization of strong defense reactions to preserve the equilibrium and integrity of the ego (See Figure 2.) According to traditional psychoanalytic postulates, the strength and integrity of the ego is the key mediating factor which would determine if the trauma or insult would produce multiple ego states vs. a multiple personality disorder.

Taylor and Martin (1944) define multiple personality as evidenced when each of two or more personalities is so developed and integrated as to have a relatively well

coordinated, rich, unified and stable life of its own. Multiple personalities, according to the DSM-III (1980) of the American Psychiatric Association, is defined as follows:

> The essential feature is the existence within the individual of two or more distinct personalities, each of which is dominant at a particular time. Each personality is a full integrated and complex unit with unique memories, behavior patterns and social relationships that determine the nature of the individual's acts when that personality is dominant. Transition from one personality to another is sudden and often associated with psychosocial stress [p. 257]

Salama (1980) has described a case of a woman with five multiple personalities which developed as the result of severe childhood traumas. In other clinical case studies of multiple personality (Allison, 1974, and Braun, 1984), the first splitting of the personality occurred before age 5 in 45% and 100% of cases, respectively, suggesting early childhood traumas or severe psychosocial stress in the preschool years.

Herzog (1984) describes the formation of a multiple personality as a complex phenomena which necessitate the interaction of three factors: a) the presence of a mental structure which allows for a high degree of dissociation, b) the underlying character organization of the individual, and c) certain neurophysiological/neurobiological proclivities.

Most interesting is his conceptualization of the underlying character organization of the multiple

personality. He agrees with Gruenewald (1977) that multiple personality is a syndrome that spans a diagnostic continuum from milder to more severely disordered pathology, but disagrees with her that the narcissistic personality disorder is prevalent. Adhering to Kernberg's (1976) classification of "high level" and "low level" character pathology, he gives examples of a hysterical and schizotypal patient, respectively. He is in general agreement with other authors (Allison, 1974, Bliss, 1980, and Braun, 1984) that the first subpersonality is created between the ages of 4-6 years, coincident with the oedipal period when strong, socially unacceptable sexual and aggressive urges need to be repressed.

Ego State and Object Relations Theory of Paul Federn

The term libido, as it was defined by Freud (1953), referred to sexual energy associated with Eros which could be cathected or invested in either the self (ego-cathexis) or an object, something other than the self (object cathexis). Federn (1952) deemphasized the eroticization of the process of cathexis and conceived of it as a more generalized investment of psychic energy in a psychological item. The process of cathexis refers to the directing or attaching of a real or imagined psychological object (self or not-self) with a quantity of energy which serves to

bring it into psychological existence or reality to the perceiver. An example is when gazing appreciatively at the beauty of rose, one thereby allocates it with a quanta of positive, integrating, life-giving object energy (object libido cathexis). Hence, in cathecting an object with libido, we activate our perception and heighten our positive interest in it.

Federn also endorsed the tripartite separation of the psyche into id, ego, and superego according to traditional Freudian theory, but he went on to elaborate more extensively on the ego boundaries. He considered that objects outside the physical body can be egotized, or to some extent, experienced as part of the self. For example, we may experience other family members or personal possessions as egotized parts of the self. The process of introjecting external objects, persons, ideas or feelings through identification renders them part of our psychic structure. Watkins (1978) has defined the product of the identification process via ego (libido) cathexis an identofact.

Mental energy can likewise be focused inward when the ego directs the libido reflexively back onto itself. This act of self-love or narcissism was coined ego-libido by Freud. Federn (1952) considered ego libido to represent the experience of knowing the self, a sense of the cohesiveness, continuity, contiguity, and causality of the ego. The permanent, cohesive, orderly and rational aspects

of the self are experienced when one cathects a percept with ego-libido and it becomes an owned, integrated part of the self. Both Freud and Federn considered the ego in the process of ego cathexis to be both subject and object, the percept as well as the perceiver, and obfuscated the critical problem of the subject-object relations in their discourses on ego psychology. Watkins (1978) takes the position that existence is impact; that in order to know the self, the other, or not-self, must be perceived. However, he does not discount the possible existence of Freud's "primary narcissism," which implies that the self can be known independent of object relations.

Reformulation of Ego State Theory

In an attempt to clarify further the preceding discussion of object relations, the present author will offer some further modifications of Federn's and Watkins' theories. Four stages in the process of object relations theory can be partitioned. First, a psychological object is experienced through sensory modalities of sight, hearing smell, taste, touch or movement. Secondly, the perception of an object is registered in more organized fashion when neural impulses are transmitted through the CNS to higher cortical centers. Next, the object perceived will be invested or cathected with a particular instinctual energy with affective components, either libido or mortido, or a

combination of the two energies. In libidinal cathexis, the energy draws toward, integrates, or attracts with positive valence in a loving way. Mortidinal energy, on the other hand, repels, is disintegrative and has a negative valence representing feelings of hatred. The attribution of affect (loving or hating) and directionality implied therein (attractive or repellant) comprise the third dimension of the relational process. Another dimension following the incorporation of sensation, perception and affection involves making a cognitive discrimination of the psychological object as either self or not-self, as within the realm of one's ego boundaries or outside of the ego boundaries. The four stages, arranged in temporal sequence, are: sensation, perception, affection, and cognition (See Figure 2.) Subjectively, these processes may be experienced as occurring almost simultaneously, although upon reflection the four components can be distinguished as essentially separate stages in the phenomenology of object relations.

The position taken here by Watkins (1978) describes cathectic processes as follows:

> Object cathexis and ego cathexis are two different kinds or qualities of energy. The first is a non-living or "it" energy; the second is an organic, living, or "self" energy. An item becomes object or subject depending on which of these two energies cathects it. If its object cathexis is withdrawn and replaced with ego cathexis, the item ceases to be an object and becomes incorporated into the ego, and vice versa. (p. 127)

sensation (visual, auditory, olfactory, gustatory, tactile-kinesthetic)

perception (sensory organized awareness and cortical processing)

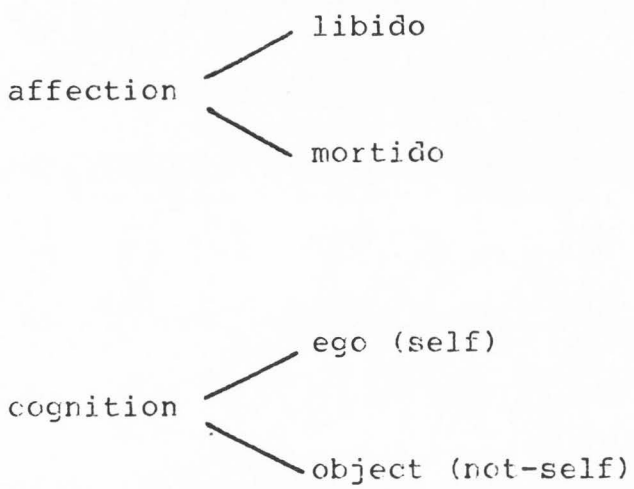


Figure 2. Four Sequential Stages in Subject-Object Relations.

It appears that in his reformulation Watkins has meshed the concepts of the origin (ego or object) with the type of energy investment. In essence, the process of imbuing an object with a particular cathexis has been nominalized as either ego-directed or object-directed, with the affective component of the process ignored. The two qualities of energy are, as Federn contended, libidinal and mortidinal, not ego cathexis and object cathexis. Libidinal energy represents Freud's original instinctual life-giving, creative, sexual force, according to the principle of Eros; while mortidinal energy, in the principle of Thanatos, embodies that which is destructive, aggressive and death-producing, according to Federn.

The crucial question seems to be "Must an object be libidinally cathected to be egotized?" The present formulation is an attempt to separate the concepts of ego cathexis and ego libido, and provide a means to clarify and distinguish between the referential indices (ego or object), and the nature of the cathected energy (libido or mortido), and their combinations. Contrary to Watkins' contention, an item does not become subject or object depending on which of the two energies cathects it. In the opinion of this author, an item can become an identofact--an internalized introject invested with ego cathexis, and still be despised or hated, cathected with mortido. Figure 3 represents a diagrammatic representation of the structure

ego-syntonic	1)	ego libido cathexis (identofact viewed as loved, integrated part of the self)
ego-dystonic	2)	ego mortido cathexis (identofact viewed as hated, disintegrated part of the self)
EGO BOUNDARY		
object syntonic	3)	object libido cathexis (psychological item perceived as loved, integrated object)
object dystonic	4)	object mortido cathexis (psychological item perceived as hated, disintegrated object)

Figure 3. A Diagrammatic Representation of Four Types of Subject-Object Relations.

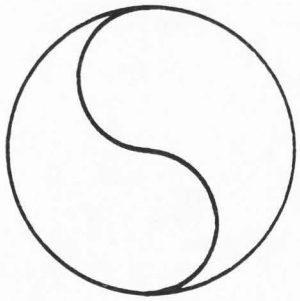
and function of personality dynamics in object-relations theory as conceived by this author.

According to this model, once ego cathexis replaces object cathexis and the item ceases to be an object, it is not necessarily cathected with a living energy, but in the case of ego mortido cathexis, the identofact is viewed as a hated, disowned part of the self. Knowledge of such identofacts remains, for the most part, repressed from conscious awareness because of their inherently unpleasant nature and negative valence relative to the ego. Nonetheless, they exist as part of the ego structure, similar in dynamic to the shadow in Jungian personality theory. Figure 4 is a symbolic depiction of the four hypothesized types of object relations--ego libido cathexis, ego mortido cathexis, object libido cathexis, and object mortido cathexis.

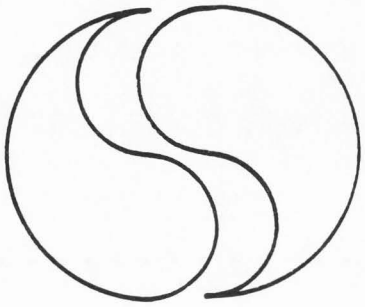
The preceding discussion and clarification of the processes of cathexis, subject-object relations theory, and libidinal and mortidinal energies and their directionality will be subsequently used to explain dynamic functioning relative to ego-state theory.

Ego state theory (Watkins, 1979) posits ego dissociative phenomena as a psychological process along a continuum from normality to pathology. The sub-systems or mini-selves known as ego states may be less distinct and manifest themselves as normal mood changes at the healthier

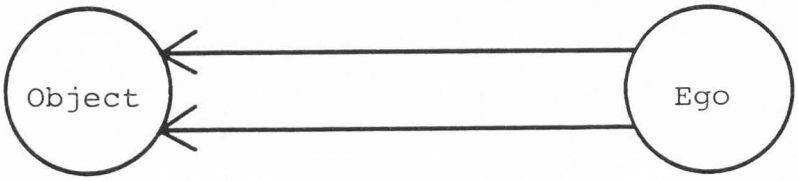
Ego libido cathexis



Ego mortido cathexis



Object libido cathexis



Object mortido cathexis

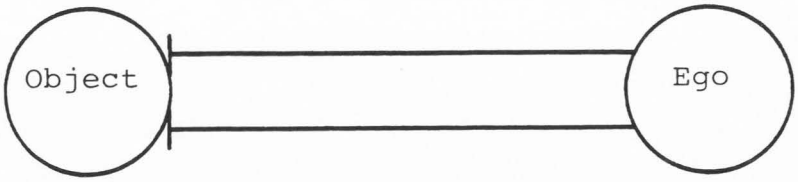


Figure 4. Symbolic Depiction of the Four Hypothesized Types of Subject-Object Relations.

end of the psychological continuum with relatively permeable boundaries. An example is the introverted, serious-minded and scholarly student who become the sociable, spontaneous party-goer on weekends. At the pathological end of the continuum, the boundaries between ego states are distinctly more impermeable and manifested as overt multiple personalities. In the case of true multiple personalities, cognitive awareness of the existence of the other personalities is precluded because the ego mortidinal energy at their boundaries is so strong as to render them essentially impermeable. The cases of Eve (Thigpen & Cleckley, 1957) and Sybil (Schreiber, 1974) are two popularized accounts of the existence of multiple personalities. In between the two extremes, covert multiple personalities are hypothesized which influence the self with relative degrees of autonomy, depending on the type and amount of energy and the flux of permeability.

Watkins (1978) draws the analogy between psychological ego states and geographical states. Like U.S. states, each encompasses a defined area surrounded by a boundary separating it from other states. Also, ego states may vary in size and contain few or many elements, or may consist of all living experiences for extended periods of a person's life. But, unlike geographical states, the boundaries between ego states are permeable, flexible and subject to flux according to the changing requirements of the ego to

maintain psychic equilibrium. A single ego state may enlarge to include elements previously under the governorship of other states; or may contract and relinquish items once contained within its boundaries. And, a given psychological item may belong to several different ego states simultaneously. However, different facets of the same experience may be stored in memory, with libidinal and mortidinal elements, attitudes, motivations, etc., around the same event varying from one ego state to another. As an example, the experience of being scolded by a teacher in second grade may belong to both a child and a bad or "shadow" archetypal equivalent ego state for a given individual.

In the next section, the relation of ego state functioning and libido/mortido cathexes to dissociative phenomena will be discussed.

Dissociative Phenomena in Normal Human Functioning

According to common psychological theory based on a continuum model of psychopathology, disordered processes of perception, cognition, affect, and behavior are only more extreme manifestations of normal psychological adaptive and defense mechanisms. Pure classic cases of multiple personality are rare; and, most clinicians have been trained to expect to find few, if any, during a life-time of professional practice. The existence of an hysterical

personality is generally considered to be a prerequisite before strong dissociative elements in the personality would manifested. Nevertheless, the possibility of moderate dissociative elements operating in a wide variety of neurotic and psychotic ailments to form relatively fixed sub-selves (covert multiple personalities), with semi-permeable boundaries, may very well be the case. And, there are probably many well-masked dissociative splits in people who may appear clinically normal, but who may possess multiple ego states.

Several major theorists and schools of therapy have acknowledged either directly or implicitly the dynamic operation of multiple sub-personalities in normal human functioning. Jung, for example, contended that dissociative phenomena occurred frequently within the range of normal personality. He recognized and labeled his own #1 and #2 personalities. The second personality became a woman in his subsequent self-analysis, planting the seed for his concepts of the anima and animus, or male and female counterparts (Brome, 1978). Jung believed dissociation to be a major defense reaction. His term, instead of ego state, was complex, referring to a gestalting of psychical concepts (thoughts, feelings, and impulses) around central themes. Similar to the multiple personality, Jung described the splinter personality as competing with the ego for control. He elaborated many different

kinds of complexes, from the accidental and normal complexes between men and women, to the split into a plurality of subjects or autonomous complexes in schizophrenia (Jung, 1963).

Hartmann (1958), an ego psychologist, hypothesized the existence of "preconscious automatisms"--subdivisions of the personality structure who treated other parts of the ego as object. The shifting operation of executive ego states in which the executor is viewed as subject and all other ego states as object is akin to the concept of preconscious automatisms.

In Gestalt therapy, hypothesized sub-components of the self are often worked with by being projected imaginatively onto chairs, having them talk and interact with each other alternately from a subject, then object, viewpoint (Fagan & Shepherd, 1970). Transactional Analysis (TA) also delineates the equivalent structure and functioning of three distinct ego states. The different part-persons--Child, Adult, and Parent--described by Berne (1961) have been theoretically derived from the corresponding Freudian psychic structures of id, ego and superego, respectively. Further sub-divisions into the natural child, rebellious child, little professor, critical parent, nurturing parent, etc., were later added. According to Berne, everyone possesses each of these three major ego states, and they are deemed to encompass all components of the individual

and can explain the entirety of attitudes, motivations, feelings, ideas, and behaviors of that individual.

Shifts in Boundary Cathexis in Normal and Psychopathological States

Ego boundaries, whether between the ego and id, ego and objects, or different ego states, must be hypothetically cathected by mortidinal energy. Core elements within the ego state would be bound by integrative libidinal forces; disparate elements would remain in distinctly separate ego states, divided by ego mortido energy.

In the case of multiple ego states present in the normal relatively well-adapted individual, the boundaries between ego states overlap and are highly permeable. There is both ego mortido cathexis (differentiating between states and preventing awareness of other ego states) as well as ego libido cathexis (integrating and fostering acceptance and awareness of other ego states) present at the ego boundaries in such normal persons. In covert multiple personalities, the boundaries are less permeable than in multiple ego states but more permeable than multiple personalities. There is a higher percentage of ego mortido cathexis relative to ego libido cathexis at the ego boundaries in covert multiple personalities compared to persons with multiple ego states.

At any given moment in time, only one ego state is typically actualized or made executive (Watkins, 1978; Watkins & Watkins, 1979). The term executive is used here to refer to the ego state most highly libidinally cathected and invested with ego activating energy. It is the ego state which is operative in the present. The executive ego state experiences itself as subject (I) and other states as objects (he, she, it). The dominant ego state, in contrast to the executive ego state, will be used in the foregoing discussion to describe that ego state which is the main nucleus of the self. It can be compared to the state capitol, where most of the primary energy and awareness is directed, and policies and decisions about behavior are most frequently made. The dominant ego state serves as the individual's persona through which he/she functions during most of the waking hours. In addition, it would be the ego state invested with the greatest portion of ego libido; that is, highly integrated and loved by the self (See Figure 5.)

In true multiple personalities, awareness of the existence of any other personalities remains completely unconscious during the functioning of the currently executive ego state (personality). The deactivated personalities cannot even be partially libidinally cathected since conscious awareness of perception of their existence, the first stage in the present formulation of

Insert Figure 5

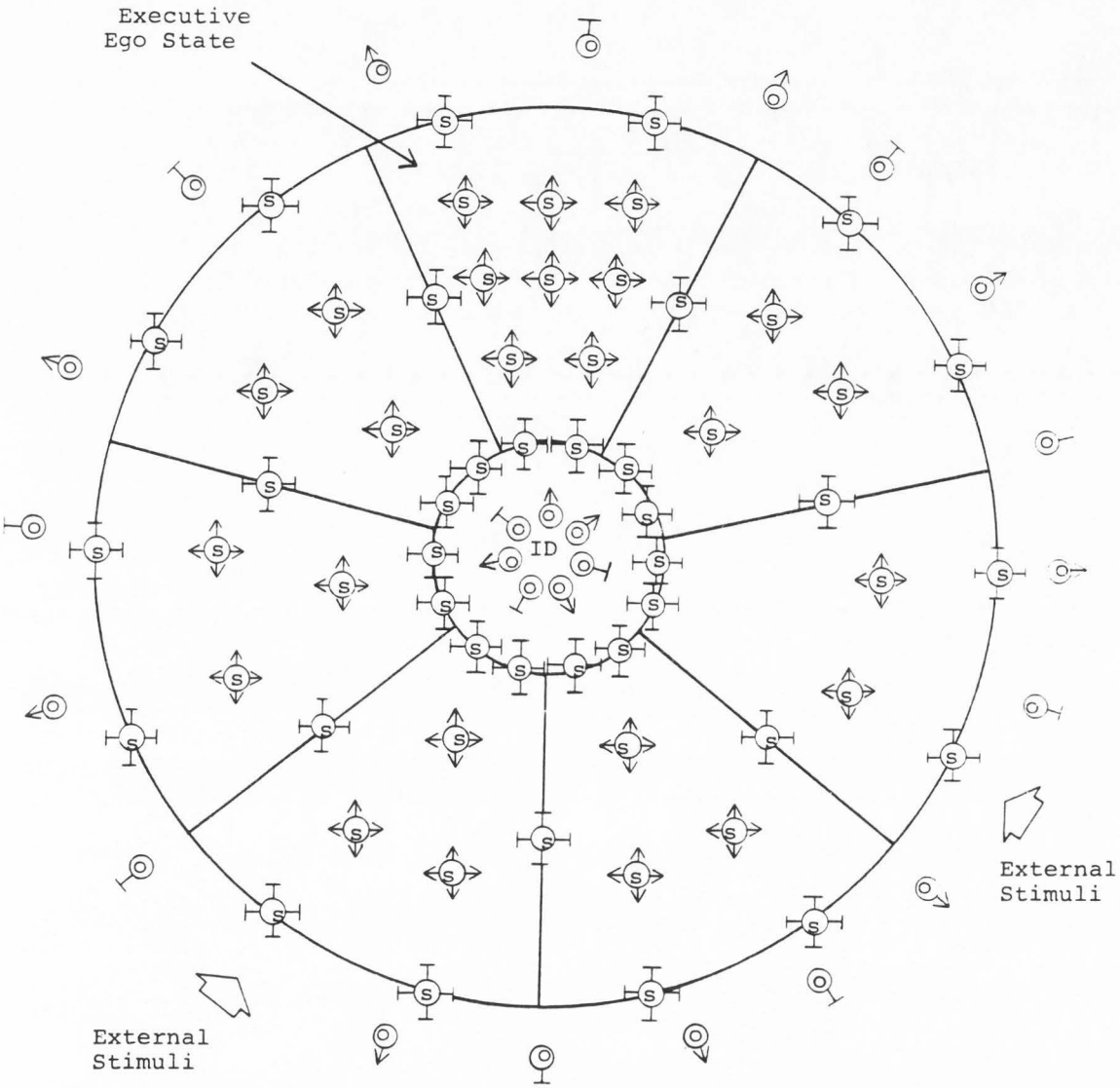


Figure 5. Generalized Schematic Representation of
Cathe[illegible] .n Ego States and
at th

*Adapted from Wa[illegible] peutic Self, New York,
Human Sciences ^.

delete this mark

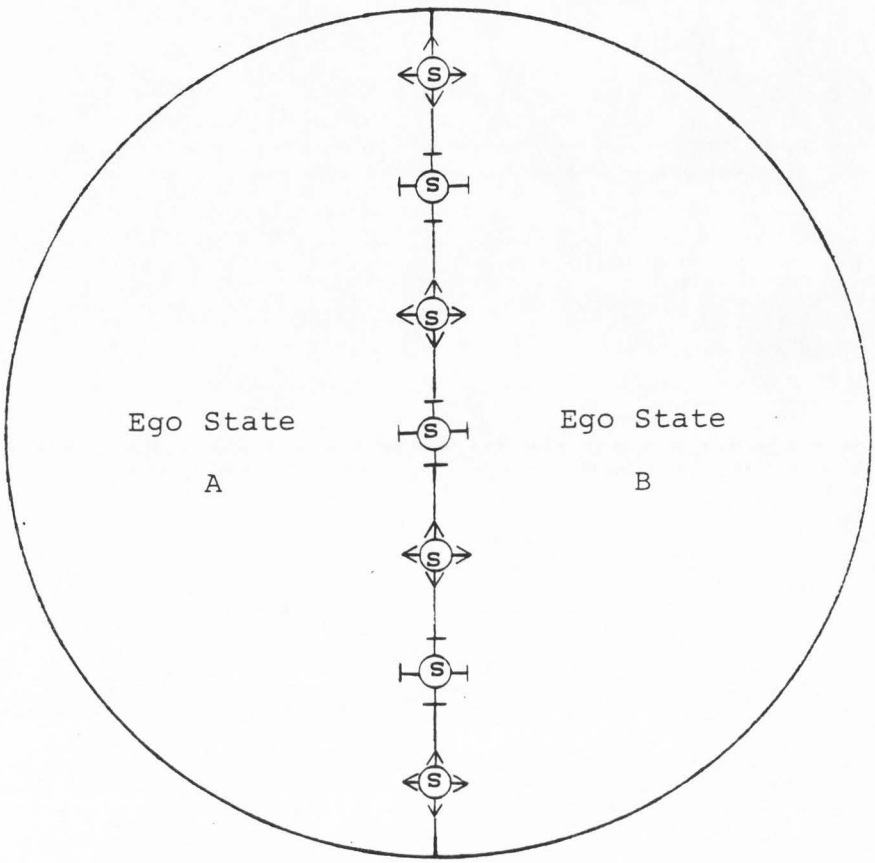
subject object relations theory, does not occur. Ego mortido cathexis at the boundary will render the other subselves as differentiated, disowned, and, at an extreme, hated parts of the total self. Rigidly fixed ego mortidinal energy at the ego state boundaries will prevent knowledge of the existence of other personalities from reaching consciousness. Differences would then exist in the relative proportions of ego libido, ego mortido, object libido and object mortido energy in each of the three hypothesized dissociative types--normal personality with multiple ego states, the covert personality, and multiple personality.

In some multiple personalities, a one-way awareness may exist between personalities. Personality A may be aware of Personality B, but not vice versa. In this case, knowledge of Personality B is conscious due to ego libido cathexis directed at Personality B, but ego mortido cathexis results in the affective reaction of Personality B to Personality A as a hated, disowned part of the self.

Berne (1961) has added another dimension to energy cathectic processes:

> Clinical understanding in this area can be obtained by postulating 3 states of cathexis; bound, unbound, and free. A physical analogy is offered by a monkey on a tree. If he remains inactive, his elevated position gives him only potential energy. If he falls off, his potential energy is transformed into kinetic energy. But because he is a living being, he can jump off, and then a third component, muscular energy, must

Multiple Ego States



Ego Libido > Ego Mortido

ego libido cathexis

ego mortido cathexis

object libido cathexis

object mortido cathexis

Figure 6a. A Diagrammatic Representation of Energy Cathectic Processes for 4 Dissociative States: Multiple Ego States.

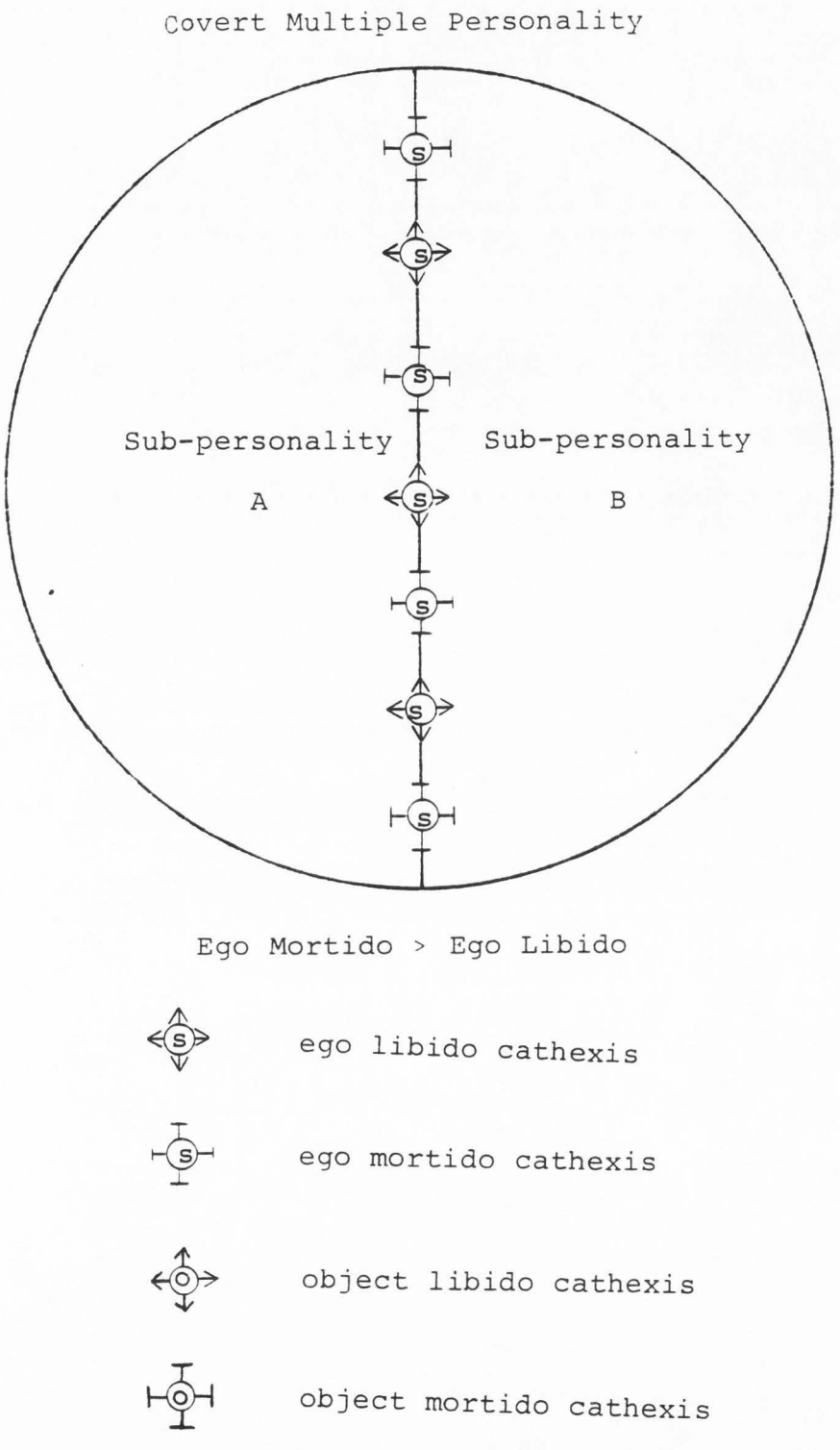
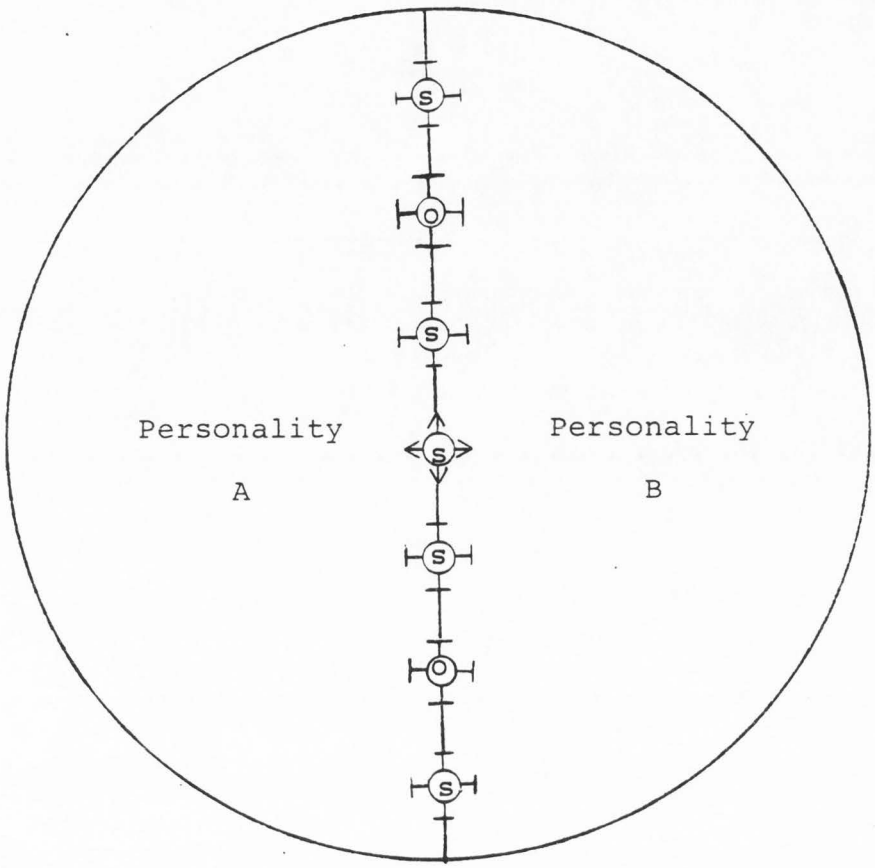


Figure 6b. A Diagrammatic Representation of Energy Cathectic Processes for 4 Dissociative States: Covert Multiple Personality.



Ego Mortido > Object Mortido

 ego libido cathexis

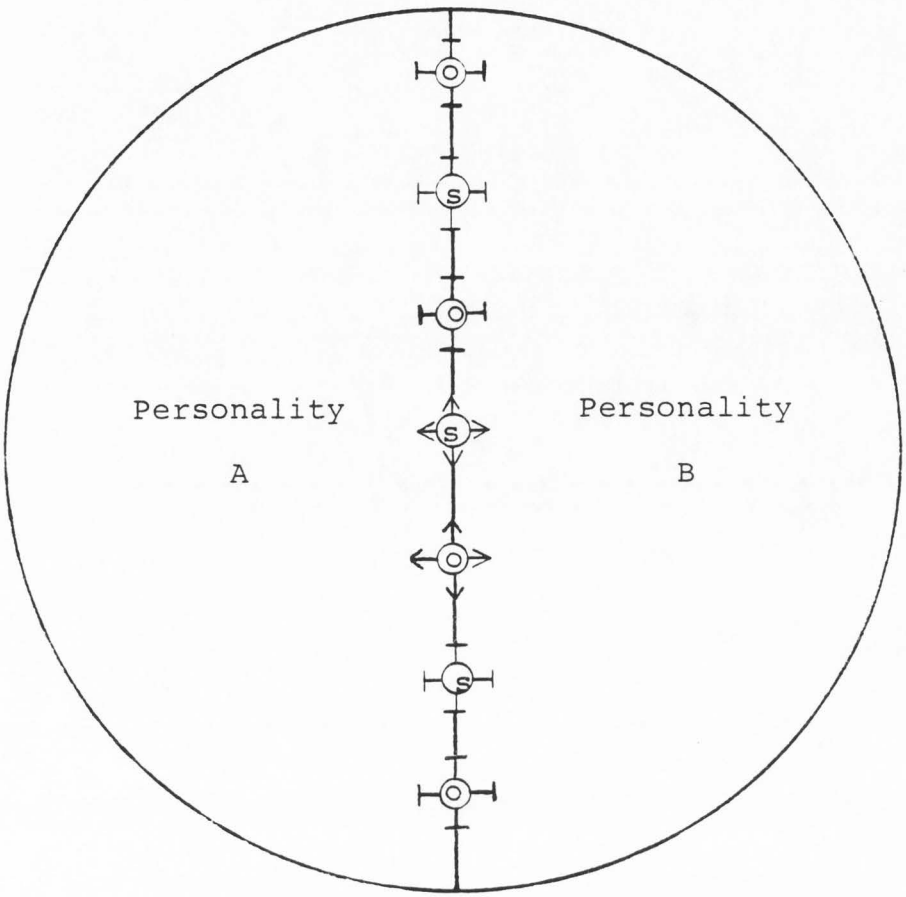
 ego mortido cathexis

 object libido cathexis

 object mortido cathexis

Figure 6c. A Diagrammatic Representation of Energy Cathectic Processes for 4 Dissociative States: Multiple Personality.

Schizophrenia



Object Mortido > Ego Mortido


ego libido cathexis


ego mortido cathexis


object libido cathexis


object mortido cathexis

Figure 6d. A Diagrammatic Representation of Energy Cathectic Processes for 4 Dissociative States: Schizophrenia.

> be taken into account in order to understand how he lands where he does. When he is inactive, the physical energy is bound, so to speak, in his position. When he falls, this energy is unbound, and when he jumps, he adds a third component by free choice. The kinetic and muscular energy together might be called the active energy. Bound cathexis then corresponds to potential energy, unbound cathexis to kinetic energy, and free cathexis to muscular energy; and unbound cathexis and free cathexis together may be called active cathexis. (P. 76)

Thus, executive power is seized by that ego state in which the sum of unbound plus free cathexis (active cathexis) is greatest at any given point in time; and the dominant ego state is the one in which free cathexis typically predominates. Latent or deactivated ego states would be libidinally bound or unbound, depending on the forces acting on each state, the relative permeability of the boundaries between ego states, and the cathectic capacity of each ego state. A state of total deactivation would exist when ego libidinal energy would be completely bound, and knowledge would be below conscious awareness. Unbinding of (libido) cathexis shifts the relative investment from ego mortido to ego libido, representative of energy investment in the awareness, acceptance and integration of the previously unacknowledged and disowned ego state. It symbolizes the intrapsychic movement (kinetic energy) of knowledge from the unconscious to conscious awareness. Knowledge of aversive psychic complexes or disliked ego states which are typically repressed, once unbound and in a partially activated condition, can then

move to a state of more complete activation following greater ego libido investment. It is in the case of free libido cathexis that an ego state becomes executive in a phenomenological and experiential sense.

The problem in multiple personality seems to be not the fractionation of the ego to cope with intrapsychic conflicts or meet adaptive demands of the environment per se, but the difficulties that arise when boundaries between ego states or personalities are cathected with insufficient ego libido. Instead, there is a preponderance of ego mortido at the ego boundaries and ego libido energy is completely bound (See Figure 6c.) Thus, knowledge of ego states cathected with ego mortido usually remains repressed in the unconscious, surfacing only occasionally when the rigidly fixed boundaries are unbound and/or freed under special circumstances such as hypnosis.

In more pathological states, disliked parts may become complexes which become invested with object mortido, a process representative of a greater dissociative split, this time between subject (ego) and object. Previously disliked identofacts become externalized as objects, moving further away from acceptance and integration at the core of the self.

Movement toward healthy integration can in one sense then be conceived of as internalizing one's projections, making subject what was once object, and infusing libido

where once mortido tread. As in Gestalt therapy, we arrive at a healthier level of functioning by owning and loving as subject (investing with ego libido cathexis) those parts of ourselves that were originally projected outside as disowned and hated objects (object mortido cathexis). Referring once again to Figure 3, the process of integration via internalization of our projections can be conceptualized as movement from cathectic process stages 4 through 1.

In stage 4, ego libido energy is bound, and the subselves are completely disintegrated, disowned and hated, projects as externalized objects outside of the self. In the next stage in the process toward healthy integration (stage 3), the alternate ego state(s) may be viewed as integrated, loved parts of the individual's world, but essentially retain their object status; "not me" instead of "me." In the following stage, the projection of personal qualities on psychological items (persons or objects), which were previously externalized objects is re-introjected and egotized as an internal object, and labeled as an identofact. The complex of identofacts called an ego state is at this point attributed a status which essentially falls within the domain of the ego, but is nonetheless cathected with repellant, disowning energy (ego mortido cathexis). In the final stage of the integration process, movement is from mortidinal to libidinal cathexis

of ego states now labeled as identofacts. Once hated and disowned sub-selves are integrated and loved, completing the associative process. Similarly, Bowers, et al. (1971) describe therapy of multiple personality as integration of understanding, interests, and memory at the highest levels of synthesis and judgment.

Ego and Object Cathexes in Multiple Personality vs. Schizophrenia

The heuristic value of the present modification and extension of ego state theory and cathectic processes becomes manifest when an attempt is made to differentiate the intrapsychic dynamic functioning of multiple personalities vs. schizophrenics. The nature of the dissociative split in schizophrenia, by definition more severe and pathological, can be conceptualized as follows. Multiple personalities contain an over-investment of ego mortido cathexis separating the various sub-personalities. Libido cathexis between states is completely bound, creating a generalized climate of repression around knowledge of the existence of alternate personalities and their contents. Occasionally, however, the relative strength of ego mortido at the ego boundaries will decrease, replaced by ego libido. This process allows energy shifts from disowning and hating sub-components of the self to awareness and acceptance of previously denied or repressed parts.

Multiple personality can be conceived as preponderance of cathexis of ego mortido at the ego boundary where a greater quanta of ego libido should be unbound and active for more adaptive functioning to occur.

In schizophrenia, however, more pathological psychic splits result in a dynamic in which identofacts (previously internalized ideas, beliefs, persons or objects which are integrated, though despised parts of the self) are re-projected and labeled as objects outside of the self. The energy flux is from an ego mortido to an object mortido cathexis (See Figure 6d.)

In reference to the "devil" in the schizophrenic process (Reich, 1949), the devil can be conceptualized as an ego state which has been transformed from a hated part of the self (ego mortido cathexis) to an externalized object outside of the realm of the ego (object mortido cathexis). Hated parts of the self in the paranoid schizophrenic become so ego dystonic that they are projected outside of the ego boundaries as hated objects; this process once again represented by a shift from ego mortido cathexis to object mortido cathexis. The "devil," symbolic of the hated, denied parts of the self which are incompletely egotized, may move back and forth across the ego boundary, from ego to object mortido cathexis, and vice versa. Hallucinated voices erupt from the unconscious to condemn the schizophrenic: "<u>You</u> are bad, a horrible

person, the devil, etc." representing lack of egotization. If instead the schizophrenic reported internal voices saying "I am a bad person," indicative of egotization of disliked sub-components, then he/she would probably not be labeled as psychotic, but a multiple personality diagnosis might be assigned with the "bad part" or "devil" as a distinct personality. Federn (1952) proposed a theory of the psychoses which highlighted the schizophrenic's problems differentiating between self and object which he described as a deficiency of (active) ego cathexis from the boundary to the core. Similarly, Watkins (1978) states that the hallucinations of schizophrenics are thoughts lacking in egotization. Schizophrenia, then, can be viewed from a subject-object relational perspective as an over-abundance of object mortido cathexis relative to ego mortido cathexis, with the multiple personality's predominance of ego mortido energy greater than object mortido energy. Moving towards the healthier end of the psychodynamic continuum, covert multiple personalities could be described as having greater ego mortidinal vs. ego libidinal energy at the ego boundaries; with multiple ego states represented by ego libido vs. ego mortido cathexis at boundary sites.

Hypnosis in the Elicitation of Multiple Personalities Hidden Observers, and Multiple Ego States

Hypnosis has characteristically been used to elicit information about the existence of multiple ego states (Watkins & Watkins, 1979, 1979-1980), hidden observers (Hilgard, et al., 1978; Hilgard, et al., 1975; Knox, et al., 1974), and what was rather loosely labeled secondary or multiple personality (Harriman, 1942, 1943; Kampman, 1975, 1976; Kampman & Hirvenoja, 1972; Leavitt, 1947; Ludwig & Ludwig, 1972; and Zolik, 1958). The Watkins' have also used a waking state to draw out multiple ego states using Gestalt multiple chair techniques, but they believe hypnosis to be more effective at restricting conscious awareness and tapping into unconscious memory stores to locate the origin and nature of the various ego states, and to conduct therapy.

Allison (1974) considers hypnosis the method by which the "Pandora's box" of multiple personalities can be opened. He further states: "I do not believe that such hypnotic procedures create the personalities any more than the radiologist creates lung cancer when he takes the first x-rays of the chest." (p. 16) In a similar vein, Braun (1984) contends that while it is possible that personality fragments can appear under hypnosis, there is no evidence to suggest that full-blown multiple personalities having a life history, range of affect, and consistent, ongoing

style of speech and motor behavior can be created by the demand characteristics of hypnosis.

Discussion of the use of hypnosis in the elicitation of dissociated psychological states will proceed as follows in order of increasing relevance to the current investigation. First, studies of multiple personalities will be treated. Then, discussion will be focused on research using the "hidden observer" paradigm. Finally, recent investigations of hypnotic elicitation of hidden observers/multiple ego states will be treated.

Kampman (1976) investigated the incidence of multiple personalities in a psychiatrically normal sample under hypnosis. She found that of 450 volunteer secondary school subjects, 78 (about 17%) could enter a deep hypnotic state. Of those able to enter a deep trance, roughly 43% were able to create a secondary personality. However, the induction method used was of dubious validity, since suggestions involved report of past lives, not currently functioning ego states in the present personality. Her method of determining the presence of multiple personality was to give the following suggestion following deep relaxation instructions "You go back in time to an age preceding your birth; you are somebody else somewhere else." Subjects who were able to give their personality and the social environment they lived in were classified as multiple personalities.

In that experiment, a personality examination was conducted without knowledge of the classification of the subjects (multiple or non-multiple personality). Results from the psychiatric interview suggested that multiple personalities had greater stress tolerance, were able to mobilize their resources more effectively, and had a more adaptable and clinically healthy superego (inferred from less guilt). On the basis of the blind clinical interview, subjects were also rated on a six point continuum of psychological disturbance ranging from no disturbance to schizophrenia and other psychoses. There was a highly statistically significant difference between the multiple vs. non-multiple personality groups, with the non-multiple personality showing neurotic or more severe disturbances significantly more often than the group designated as multiple personality.

Another measure, identity diffusion, defined as the difference between personal identity (self-image) vs. social identity (image of the subject held by others in close relation to the subject) was also obtained. Results demonstrated that identity diffusion was greater in the non-multiple personality group.

An ability to create sub-identities was suggested by Kampman (1976) to represent a freer and healthier ego autonomy with the ability to react to an experimentally devised stress situation. She reasoned that if a

personality was neurotically disturbed and the ego defenses are rigidly bound to maintain inner equilibrium, the ego will perseverate in stereotyped ways in novel as well as traditionally patterned social situations.

The dynamic relation between multiple personality and a report--fictitious or actual--of past lives, which was what Kampman (1976) in actuality, elicited from her subjects, is unknown. Indeed, it might be more correct to attribute the healthier, more adaptive functioning of Kampman's subjects to persons who possess attributes of greater social responsivity, rather than labeling them as true multiple personalities, or more accurately persons with multiple ego states. It would appear that Kampman made a gross and erroneous inferential leap in labeling the highly responsive subjects "multiple personalities."

Ernest and Josephine Hilgard and colleagues (Hilgard, et al., 1978; Hilgard, et al., 1975; and Knox, et al., 1974) studying the hypnotic relief of pain, discovered a dissociated part of subjects which they labeled the "hidden observer." Since extended discussion of the hidden observer model and research at the Stanford laboratories was conducted earlier in Chapter 1, only highlights of the most relevant issues will be mentioned here. Again, in this paradigm, subjects typically were given hypnotic suggestions that they would feel no pain when their arms were immersed in extremely cold water, as well as

suggestions of hypnotic deafness to loud noises. They responded behaviorally with apparent lack of reaction to the cold water and absence of flinching or other signs of auditory perception. Later, during the same hypnosis session, they did report hearing and sensing pain.

From Hilgard's (1977) theoretical framework, multiple cognitive control structures seemed to be operating hierarchically from total inactivation and unawareness to complete domination of awareness and behavior. It appeared to the Watkins (Watkins & Watkins, 1979) as if another ego state was operating which was not anesthetized or hypnotically deaf during the experiment.

Hilgard (1977) discounted the connotation of the involvement of a secondary or multiple personality associated with the metaphor of the hidden observer. He characterizes the hidden observer as one whose covert experiences are reality bound and tend to be objective observations of contemporary events, with little evidence of upsurge from deeper recesses of the mind akin to primary process thinking. Later, however, he admits that the reality orientation of the hidden observer may be a consequence of the available options, since the overt reported experience is already a distortion, and the most logical alternative report would be one which experienced the sensory perceptions initially before cognitively processing and then screening them from conscious

awareness. Interpreted in terms of ego state theory, the ego state which had experienced the pain repressed the knowledge outside of awareness by changing the cathexis from ego libido to ego mortido energy, localizing the knowledge in a differentiated ego structure.

A subsequent investigation by the Watkins (Watkins & Watkins, 1979-1980) utilizing the paradigm and instructions of Hilgard et al. (1975) for producing hypnotic anesthesia, activated different ego states in highly susceptible subjects. By administering suggestions of hypnotic deafness to the currently executive ego state (presumably the individual's dominant ego state as well), it becomes relatively deactivated, invested with relatively more ego mortido, while the hidden observer state becomes activated or cathected with a greater proportion of ego libido.

The Watkins were specifically interested in the identity and content of the hidden observer ego state(s). The experimental procedure involved the successful completion of several difficult hypnotic tasks by highly susceptible subjects, followed by a suggestion of hypnotic deafness and a query about a part that may have heard the hypnotist. If the subject indicated the presence of such a part by raising the right index finger, further inquiries about the name, date of origin, and purpose of that part

were conducted. The same sequence of questions were repeated for all subsequent parts reported by the subject.

A total of 17 hidden observers or ego states were activated and interviewed in 10 highly susceptible hypnotic subjects. They described various elements of behavioral, experiential and attitudinal content which could be used to characterize them as relatively separate entities or part-persons. There are two possibilities that can account for the existence of the multiple ego states:

1. The elicitation of multiple ego states is not evidence of actual mini sub-selves within the same individual, but merely a reflection of appropriate social role enactment, a la Orne's good hypnotic subject, in response to demand characteristics to please the experimenter.

2. These states were pre-existing parts of the normal personality structure developed to serve some adaptive/defense purposes in the psychic economy of the individual. The hypnotic situation did not artificially create these ego divisions; it merely made communication with them possible.

In an attempt to provide evidence in support of the first hypothesis, and, to some extent, to discount the second interpretation, a second experiment reported in the same study (Watkins & Watkins, 1979-1980) was done using hypnotic analgesia induced in five former patients with

prior intensive treatment in hypnoanalytic therapy. These subjects were tested for hypnotic analgesia in an experiment similar to the paradigm used by Hilgard , et al. (1975) in which they immersed their left hand in a basin of ice water. A total of 10 ego states in 5 subjects were activated in the pain experiment. It is noteworthy that two of these ego states were new entities which had never surfaced before in previous therapy sessions. The frequency with which these states emerge in unexpected or contradictory ways argues for the fact that they are not mere artifacts of the demand characteristics of the experiment.

Reports of the lack of confirmation or incongruity among self-reports, other-reports or behavior observation, and physiological reports may suggest divisions in conscious organization of experience at the level of perception and cognitive attribution. In the experiment by the Hilgards (1975), the discrepancy arose between two self-reports. An incongruity also surfaced between self-reports vs. physiological measures in a series of studies by Sutcliffe (1961) testing the phenomena of hypnotically induced anesthesia, hallucinations and delusions. Subjects in that study asserted that they were not shocked (did not feel pain) when in reality they were; and that they did not hear their own voices when talking aloud. Their self-reports of lack of perceptual input were in marked contrast

to their physiological protocols which indicated processing of sensory stimuli. Such a discrepancy may suggest the operation of multiple cognitive controls or multiple ego states. In the experiment just described, for example, the executive ego state reported lack of pain from shock and absence of audition while the physical body reacted in accordance with normal laws of sensation. Undoubtedly, part of the subject was aware of the sensations to the skin and ears, but this knowledge was denied in the subjective report. At least one other subdivision of the ego, akin to Hilgard's hidden observer, must have contained that body of experiences which included sensation, perception and intellectual acknowledgment of the hypnotic events.

Whether this part can be inferred as a manifestation of a separate psychic complex (multiple ego state) or is more accurately described as demonstration of splitting as the effect of conscious suppression of sensory and perceptual awareness and cognitive attribution as assigned to the event, is a question which will be addressed later in the final chapter.

Hypnosis as a Construct: State vs. Contextual Perspectives

Despite the fact that hypnosis has been the subject of scientific inquiry and theoretical speculation for virtually 200 years, no singular well-integrated theory or model

currently developed to explain hypnosis is standardly accepted. Historically, various metaphors have been proposed to explain hypnotic phenomena, including animal magnetism (Mesmer), somnambulism (de Puységur), lucid sleep (di Faria) and neuropathology (Charcot), congruent with the prevailing philosophy of science for that historical period (Sarbin & Coe, 1979; Sheehan & Perry, 1976).

The early metaphors of "trance" were thus predominantly marked by a mysterious dynamism imposed by the hypnotist on the subject. The transition phase from an alert, oriented, awake state to an hypnotic state was largely ignored, and little attention was paid to intervening contextual variables such as the personal characteristics of the subject, the setting, interpersonal and person-environment interaction effects as influencing hypnotic outcomes. Therefore, the prevailing metaphor in the late 19th and early 20th century was that hypnosis was a distinct, altered state and most research was analyzed and interpreted along this linear, mechanistic, causal model. Major investigators such as Hilgard (1965), Shor (1959, 1962) and Orne (1979) are among the proponents associated with state theoretical perspectives.

The reason state viewpoints gained theoretical ascendance within the field of psychology was because social-psychological theoretical development was in its infancy. The pragmatic value of state views then declined

as the philosophy of behavioral science began to shift and examine the complexities of human conduct and the myriad of factors associated with differential responsiveness The theories of Barber (1969), Sarbin (Sarbin & Andersen, 1967; Sarbin & Coe, 1972); and Erickson (Rossi, 1980) are examples of non-state viewpoints.

The theories of some contemporary hypnosis theoreticians will be briefly reviewed in order to elucidate the progression of thought and transformation of the Zeitgeist in the field of hypnosis from state to non-state, or contextual formulations. First, a brief outline of the theoretical perspectives of Hilgard, exemplifying a more traditional state perspective, will be presented. Next, non-state or contextual theories of Barber, Sarbin, and Erickson will be reviewed.

Ernest Hilgard's theorizing has been historically associated with a state conception of hypnosis. Internal process constructs, such as traits, are central to the theory. Hilgard (1965), in his major early treatise, Hypnotic Susceptibility, specifies several variables characteristic of the subject in a hypnotic state: loss of initiative and independent action, subsidence of the planning function, redistribution of attention, tolerance for reality distortion, selective perception of the hypnotist's demands, and an increase in suggestibility over that of the waking state.

In later writings, Hilgard rejects the notion of hypnosis as a separate state, with the implication that a causal relationship exists between the state of hypnosis and typical hypnotic phenomena such as hallucinations, post-hypnotic behaviors, and age regressions. Instead, he adopts a "state as metaphor" view in which he values hypnosis as a descriptive term to aid one in defining the domain of hypnosis (Hilgard, 1973). The importance of the subjective report of trance, which he previously considered the essential criterion of hypnosis, is now merely one among several variables that can be used to describe the domain of hypnosis.

The hypothesis that hypnotic susceptibility is a stable trait over time and across situations is another tenet of Hilgard's theory. His model recognizes the fact of enduring individual differences in levels of hypnotic suggestibility, and he attempts to investigate the effects of induction procedures on susceptibility as a stable trait. His interest in the effects of induction procedures reflects some acceptance of hypnotist-subject interactions in hypnosis. Indeed, in recent years, Hilgard's position has become more flexible and has allowed for investigation of situational determinants of hypnotic responsiveness (Hilgard, 1977) as well as the earlier state and trait variables.

A non-state theorist, Barber (1969) challenged state formulations of hypnosis contending that constructs such as hypnosis and hypnotic trance are misleading and empirically useless because they had no clearly defined referents or limits. He proposed several independent variables that affected a person's response to hypnosis, including the subject's attitudes, expectations, motivations; involvement in suggestion related imaginings and the tone and wording of suggestions and questions designed to elicit reports of subjective experience (Barber, Spanos & Chaves, 1974). Dependent measures were 1) behavioral responses to analgesia, hallucinations, amnesias, and other responses to test suggestions; 2) hypnotic-like appearance; 3) self-report of unusual experiences; and 4) testimony of being hypnotized. He cogently argued that it is the task of hypnosis researchers to discern the relations between the aforementioned independent and dependent variables before empirical validity could be assigned to state theories.

Another social-psychological analysis of hypnosis is the role theory of Sarbin (Coe & Sarbin, 1977; Sarbin & Coe, 1972). The "role" metaphor, like any other metaphor, runs the danger of being reified when denotations of the word are taken literally. The term "role" is intended to denote behavioral clusters associated with certain positions separate from the persons who enact them, and does

not, therefore connote ingenuine enactment or lack of experiential involvement in the process.

Dramaturgical metaphors of actors, stage, audience, plot, etc. are employed by role theory. The role of the hypnotist, analogous to that of the director of a play, is crucial in structuring the hypnotic episode as a miniature drama. The hypnotist suggests performances of counter-expectational feats, such as catalepsies, hallucinations, and amnesia. The unique dramatic quality of the production can be communicated in various ways; for example, the use of low, modulated tones, slowed speech, and repetition of phrases by the hypnotist.

Role theory postulates several independent variables to assist in analyzing individual differences in role enactment: role location, self-role congruence, role expectations, role skills, role demands, and audience effects (Sarbin & Coe, 1972).

With the most direct relevance to the current investigation is the variable of role demands, defined as tacit and subtle propriety norms more likely to be activated in social situations that depart from the conventional and familiar. Examples of role demands in the hypnotic context would be the operation of implicit norms to avoid shame or embarrassment, stemming from non-compliant or incorrect role behavior enactment (face-saving norms) and to cooperate and respond to the hypnotist's

requests (reciprocity norms) in the interests of maintaining proper order and balance in the hypnotist-subject interaction pattern.

Milton Erickson's (Rossi, 1980; Lankton, 1985) contribution to clinical hypnosis and psychotherapy have placed his among the ranks of the great masters of innovative therapy. His philosophy of psychotherapy, including hypnotherapy, was that it should be formulated to meet the uniqueness of the individual's needs, rather than forcing clients to fit in the "Procrustean bed" of hypothetical theories of human behavior. Thus, he operated from an heuristic, utilitarian, problem-solving approach.

Erickson conceptualized hypnosis from a social-psychological perspective as a modality for enhancing communication and contingent on the interpersonal relationship existing between the subject and the hypnotist. His early experiments with hypnosis substantiated the contextual effects of the type of hypnotic techniques and inductions on the subject's response to hypnosis. He stressed a "personological" or utilization adaptation of hypnotic approaches that was congruent with the moods, attitudes and beliefs of the subject.

Thus, a hypnotist using finely honed clinical judgment and intuition who also has at his/her disposal a wide armamentarium of techniques for trance induction and facilitation can hypnotize even the most difficult of

subjects. Therefore, in regard to the issue of hypnotic susceptibility, Erickson believed that even the most resistive subject could be hypnotized by the trained observer who could utilize the behavioral and verbal cues provided by the subject. Advanced hypnotic techniques utilizing paradoxical suggestions, double-binds, indirect inductions, interspersal of hypnotic and non-hypnotic suggestions, and confusion techniques effectively reduced the conscious resistance and elicited the cooperation of the patient. Erickson operated from the basis that hypnotic responsiveness was more highly dependent on the skill and ingenuity of the hypnotist, rather than any intrinsic skills, abilities, pathology or lack of it, possessed by the subject. He contended that most normal people could develop light hypnosis easily, and at least 70 percent of subjects, with repeated hypnosis, could develop deep, somnambulistic trance states (Rossi, 1980).

On the Subjective Experience of Hypnosis

To what degree can the testimony of the subject be considered a veridical report of the experience? Since one person cannot experience an event in the exact same way as another, the private reaction (including sensation, perception, affect, cognition, and behavior) during hypnosis is relatively imcomprehensible to others without some additional means of conveying or communicating one's

response. The scientific status of self-report measures has generally been one of questionable validity. Subjective report of experience has typically been regarded with skepticism in defining the nature of hypnosis. Although the individual's own report of the experience is meaningful, and considered to be a useful indicator that the experience has truly occurred, it usually remains to be varified interpersonally by more "objective" behavior observation. "Reality" is generally a process of convergent and consensual validation, determined by comparing self-report with behavioral or physiological consequences of the subject's performance observed or recorded by the hypnotist. Yet, one cannot assume freedom from bias or error in the presumably more "objective" hypnotist report. (See "Is the Hypnotist Also Being Hypnotized?" Blatt, Goodman & Wallington, 1969).

The procedure called hypnotic induction serves the function of providing the opportunity to establish a social relationship between the hypnotist and subject where normal reality testing can be held in abeyance and fantasy allowed to operate of its own accord, dependent on the imaginative and suggestible capacities of the subject. Sarbin and Coe (1972) have described the behavior of hypnotic subjects according to a role enactment model. They view the highly hypnotized person as adopting an "as-if" role taking attitude and responding well to the role expectations

communicated by the hypnotist. Good hypnotic subjects therefore react favorably to the social influence process which constitutes the hypnotic relationship, and use their skills in imagination and concentration to maximize their performance.

Gill and Brenman (1961) have coined the phrase "regression in the service of the ego" to describe hypnotic phenomena. Implied in this statement is the acknowledgment of the operation of a regressed sub-system which prevents disintegration manifested in an irreversibly pathological return via primary process thinking to earlier modes of functioning. Reality contact is maintained by the dominant ego (state), but the psychological space it occupies is diminished in proportion to the dimensions allowed the regressed subsystem. Hypnotic regression is thus considered an adaptive, rather than maladaptive modification of ego operations to meet the requirements of both the hypnotist's and the inductee's ego, or to adjust to internal and external demands in a creative, rather than destructive fashion (Ludwig & Ludwig, 1972).

Recently, the validity of the hypothesis that hypnosis is an adaptive regression has been subjected to empirical investigation (Gruenewald, Fromm & Oberlander, 1979). The nature of the regression, measured by the Rorschach inkblot test, was split along the adjustment-maladjustment axis depending on the prior personality adjustment of the

subject. Overall, there was a quantitative reduction of scores pertaining to use of defense and coping strategies, which prima facie suggests healthier ego functioning. Qualitatively, better adjusted subjects showed greater flexibility and higher level coping styles, while less adjusted subjects became more constricted and tended to rely on maladaptive defenses. The changing intrapsychic operation of the executive ego in relation to the primary process dominated regressed sub-system of the ego was manifested differentially as adaptive or maladjusted depending on the psychological integrity of the subject prior to the experiment. Thus, the return to primary processing modes under hypnosis is not necessarily functional or dysfunctional per se but is suggested to be related to inherent personality attributes of the subjects such as ego strength. Here, ego strength is operationally defined as the ability to repress or express material from the unconscious as the situation demands without significantly interfering with reality functioning.

Highly susceptible subjects possess, among other traits, the ability to experience more vivid imagery and hallucinations, as a product of the shift to primary processing. The skeptical account of hypnosis promulgated by Sutcliffe (1958, 1961) regards the main feature of the hypnotic subject's experience as delusory. The subject is emotionally convinced that the world is not as it exists in

physical reality but consists of his/her interpretations and fantasy productions based on the hypnotist's suggestions. This view implies that the hypnotic subject has a dual awareness or divided consciousness: 1) the "reality" of the external environment in a waking state; and 2) the present experience under hypnosis.

From this author's viewpoint, reports by Kampman (1975) and Rubinstein and Newman (1954) have provided evidence for such a skeptical standpoint. In the study by Kampman (1975), carefully selected subjects were hypnotized at intervals of approximately seven years. Subjects were regressed to earlier lives and gave highly detailed accounts of their residence, names, character features, life attitudes, and experiences. An effort was made by the investigator to elucidate the dynamic relation of the secondary personalities to the present personality. Historical records, when available for reference, did not confirm any of the hypnotic reports. Much of the factual and emotional content of the multiple personalities was shown to be derived from events and material either experienced directly or stored in memory from previously read materials, including autobiographical accounts, or some combination of the two.

Other evidence of systematically induced fantasy and delusion via hypnosis is contained in an experiment by Rubinstein and Newman (1954) in which subjects were

progressed into the future. Since they were able to generate detailed stories predicated on fantasied projection, prodignomatic narratives could likewise be fantastical productions. Zolik (1958) also examined prodignomatic fantasy under hypnosis and concluded that it is difficult to prove that the material produced is in dynamic relation to the subject's main personality. An earlier report by Leavitt (1947) found a clear connection between multiple personality induced by hypnosis and those appearing spontaneously as part of a hysterical dissociative reaction. Nonetheless, part of the material produced was likely a confabulatory combination of experience and imagination.

The investigations by Kampman (1975), Rubinstein and Newman (1954), and Zolik (1958) illustrate the difficulties arising when hypnotic subjects experience vivid imaginative happenings and recollections which may be delusory, hallucinatory or fantastical based on the demand characteristics of the hypnotic experiment.

Demand Characteristics During Hypnosis

We have examined how the hypnotist's suggestions can influence the subject to the extent that they are led to believe the veridicality of their fantasy productions. How, then, can self-reported production of pre-existing ego

Demand characteristics are the aggregate of cues which implicitly convey the intent of the experimenter and the nature and direction of findings desired in the experiment. Usually, this depends on the cues emanating from the experimenter and the procedural approach used, but the subject may also glean information from the nature of the setting itself or preconceived attitudes about the experiment.

The question of demand characteristics, or social-psychological factors influencing the subject's response in hypnosis, has been most thoroughly addressed by the theoretical and methodological work of Martin T. Orne. Orne (1959) considers the hypnotic subject as one who is eager to please and validate the experimenter's hypothesis. As such, the subject collects cues from the experimenter (and vice versa) about how to behave in the situation and both attempt to arrive at a complementary enactment of their respective roles.[1]

His real-simulating methodology (Orne 1969, 1979) is directed specifically at uncovering the possibility of subjects artifactually responding. The paradigm involves the use of a control or comparison group of unsusceptible

---

[1]Scheff (1966) makes the point that since there is a combination of voluntary and involuntary elements intertwining in enactment of a particular role, it is often difficult to discern the person who, in the case of a diagnosed schizophrenic, is faking psychotic behavior for secondary gain, from the same person who may be having a true psychotic decompensation.

subjects artifactually responding. The paradigm involves the use of a control or comparison group of unsusceptible subjects who are highly motivated to deceive or fake hypnotic trance and play the role of the compliant hypnotic subject.

As an illustration, in a replication of a study originally done by Ashley, Harper and Runyon (1951), Orne (1959) used a group of highly susceptible subjects and a comparison group of simulators who were given the same instruction which induced artificial life histories, whether as "rich," "normal," or "poor." Results for the experimental hypnotic induction and simulating (faking) groups were the same: coin judgments for subjects given suggestions of being poor were the largest; judgments in the rich state were the smallest; with normal subjects' judgments falling in between. Therefore, results of the experiment could not be attributed to the effect of hypnosis, specifically hypnotic amnesia, introduced in the Ashley, et al., (1951) study to block out memories from actual life histories. Orne's experimentation argued strongly for the position that before an effect could be attributed legitimately to hypnosis, it was necessary to show that it was not a product of demand characteristics of the hypnotic experiment.

In a critique of Orne's simulator paradigm, Bowers (1973) has addressed the problem of whether to attribute a

hypnotic effect to some internal state or disposition of the person (state attribution) vs. situational effects such as demand characteristics of the experiment (contextual attribution). According to Orne's reasoning, if experimental manipulations (demand characteristics) do not show treatment effects, the outcome is therefore valid, and the result a "legitimate" hypnotic demonstration of personality characteristics which existed prior to the experiment. In his attributional analysis, Bowers attacks Orne's logic which attributes hypnotic behavior to an altered state by default. However, in order to validate the reality of experimental outcomes given enhanced suggestibility during hypnosis, situational demands must first be ruled out by demonstrating significant differences in behavior between real and simulating subjects (Orne, 1969). However, demonstrating differences in behavior between such experimental and quasi-control groups does not address the issue of the validity of the experimental design in reference to the operation of demand characteristics. It appears that valid "significant differences" between groups have not been adequately demonstrated through use of true control or comparison groups, in which subjects are matched on susceptibility level in a true scientific experimental design.

Earlier, we examined the controversy surrounding the use of self-report vs. behavior observational data (hypno-

tist report). Since hypnotic subjects may distort their experience in a self-report, the hypnotist's report of the subject's behavior is general considered a more valid and reliable dependent measure. But, a problem arises since faking behavior of simulators or non-hypnotized controls is often very difficult, if not impossible, for hypnotists to distinguish from genuine hypnotic behavior. In an experiment by Coe (1973), for example, demand characteristics to complete a post-hypnotic suggestion were investigated in both waking and hypnotic conditions. The two groups showed an equal tendency to perform the post-hypnotic task based on behavioral indices. In that study, there was no rational method of attributing the successful completion of amnesic behavior obtained by hypnotist observation to hypnosis since awake subjects performed equally well. Therefore, the hypnotist's report of behavior observations is not always an adequate measure of differences between hypnotized and awake subjects. The existence of the hypnotic state is then an inference which may be more accurately distinguished from non-hypnotic or simulating states primarily based on the self-report of the happenings experienced by the subject, in selected experimental designs. The attributional question then becomes intrapsychic instead of interpersonal in nature, necessitating self-report measures to confirm differences in the hypnotic experiences of real vs. faking subjects.

Bowers (1973) maintains that the subjective difference between simulating and genuine hypnosis is profound, despite the usual similarity in outward appearance. Although demand characteristics may be operating in both conditions, hypnotic subjects experience their own behavior as phenomenologically real and in-dwelling, whereas the simulating subjects would likely report that they are responding to external demands. Recent investigations have elucidated facets of the demand characteristics (Hilgard, et al., 1978; Laurence & Perry, 1981; Nogrady, et al., 1983) using the "hidden observer" model of Hilgard. Lack of uniformity was found in the former study (Hilgard, et al., 1978) between subjects' pre-experimental expectations and their actual experience of the hidden observer, with 50% of hidden observer subjects reporting they had been skeptical of such a part prior to experiencing it, and 50% reporting self-role congruence. Of subjects <u>not</u> reporting a hidden observer, roughly one-third accepted this as a possibility within their limits of experience.

In the Nogrady, et al., (1983) investigation, nondirective procedures were employed in a real-simulating design. No simulators in that study reported a hidden observer response, and <u>only half</u> of the highly susceptible subjects displayed a hidden observer response, while the remaining half did not.

In the Laurence and Perry (1981) study, subjects reported that their experience of having dual awareness through the hidden observer a familiar pattern which occurred voluntarily and was related to their tendency to engage in objective self-observation outside of the hypnotic context. In comparing subjects' performance on an age regression in which they experienced dual awareness of child and adult identities, and the incidence of reporting a hidden observer, all subjects who described a hidden observer also reported duality during regression. But, phenomenologically, the subjects reporting a hidden observer were split along the duality dimension of having temporally simultaneous vs. discreet dual awareness of their child and adult ego states during the regression.

The response heterogeneity in all three of the above studies suggests that the hidden observer response cannot be explained simply in terms of demand characteristics or susceptibility level, since some experimental instructions elicited differential responsivity within the highly susceptible subjects. Divergent reports on pre-experimental self-role congruence, temporally simultaneous vs. discreet duality in awareness, and variability (39% to 88%) in the frequency of reporting a hidden observer, all among highly susceptible subjects, suggest that subject's heterogeneous responses may be more accurately explained on the basis of pre-existing personality variables such as the tendency to

self-monitor from a detached, objective viewpoint and relative degrees of fluidity in moving from immersion to dissociation/detachment in their sensory/perceptual/ cognitive processing.

Another piece of information reported informally in the study by Watkins and Watkins (1979-1980) lends some indirect support to the contention that hypnotically activated ego-states are not artifactual. In a probe about simulator behavior under hypnosis, subjects were asked if they would be able to respond adequately to various tasks and challenges, eight of the ten claimed they would not flinch if blocks were pounded behind their ears. But when asked if they would raise their index finger to indicate a part that was hearing (hidden observer), 9 of the 10 stated they would <u>not</u> lift it because they felt it would be a <u>trick</u> to get them to reveal that they were not really hypnotized. In the experiment described earlier in the same report, it will be recalled that all of the 10 subjects did lift their fingers several times to indicate the presence of ego states. The tolerance of logical inconsistencies in highly susceptible subjects (Orne, 1969, 1979) of which the above case is exemplary, provides a clue as to potential differences between experimental and control groups which may be elucidated through self-report measures.

Statement of the Problem

The critical experimental attribution question therefore has shifted from evaluation of the presence or absence of demand characteristics, to the acknowledgment of demand characteristics operative in all social contexts, hypnotic or not; and specifically, whether the demands during hypnosis are perceived by the subject as externally or internally mediated via use of self-report measures. Special control procedures (Orne, 1969, 1979) using quasi-control groups of simulators have been developed. The limitations and qualifications of Orne's paradigm in restricting the operation of demand characteristics in the experimental setting (Bowers, 1973) have been described. Subjective experience has emerged as the more reliable criterion which has been experimentally demonstrated to distinguish hypnosis from task-motivation or other waking states, frequently indistinguishable on behavior observational criteria alone. Inasmuch as report of private experiences is a valuable addition to other sources of information about the hypnotized person's experience, caution in interpreting self-report measures is necessary. Ultimately, there is a problem in determining the veridicality in attributing an hypnotic effect to some internal state or characteristic of the person. Highly susceptible subjects, for example, may simply attribute their behavior to the hypnotic condition or deny hypnotically induced

effects when they are operative. Thus, demand characteristics, although present, may go unrecognized.

Studies in the elicitation of multiple ego states or multiple personalities during hypnosis (Kampman, 1976; Watkins & Watkins, 1979-1980) have been primarily descriptive and have ignored the question of demand characteristics in hypnosis. In addition, no control or comparison groups were used in the experimental design. The general lack of methodological rigor in these early investigations has lead to a healthy attitude of skepticism about the validity of the existence of multiple ego states and their elicitation via hypnotic techniques.

Rationale and Intent of the Current Study

The rationale underlying the current study is to examine the effects of demand characteristics in the elicitation of multiple ego states in hypnotic and simulation contexts. Subjects were matched on the variable of high hypnotic ability, varying demand characteristics in the experimental setting. The nature of multiple ego state inquiries was uniformly adhered to. An experimental control (simulation) group was incorporated and test-retest reliability data were provided as an index of stability over time. The experimenters were naive as to the group membership of subjects (hypnosis vs. simulation) status. It was the intention of the experimenter to manipulate the

independent variable of demand characteristics operating in and out of hypnotic states during activation of multiple ego states, which, unchecked, could lead to an artifactual production of sub-personalities by the subject to please the hypnotist. Two dependent measures--a subjective self-report and behavior observation by the hypnotist--were used for comparison purposes to determine the effects on the dependent variable--the reality/validity of the hypnotic elicitation of multiple ego states.

Hypotheses

H = Hypnosis

S = Simulation

SR = Self Report

HR = Hypnotist Report

Four possible combination patterns of response could theoretically occur based on 2 groups--Hypnosis (H) and Simulation (S)--and two dependent measures--Self-Report (SR) and Hypnotist Report (HR).

1. $H_{SR} = S_{SR}$; $H_{HR} = S_{HR}$

If the hypnosis and simulation groups failed to show significant differences based on self report and hypnotist report scores, then the primary hypothesis of demand characteristics attributable to hypnotic role playing would be supported. There would be no supportive evidence for an ego state interpretation, since it was not distinguished in

either self or hypnotist reports as different from role playing.

2. $H_{SR} = S_{SR}$; $H_{HR} \neq S_{HR}$

If findings were mixed, with self report data showing no difference between groups but hypnotist report data showing differences between the hypnosis vs. simulation groups, then there would be equivocal support for both an hypothesis of demand characteristics (self-report) and a possibility of valid multiple ego states suggested by hypnotist-reported differences. However, the self-reported experience showing no differences in reality/validity of multiple ego state phenomena would bias the interpretation in favor of demand characteristics or some other artifact as contributing to this pattern in which the hypnotists would apparently be fooled when in fact subjects would report no difference between groups. Again, this pattern would suggest role playing and ego states are not different.

3. $H_{SR} \neq S_{SR}$; $H_{HR} = S_{HR}$

In the reverse pattern of differences between hypnosis and simulators evidenced by self-reported differences but failure to find statistical differences between groups based on hypnotist report, we would again have insufficient evidence to support a position of multiple ego states as pre-existing parts of the personality. However, the phenomenological report of subjects documenting intergroup

differences in experience would point to this as an hypothetical possibility. The failure to report differences by the hypnotists would not be unanticipated given past research by Orne (1969, 1979) that even well-seasoned clinical hypnotists often are unable to distinguish real vs. faking behavior. This pattern of results would favor the existence of multiple ego states as distinct from "role playing."

4. $H_{SR} \neq S_{SR}$; $H_{HR} \neq S_{HR}$

The fourth possibility would consist of both self-report and hypnotist report measures showing statistically significant differences between hypnosis and simulation groups. In that event, the pattern of research findings would support the most strongly of all 4 patterns interpretation of the results in favor of possible existence of multiple ego states as separate from "role playing." However, other theoretical interpretations, such as multiple cognitive controls, hidden observers, etc., could not be ruled out.

It was hypothesized that hypnotic and simulating subjects producing multiple ego states would be discriminable on the basis of self-report, but not in terms of behaving observation (hypnotist report) congruent with Hypothesis 3 set forth earlier. Additionally, it was anticipated that significant inter-correlations between self and hypnotist report scores would be found. Thus,

convergent validity and inter-rater reliability data would be obtained in support for the generalizability or external validity of the research findings. It was also hypothesized that test-retest reliability of multiple ego state phenomena would be established through statistically significant correlation between sessions 1 and 2.

CHAPTER III

METHOD

Subjects

Two hundred sixty-three undergraduate subjects from the University of Hawaii-Manoa with no prior hypnotic experience were screened for hypnotic susceptibility using the Harvard Group Scale of Hypnotic Susceptibility Form A (Shor & Orne, 1962).[2] Subjects who obtained a score of 9-12 were classified as highly susceptible. Highly susceptible subjects also needed to pass either the post-hypnotic suggestion or the fly hallucination item as evidence of high hypnotic involvement. The final sample of 20 subjects consisted of 10 men and 10 women, with a mean age of 22.81 years.

High hypnotic subjects were randomly assigned to one of two groups: hypnosis or simulator condition. High susceptibility subjects assigned to the group simulating hypnosis were given modeling instructions on how to "fake" production of multiple ego states in the individual hypnosis sessions.

---

[2]Although contextual variables such as the hypnotist, setting and nature of instructions are recognized as mediating hypnotic outcomes, with group administration not allowing for an individualized, "personological" adaptation which would enhance hypnotic responsiveness (Rossi, 1980); the Harvard Group Scale of Hypnotic Susceptibility is regarded as a reliable and valid tool for securing initial normative ratings of hypnotic susceptibility (See Laurence & Perry, 1981).

The mean HGSHS:A scores for the hypnosis condition were 10.51 and 9.82 for the simulating subjects. Subjects who demonstrated the presence of at least one self-reported multiple ego state were then retested in a second session to measure reliability of the phenomena.

Hypnotists

The hypnotists were advanced clinical practitioners who had completed master's or doctoral level training in clinical social work or psychology. All had previous knowledge, training, and experience in the therapeutic use of relaxation and/or hypnotic induction techniques. The hypnotists were presented with a brief training course outlining general principles of hypnosis methods (with particular emphasis on the experimental induction paradigm used in the current study), ethical and professional guidelines for hypnosis, usual and untoward hypnotic reactions and appropriate intervention strategies.

Hypnotists were told that all subjects were highly susceptible, and thus, had a good probability of demonstrating multiple states based on previous research. Thus, experimenters were blind to the existence of the second group of simulators, who were subsumed under the group receiving hypnotic inductions.

Procedure

Two groups of 10 subjects each were utilized.

The first experimental group composed of highly susceptible subjects were hypnotized by an arm-lowering induction and deepened by the visualization of walking downstairs. Each subject was tested post-induction using some difficult challenge items to confirm deep hypnotic involvement. These challenge items included: bouncing a sharp pencil point on the arm to test for arm anesthesia; eyes open trance; and suggesting a black and white cat hallucination, then bringing the subject out of hypnosis and obtaining reactions to the hallucinated cats. Hypnotic deafness was then suggested, and if the subject did not answer to his/her name or flinch in response to striking two blocks of wood together, hypnotic deafness was assumed to have been induced. Then the suggestion was made that another part of the person may be hearing the hypnotist's voice. If the subject indicated that there was another hearing part by raising the index finger of the right hand, that part (ego-state) was encouraged to talk with the hypnotist. The hypnotist stated verbatim: "Part, I want to talk to you. Will you please come out, and when you're here, just say, 'I'm here.'" Then the part was asked to tell about itself, to give itself a name, and state when and why it was born. The same elicitation instructions was repeated until the subject was unable to name any other

part(s) who had been able to hear the hypnotist. (For a complete outline of the induction and interview format, see Appendix C.)

The second (control) group consisted of high susceptibility subjects and they received the same standardized hypnotic induction and interview of multiple ego states as Group 1. However, they were specifically given instruction and modeling by the investigator prior to the experiment to convince the hypnotist they were truly hypnotized by producing at least one "hearing" ego state (hidden observer) different from the hypnotically deaf (executive) ego state who entered the hypnotic trance. Instructions and modeling of highly hypnotized subjects included attention to voice volume (lower), speed (slower) compared to the person's normal speech pattern; relatively more relaxed body posture and facial musculature; normative responses to analgesia, positive visual hallucinations, eyes open trance and hypnotic deafness; and specific suggestions to produce a separate "part" that could hear, with a specific function or purpose, and optional different date of birth and name.

In summary, the first group received an hypnotic induction and multiple ego state interview and the second group was instructed how to fake hypnotic involvement prior to the experiment and then was presented with the same

hypnotic induction and ego state interview as the hypnotic group.

Subjects in both groups were escorted into the experimental room and seated in a comfortable chair. They were told that the current experiment would involve an individually administered induction using hypnosis and introduced to the hypnotist. An informed consent form was given to them similar to the form completed for the group hypnosis experiment. Then the induction and multiple ego state interview was conducted. After the induction, subjects were instructed to fill out the report of induction experiences (Appendix D). Simulating subjects were taken from the experimental room by the author, specifically told to "stop faking" and to rate themselves as they honestly experienced the hypnosis session. The hypnotists, at this time, completed their behavioral rating of subjects using the same scale, then subjects were debriefed and allowed to ask any questions about the nature of the experiment.

In the wake of previous research (Hilgard, et al., 1975, 1978; Perry & Laurence, 1980; Laurence & Perry 1981; Nogrady, et al., 1983), it was anticipated that not all of the highly suggestible subjects would describe multiple ego states under the prescribed experimental contingencies. They reported frequencies of 39-50% for highly susceptible subjects able to describe a hidden observer. A sample of

10 subjects reporting multiple ego states was obtained to provide sufficient data for statistical comparison purposes with the simulating control group. A number of simulators equal to those who provided analyzable protocols in the hypnotic group (N=10) were also tested. The simulating group was expected to fake production of multiple ego states. All high susceptibility simulators were expected to be able to provide a convincing role enactment of multiple ego states which would be behaviorally difficult to distinguish from the performance of the genuine hypnotic subjects. Only subjects who showed at least one multiple ego state in session 1 were retested in a second session which was conducted no sooner than 3 days later to minimize effects due to memory.

Measurement Instruments

Two dependent measures were utilized: (1) a self-report rating scale, and (2) an identical version of the same rating scale completed by the hypnotist. The self-report and hypnotist rating scales were constructed based on the interview questions contained in Watkins & Watkins (1979-1980). The scales included such items as evaluation of the validity of having an additional part that could hear, degree of hypnosis, and amount of felt control over one's behavior. In addition, a list of the various hypnotic tasks and multiple ego state experiences were

presented and subjects were requested to describe the reality of their experiences along a 3-point continuum from "very real," "real," to "not real" for behaviors related to the production of multiple ego states. (For a copy of the self-report rating scale, see Appendix D.)

CHAPTER IV

RESULTS

Multiple t-tests were computed to test for significant differences between means of the hypnotic vs. simulator groups on the initial 3 scale items (level of relaxation, hypnosis and control, respectively). Multiple chi-square tests were conducted for the 17 Likert scale items 4-20 which examined multiple ego state induction experiences. Self report and hypnotist report scores for test and retest time periods were examined. A retest session was conducted only with those subjects who showed evidence of at least one self-reported as "real" or "very real" multiple ego state in the first session.

Item 1 - Level of Validity

Significant differences between hypnosis vs. simulator means were found for the scale item measuring the level of validity of experiencing another "part" based on self-report and hypnotist-report data ($t = 3.52$, $p < .01$; $t = 1.78$, $p < .05$). Both the subjects and the hypnotists rated the level of validity or reality of the second "hearing" part as significantly greater for the hypnosis vs. simulation group (See Figures 7 and 8.)

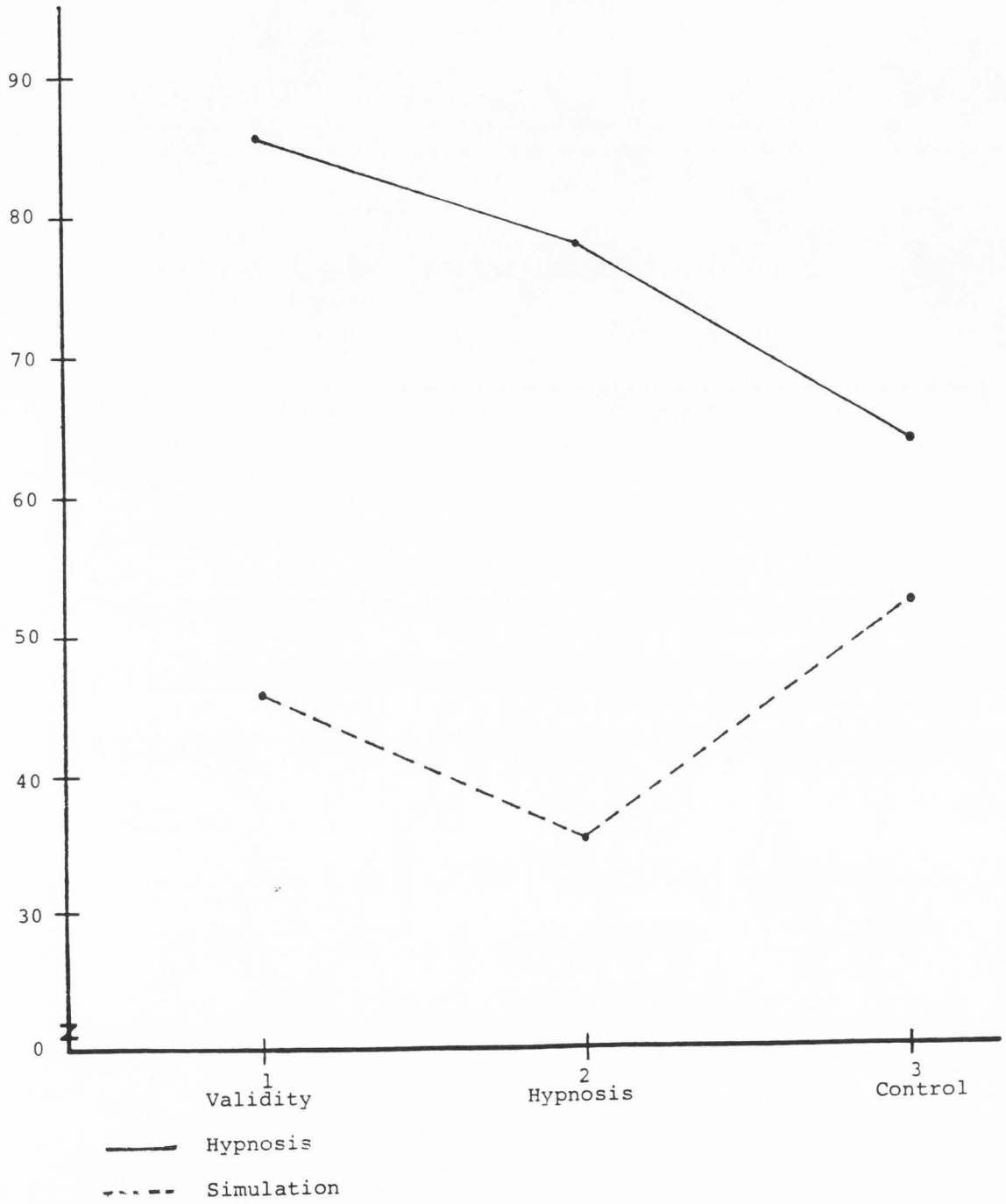


Figure 7. Mean Scores by Group on 3 Items for Self-Report Data, Session 1.

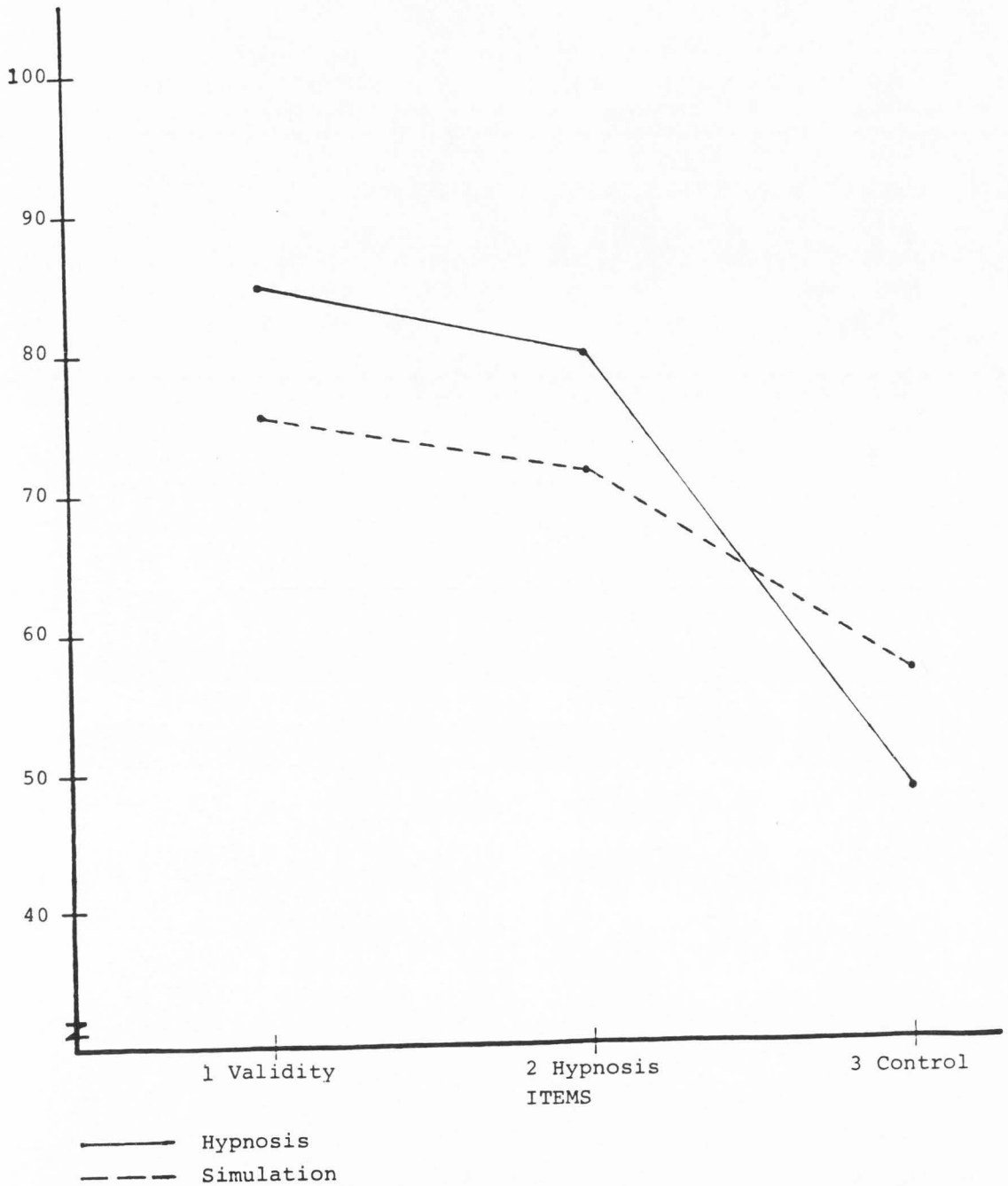


Figure 8. Mean Scores by Group on 3 Items for Hypnotist-Report Data, Session 1.

Item 2 - Level of Hypnosis

On the self-rating of level of hypnotic involvement, subjects in the hypnosis group had a mean score of 77.5, rating themselves significantly higher than the simulators with a mean of 35.5 on level of hypnosis ($t = 4.73$, $p < .001$). However, the hypnotists did not rate the highly hypnotized subjects as significantly different from the simulators. As expected, however, simulators were rated by the hypnotist as generally less hypnotized than the hypnosis subjects (refer to Table 1).

Item 3 - Level of Control

On self-report and hypnotist report measures, no significant differences between the hypnosis and simulator groups were found. The pattern of results showed that in the first session, subjects in the hypnosis condition tended to rate themselves as higher in perceived control (refer to Figure 7) than simulating subjects ($\bar{x}_H = 63.30$ $\bar{x}_S = 52.00$). The hypnotists, however, rated simulators as highest in perceived control and hypnosis subjects as lower in session 1 (Figure 8). The simulating subjects may have been submitting self reports congruent with the instruction to provide a convincing enactment of the hypnotic role, thereby accounting for lower self-ratings in perceived control. Or hypnosis subjects may have experienced a higher degree of felt control whereas simulators, given

Table 1. Means and Standard Deviations by Groups for Self-Report and Hypnotist-Report Data; Levels of Validity, Hypnosis & Control Items

Test 1		Self-Report		Hypnotist-Report	
Items		Mean	S. D.	Mean	S. D.
Level of Validity	H	85.30	13.94	84.80	10.87
	S	45.60	32.80	75.30	12.86
Level of Hypnosis	H	77.50	14.77	80.00	16.33
	S	35.50	23.86	71.30	18.74
Level of Volitional Control	H	63.30	26.73	49.10	32.52
	S	52.00	24.97	57.80	21.75
Test 2		**Self-Report**		**Hypnotist-Report**	
Items		Mean	S. D.	Mean	S. D.
Level of Validity	H	84.50	14.03	78.80	9.07
Level of Hypnosis	H	78.00	13.98	77.80	9.75
Level of Volitional Control	H	67.00	24.18	52.00	20.03

specific instructions to fake, may have experienced less "apparent choice" about their hypnotic involvement.

Items 4-20 Multiple Ego States Interview

The pattern of results for items 4-20 (see Appendix D) pertaining directly to multiple ego state induction and interview experiences will be interpreted first for the self-report data, session 1.

Self-Report, Session 1

Of a total of 17 items related to high hypnotic involvement, 10 showed statistically significant differences between hypnosis vs. simulation groups based on self-reported validity of their experience using multiple chi-square analyses. Frequency scores are displayed in Table 2. Additionally, means and standard deviations for items 4-20 are reported in Table 3 and graphically displayed in Figure 9.

As a cluster, items 4-7 measure higher level skills in focused attention and concentration along with tolerance for illogical or implausible events. Items 4 and 6 measuring arm anesthesia and black and white cat hallucination did not show significant differences between groups. Items 5 and 7, however, measuring eyes open but still in a trance, and induced deafness, were statistically significant ($\chi^2(1,2) = 9.33$, $p < .01$; $\chi^2(1,2) = 12.84$, $p < .001$).

Table 2. Frequency Scores by Groups for Self-Report Data; Items 4-20.

		Hypnosis			Simulation		
Items	Not Real	1 Very Real	2 Not Real	3	1 Very Real	2	3 Real
4	N	1	6	3	5	4	1
	%	10	60	30	50	40	10
5	N	0	8	2	6	4	0
	%	0	80	20	60	40	0
6	N	4	4	2	8	2	0
	%	40	40	20	80	20	0
7	N	1	8	1	9	1	0
	%	10	80	10	90	10	0
8	N	0	7	3	9	1	0
	%	0	70	30	90	10	0
9	N	0	6	4	9	1	0
	%	0	60	40	90	10	0
10	N	0	6	4	9	1	0
	%	0	60	40	90	10	0
11	N	3	4	3	10	0	0
	%	30	40	30	100	0	0
12	N	0	4	6	9	1	0
	%	0	40	60	90	10	0
13	N	1	7	2	9	1	0
	%	10	70	20	90	10	0
14	N	3	5	2	9	1	0
	%	30	50	20	90	10	0
15	N	0	6	4	9	1	0
	%	0	60	40	90	10	0
16	N	7	2	1	10	0	0
	%	70	20	10	100	0	0

Table 2. (continued)

		Hypnosis			Simulation		
Items	Not	1 Real	2 Very Real	3 Not Real	1 Real	2 Very Real	3 Real
17	N	7	1	2	10	0	0
	%	70	10	20	100	0	0
18	N	7	1	2	10	0	0
	%	70	10	20	100	0	0
19	N	7	1	2	10	0	0
	%	70	10	20	100	0	0
20	N	8	0	2	10	0	0
	%	80	0	20	100	0	0

Table 3. Means and Standard Deviations by Groups for Self-Report and Hypnotist-Report Data, Likert Items 4-20, Test 1

Test 1

		Self-Report		Hypnotist-Report	
Items		Mean	S. D.	Mean	S. D.
4	H	2.20	0.63	2.50	0.53
	S	1.60	0.70	2.40	0.70
5	H	2.20	0.42	2.40	0.52
	S	1.40	0.52	2.50	0.53
6	H	1.80	0.79	2.00	0.94
	S	1.20	0.42	2.30	0.82
7	H	2.00	0.47	2.10	0.32
	S	1.10	0.32	2.40	0.70
8	H	2.30	0.48	2.30	0.48
	S	1.10	0.32	2.50	0.85
9	H	2.40	0.52	2.30	0.48
	S	1.10	0.32	2.50	0.85
10	H	2.40	0.52	2.40	0.52
	S	1.10	0.32	2.40	0.84
11	H	2.00	0.82	1.50	0.71
	S	1.00	0.00	1.90	0.99
12	H	2.60	0.52	2.20	0.42
	S	1.10	0.32	2.00	0.94
13	H	2.10	0.57	2.00	0.47
	S	1.10	0.32	2.40	0.84
14	H	1.90	0.74	2.30	0.82
	S	1.10	0.32	2.00	0.94
15	H	2.40	0.52	2.50	0.53
	S	1.10	0.32	2.30	0.95
16	H	1.40	0.69	1.40	0.70
	S	1.00	0.00	1.10	0.32

Table 3. (continued)

		Self-Report		Hypnotist-Report	
Items		Mean	S. D.	Mean	S. D.
17	H	1.50	0.85	1.50	0.85
	S	1.00	0.00	1.10	0.32
18	H	1.50	0.85	1.60	0.97
	S	1.00	0.00	1.10	0.32
19	H	1.50	0.85	1.40	0.84
	S	1.00	0.00	1.10	0.32
20	H	1.40	0.84	1.40	0.84
	S	1.00	0.00	1.10	0.32

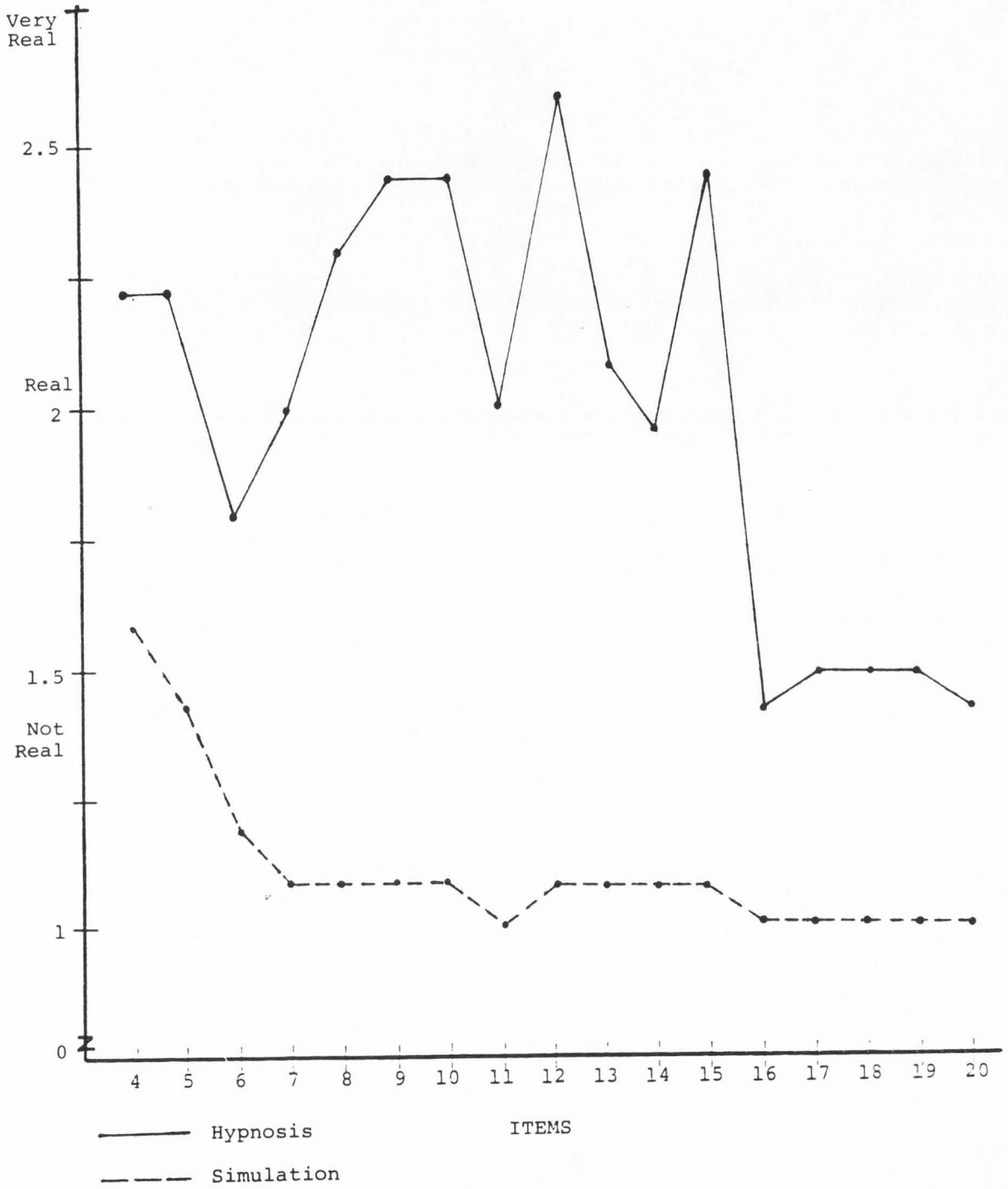


Figure 9. Mean Scores by Group on Reality of Experience for Items 4-20; Self-Report Data, Session 1.

Hypnosis subjects uniformly reported higher frequencies of endorsing "real" or "very real" as descriptors for their hypnotic experience for these 4 items compared with simulators. Mean frequencies for having a valid experience on items 4-7 were 85% for the hypnosis group and 30% for the simulators (See Table 2 for raw frequency data.)

Item 7 "induced deafness" was a necessary prerequisite before continuing onto the multiple ego state interview. Subjects needed to experience induced deafness to subsequently describe another part of themselves that could, in fact, hear. As expected, simulating subjects generally rated their experience of hypnotic deafness as "not real" (90%), while the hypnosis group endorsed items describing the validity of their experience as "real" or "very real" (90%).

Turning next to items 8-20, significant differences between the two groups were found for items 8 through 15, pertaining to the first (additional) ego state or part indicating its presence and describing facets of itself. Items 16-20 which probed for secondary and tertiary ego states (parts) that could hear, did not significantly differentiate between groups, since only 3 of the 10 hypnotic subjects gave evidence of more than one hearing part (30%) compared to 0% of the simulators, a difference which was not statistically distinct.

Table 4. Frequency Scores by Groups for Hypnotist-Report Data, Items 4-20.

Test 1

		Hypnosis			Simulation		
Items		1 Not Real	2	3 Very Real	1 Not Real	2	3 Very Real
4	N	0	5	5	1	4	5
	%	0	50	50	10	40	50
5	N	0	6	4	0	5	5
	%	0	60	40	0	50	50
6	N	4	2	4	2	3	5
	%	40	20	40	20	30	50
7	N	0	9	1	1	4	5
	%	0	90	10	10	40	50
8	N	0	7	3	2	1	7
	%	0	70	30	20	10	70
9	N	0	7	3	2	1	7
	%	0	70	30	20	10	70
10	N	0	6	4	2	2	6
	%	0	60	40	20	20	60
11	N	6	3	1	5	1	4
	%	60	30	10	50	10	40
12	N	0	8	2	4	2	4
	%	0	80	20	40	20	40
13	N	1	8	1	2	2	6
	%	10	80	10	20	20	60
14	N	2	3	5	4	2	4
	%	20	30	50	40	20	40
15	N	0	5	5	3	1	6
	%	0	50	50	30	10	60
16	N	7	2	1	9	1	0
	%	70	20	10	90	10	0

Table 4. (continued)

Test 1

		Hypnosis			Simulation		
Items	1 Not Real	2	3 Very Real	1 Not Real	2 Real	3 Very Real	Real
17	N	7	1	2	9	1	0
	%	70	10	20	90	10	0
18	N	7	0	3	9	1	0
	%	70	0	30	90	10	0
19	N	8	0	2	9	1	0
	%	80	0	20	90	10	0
20	N	8	0	2	9	1	0
	%	80	0	20	90	10	0

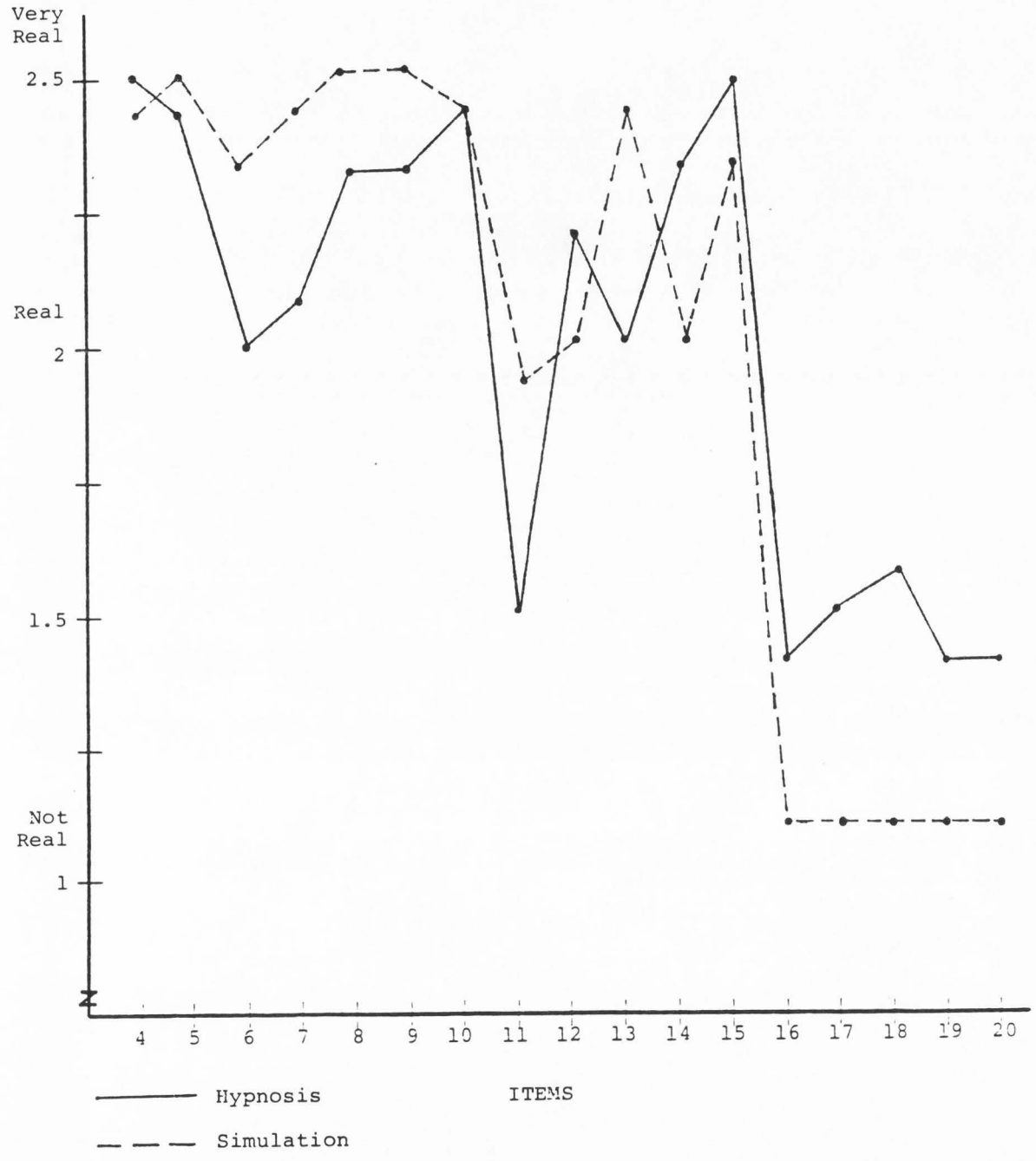


Figure 10. Mean Scores by Group on Reality of Experience for items 4-10; Hypnotist-Report Data, Session 1.

Specifically, chi-square results yielded significant differences for the following: item 8 - "lifts finger to indicate first hearing part," $\chi^2(1,2) = 16.50$, $p<.001$; item 9 "first part says 'here,'" $\chi^2(1,2) = 16.57$, $p<.001$; item 10 "first part tells about self," $\chi^2(1,2) = 16.57$, $p<.001$; item 11 "first part states name," $\chi^2(1,2) = 10.77$, $p<.01$; item 12 "did first part hear (yes)," $\chi^2(1,2) = 16.80$, $p<.001$; item 13 "first part states when born," $\chi^2(1,2) = 12.90$, $p<.01$; item 14 "first part states why born," $\chi^2(1,2) = 7.67$, $p<.05$; and item 15 "first part states function," $\chi^2(1,2) = 16.57$, $p<.001$.

Hypnotist Report, Session 1

Based on the hypnotist's rating of subjects behavior, frequency differences of statistically significant magnitude using chi-square tests were found for 4 of a possible 17 items (See Table 4 for frequency data.) These items were: item 8 "lifts finger to indicate first hearing part," $\chi^2(1,2) = 8.10$, $p<.05$; item 9 "first part says 'here,'" $\chi^2(1,2) = 8.10$, $p<.05$; item 12 "did first part hear (yes)," $\chi^2(1,2) = 8.27$, $p<.05$; and item 13 "first part states when born," $\chi^2(1,2) = 7.50$, $p<.02$. The relatively fewer number of items showing significant differences based on hypnotist report measures compared to self-report data may be explained as greater discriminability attributable to the phenomenological self report data vs. behavior observations and inferences about the validity of their

subjective experiences made by the hypnotist. Mean scores for items 4-20 are reported in Table 3 and displayed in Figure 10.

Pearson Correlations

Item 1 - Level of Validity

Pearson product-moment correlations were calculated to determine the relation between self- and hypnotist-ratings in session 1 and 2 for the "level of validity" item. The two inter-rater reliability coefficients were not significant, since hypnotists and subjects ratings diverged markedly for the simulating, but not hypnosis, group.

Test-retest reliability based on self-report scores across the two sessions was $r=.94$, $p<.001$. The retest reliability of the hypnotist's ratings was $r=.84$, $p<.01$. See Table 6 for reliability coefficients for all scale items.

Item 2 - Level of Hypnosis

The correlation of self and hypnotist ratings in session 1 on the "level of hypnosis" rating during the induction was nonsignificant. For the second session inter-rater reliability was significant ($r=.67$, $p<.05$).

Test-retest reliability results for the self-report ratings on the level of hypnosis was $r=.87$, $p<.001$; with the hypnotist report results also significant ($r=.78$, $p<.01$).

Table 5. Means and Standard Deviations by Groups for Self-Report and Hypnotist-Report Data, Likert Items 4-20, Test 2

Test 2

		Self-Report		Hypnotist-Report	
Items		Mean	S. D.	Mean	S. D.
4	H	2.30	0.68	2.40	0.70
5	H	2.10	0.57	2.30	0.48
6	H	1.80	0.79	1.90	0.88
7	H	2.10	0.57	2.20	0.42
8	H	2.30	0.48	2.40	0.52
9	H	2.40	0.52	2.40	0.52
10	H	2.50	0.53	2.40	0.52
11	H	1.60	0.52	1.80	0.63
12	H	2.30	0.48	2.20	0.42
13	H	2.00	0.67	2.00	0.67
14	H	2.10	0.57	2.10	0.74
15	H	2.30	0.48	2.40	0.52
16	H	1.60	0.97	1.40	0.70
17	H	1.60	0.97	1.40	0.70
18	H	1.50	0.85	1.50	0.85
19	H	1.40	0.84	1.40	0.85
20	H	1.40	0.84	1.20	0.63

Table 6. Pearson Correlations as Reliability Coefficients for Levels of Validity, Hypnosis and Control Items and Items 4-20

	Test-Retest		Inter-Rater	
Items	Self-Report	Hypnotist-Report	Test 1	Test 2
Validity	r=.94 p<.001	r=.84 p<.01	NS	NS
Hypnosis	r=.87 p<.001	r=.78 p<.01	NS p<.05	r=.67
Control	NS	NS	NS	NS
4-20	r=.85 p<.001	NS	NS p<.001	r=.99

Item 3 - Level of Control

Both subjects and hypnotists rated the subjects' level of perceived control during their induction experience. Pearson correlation coefficients were utilized to determine the inter-rater reliability of self vs. hypnotist ratings. Results were nonsignificant in sessions 1 and 2. Examining the mean scores in session 1, the self-ratings on volitional control of hypnotized subjects was greater than those of simulators; while hypnotists rated the simulators as higher in perceived control than the hypnosis subjects. (See Table 1.)

Test-retest reliability results for the self-report scores were non-significant, as were the correlation scores for the hypnotist ratings.

Items 4-20 Multiple Ego State Interview

The Pearson correlation coefficient was calculated between self and hypnotist ratings for the total score of items 4-20. In session 1, the correlation was nonsignificant, since hypnotists did not detect the lack of real experiential involvement of the simulators. In session 2, with hypnosis subjects only, the correlation was highly significant ($r=.99$, $p<.001$).

Test-retest reliability was significant for self-report measures ($r=.85$, $p<.001$) but not for hypnotist report data. The latter finding is again suggested to be

in relation to the hypnotists difficulty manifesting as inconsistency in assigning levels of genuine vs. faked enactment of the hypnotic role.

Point Biserial Correlations

Four intercorrelational matrices were computed to determine the relation between each individual item (4 through 20) on the rating scale and the total scale score for 1) self-report, session 1, 2) hypnotist report, session 1, 3) self-report, session 2, and 4) hypnotist report, session 2. This data was compiled in order to examine the pattern of individual item co-variation with the total test score. Thus, the higher the proportion of variance of an item attributable to differences in total test score (r^2), the greater the degree of relationship between that item and the total score.

Self-Report, Session 1

Results showed, statistically significant correlations ($p<.05$ or better) for all items except for item 4 (arm anesthesia). Therefore, an arbitrary cutoff of $r \geq .71$ was used to determine the items which contributed at least 50% of the variance in relation to the total test score. The following items remained based on $r \geq .71$ in order of rank from lowest to highest:

Item		r*
9	"First part says 'here'"	.96
10	"First part tells about self"	.96
15	"First part states function"	.96
8	"Lift finger to indicate first hearing part"	.89
12	"Did first part hear"	.88
11	"First part states name"	.87
5	"Eyes open trance"	.77
7	"Induced deafness"	.76
14	"First part states why born"	.72
17	"Second part says 'here'"	.72
18	"Second part tells about self"	.72
19	"Second part states name"	.72

Hypnotist Report, Session 1

Items which correlated r>.71 with the total scale score on the hypnotist report, session 1, were as follows:

Item		r*
10	"First part tells about self"	.84
9	"First part says 'here'"	.80
15	"First part states function"	.78
13	"First part states when born"	.74
6	"Black and white cat hallucination"	.72
8	"Lifts finger to indicate first hearing part"	.71

*p<.05

Self Report, Session 2

The following item-scale correlations were obtained for self-report data in session 2:

Item		r*
18	"Second part tells about self"	.90
9	"First part says 'here'"	.87
19	"Second part gives name"	.86
20	"Lifts hand to indicate other parts"	.86
16	"Lifts finger to indicate second part"	.84
17	"Second part says 'here'"	.84
10	"First part tells about self"	.78

Hypnotist Report, Session 2

For the hypnotist report scores in session 2, the following Pearson correlations were obtained, in order of lowest to highest:

Items		r*
20	"Lifts hand to indicate other parts"	.87
16	"Lifts left finger to indicate second hearing part"	.79
17	"Second part says 'here'"	.79
12	"Did first part hear"	.76
19	"Second part states name"	.72

*p<.05

CHAPTER V

DISCUSSION

In review of the current findings, results will be treated in a systematic progression of discussion from the report of induction experiences, beginning with the first 3 scale items--level of validity, level of hypnosis, and level of volitional control, followed by items 4-20. Then, results from the reliability (test-retest and inter-rater) and point biserial correlational data will be presented. Finally, theoretical and philosophical commentary on the implications of the findings and future recommendations for research will be offered at the close.

Subjects in the 2 groups did differ significantly on the level of validity experienced (self-report) and inferred through direct observation by the hypnotist (hypnotist report). This finding is in accord with the anticipated direction of results that both subjects and hypnotists would report different levels of validity related to differences in demand characteristics to simulate (control group) vs. participate in the hypnosis experiment (experimental group), which would actuate propriety norms related to "good" hypnotic involvement.

In comparing the hypnosis and simulating groups on the "level of hypnosis" item, it is not surprising that lack of significant differences were found based on the behavioral ratings of the hypnotists. Subjects, however, rated

themselves as significantly higher in genuine hypnotic involvement than simulators, also in the anticipated direction. The hypnotists, as a group, were apparently fooled by the subjects' convincing enactment, since no statistically significant differences between the hypnosis and simulating group were found based on the hypnotist report. Very likely, the hypnotists, who were blind to differences in demand characteristics between subjects, sought to minimize any subtle behavioral indices which may have suggested anything less than valid experiential involvement. Or, in fact, there may have been no clear indices to suggest possible deception by the simulators. This finding is not at all unusual, since experienced clinical and experimental hypnotists are frequently unreliable in their efforts to distinguish simulating from truly hypnotized subjects (see Orne, 1979).

On the level of control item, both the subjects and hypnotists rated the 2 groups such that no significant differences were found in the t-test analysis. Relatively, subjects in the hypnosis group rated themselves as higher in perceived control than simulators. Past research findings on post-hypnotic amnesia for highly susceptible subjects have shown level of self-control to be unclear with both voluntary and involuntary classifications equally represented (Schuyler & Coe, 1981). Thus, these results are in accord with previous findings. Hypnotists rated the

simulators as higher in perceived control than the hypnosis subjects. Since the hypnotists were generally fooled by subject's convincing simulated enactment of being highly hypnotized, it is possible that they inferred subjects' level of volitional control was positively related to high hypnotic involvement.

Group Differences (Items 4-20)

Self Report

Turning our attention to the self-report data of a total of 17 multiple ego state items gleaned from the multiple ego state report items 4-20, 10 items or 58% attained statistically significant differences between the hypnosis vs. simulation groups in session 1. However, the trend of the results suggests that both simple items pertaining to differentiation of the sensorily aware, in this case, "hearing" part, by raising a finger (#8), indicating intra-psychic shift by saying "here" (#9), and confirming the presence of hearing (#12), as well as items which elaborated on different feeling and experiential components of the multiple ego state, such as telling about itself (#10), stating when it was born (#13) and its function (#15), were valuable and valid indices of differences between hypnosis subjects whose experiences were real and valid vs. subjects who faked production of multiple ego states (simulators).

Hypnotist Report

Summarizing overall results on hypnotist report data in session 1, only 4 of 17 possible items, or 24% showed significant differences between the 2 groups. These items (#8, 9, 12, and 13) had also yielded significant differences in frequency of endorsement by the subjects, and related to indicants of the presence of and specific information about the first hearing part (ego state). From the relatively fewer significant hypnotist-report vs. self-report items, one could conclude that the hypnotists, as a whole, were less able to effectively discriminate between genuine vs. faking behavioral indicators of multiple ego states than the subjects themselves.

Test-Retest Reliability

Retest reliability was statistically significant, for 5 of 8 correlational indices. (See Table 5.) These significant correlations substantiate the replicability of results across time for both self and hypnotist ratings. To date, no test-retest or inter-rater reliability data has heretofore been reported in multiple ego state or hidden observer inquiries, and therefore results provide some cursory evidence to support the reliability of experimentally elicited multiple ego states using a hidden observer paradigm with highly susceptible subjects.

Inter-Rater Reliability

The present study generally failed to demonstrate significant reliability between self and hypnotist reports. (See Table 5.) As such, the convergent validity between the hypnotist's observations of subjects' behavior and their own self reported experiences was not substantiated. Hypnotists rated the genuinely hypnotized subjects enactment as valid, but failed to differentiate real from simulated hypnotic behavior when subjects were given explicit instructions on how to "fake" high hypnotic involvement.

Point Biserial Correlations

Also of interest is the pattern of results for the highly significant point biserial correlations. In session 1, the items which correlated the highest with total scale scores were items which pertained to both the first and second parts (multiple ego state) indicating their presence by saying "here," lifting of the right finger, and telling about itself, including its function.

In contrast, more significant items in session 2 were items which pertained to the second multiple ego state indicating its presence by saying "here," lifting the finger, telling about itself, and indicating the presence of even more parts which could hear "multiple ego states).

No explanation can be offered at this time to account for the difference between sessions 1 and 2 in these findings.

Inter-Hypnotist Variability

Inter-hypnotist variability was examined to determine the potential confounding influence of unreliability of hypnotist reports on group differences in the current study. Only 2 of a total of 80 separate analyses yielded significant differences in variance due to hypnotist group membership. These 2 items were: 1) self-report of "first part states when born" and 2) the hypnotists' report of the same item (#13). Two possible explanations for the two items evidencing non-homogeneity of between hypnotists' variance are: 1) both the subjects and hypnotist evaluated the validity of stating when the first part was born for certain hypnotist(s) differently due to some characteristic of the hypnotist(s) or 2) these two significant non-homogeneity of variance findings represent random item sampling variance, since only 2 of 80 items is within a 95% confidence interal that there are no significant differences between subjects due to inter-hypnotist variability.

In summary of the inter-hypnotist reliability, the finding that only 2 of 80 possible inter-hypnotist item analyses yielded significant differences between hypnotists lend strong support for the external validity, specifically

inter-hypnotist generalizability, of the multiple ego state phenomenon.

Multiple Ego State Descriptions of Subjects

In characterizing the hidden observer, Hilgard (1977) described the covert experiences of the hidden observer experimental subjects as rational, objective "secondary process" modes of cognitive activity. Correspondingly, Hilgard did not find Gill and Brenman's (1961) concept of adaptive regression a tenable explanation of the hypnotized part's experience, although some features of primary process, such as hallucinations, active imagination, and fantasy, are present.

In the present investigation, subjects described the operation of an additional ego state in a similar objective fashion, but with the added quality of having objective knowledge to protect and help the subject (part blocking sensory awareness). The following examples serve to illustrate representative comments of subjects from the current study about their "sensorily experiencing" ego state.

E: Why were you born?

S: To protect Dave. To help Dave. Help Dave.

E: What function do you serve?

S: Help him fight against all the people and things that keep him . . . (voice fades

out). Keep him straight, not to fall off the path.

Another example was of a subject whose additional ego state helped him to see more clearly for safety reasons.

E: Can you tell me what you help him see?

S: To see himself. To see the world so he can feel safe.

A third subject volunteered information about the functional aspects upon general questioning.

E: Tell me about yourself.

S: I'm the part that helps her, guides her.

E: What is your function?

S: Her inner voice.

Characterizing the hidden observer or additional ego state in this investigation, then, it can be described as a protector, or guide, subjectively experienced as a higher cognitively functioning and more aware self than the non-hearing part which reported hypnotic or relaxation-induced deafness.

Conclusions

In examining the combined pattern of results for the self-report and hypnotist report data, the preponderance of multiple ego state items (58%) revealed significant differences between groups, whereas the majority of hypnotist report items (76%) failed to show significant

differences between the hypnosis vs. simulator subjects. This pattern would resemble the third hypothesized pattern of results, namely $H_{SR} \neq S_{SR}$; $H_{HR} = S_{HR}$, described earlier as one of four possible hypothesized outcomes. These results are interpreted to support the possibility in highly susceptible subjects of the existence of multiple ego states distinct from simulating subjects enacting a "fake hypnosis" role.

Limitations of the Current Study

However, the evidence does not necessarily support the prior existence of multiple ego states, since no pre-experimental data or history, at least in this study, is available to substantiate or disconfirm the validity of the particular ego states elicited experimentally. In the Watkins and Watkins (1979-1980) investigation, subjects selected did have documented clinical case histories of multiple ego states. However, there was no control group included, and the hypnotists were not blind experimenters, since they had prior knowledge and experience with the subjects in a clinical setting. These methodological flaws were corrected in the current investigation to lend support to the internal and external validity of the findings.

In therapeutic contexts, shifts in attitudes, behavior motivations, feelings, etc., may signal acknowledged or unrecognized shifts from one ego state to another. The

exact nature of this triggering process is unclear. Hilgard's paradigm of the hidden observer has been utilized by Watkins and Watkins (1979, 1979-1980) as an investigative model which can be critiqued as invalid according to the fallacy of affirming the consequences of the experiment, e.g., inducing the type of sensory split or dissociation through demand characteristics inherent in the instructions that the investigation purports to measure.

A recent (editorial) commentary on hidden observers, multiple ego states and multiple personality by Hilgard (1984) is particularly relevant here. Hilgard states that there are clearly some analogies between hidden observer phenomena and ego-state interpretations, although identification with enduring states existing prior to the experimental hypnotic induction remains a controversial issue.

Hilgard cites recent studies of Laurence and Perry (1981) and Laurence, et al., (1983) where experiments effects or demand characteristics for high susceptibles were uniform, but their responses to age regression showed non-homogeneity and differences in experiencing duality of child and adult ego states during age regression.

The distinction between multiple personality and multiple ego states in controlled experimental settings is typically less discernible than in a clinical therapy context with greater time, freedom from standardization

constraints, and opportunity to explore the personality dynamics. Theoretically, however, it remains a basically straight-forward differentiation due to the criteria of greater dissociation and encapsulation hypothesized as owing to unconscious repressive mechanisms operative in multiple personality disorders creating strong mortidinal energies at the multiple personality boundaries.

In the current experiment, several highly hypnotized subjects gave convincing reports (confirmed by hypnotist observations) of immersion in their experience of having another mini sub-self which frequently served a protective function in the ego economy. Yet the subjects' individual responses and verbal descriptions of the existence and functions of this additional ego state were not uniformly convincing. Some subjects were able to give a different name or date of birth, or gave more elaborate reports about the functional differences between the observing ego state and their hypnotized or relaxed self. Others appeared to, in fact, be responding to the demands of the experiment and engaging in an imaginary production of another ego state. Yet, the dependent measures utilized in this study did not effectively ferret out these qualitative distinctions. It is therefore possible that erroneous assumptions about the depth, complexity, and integrity of multiple ego states in this investigation may have been made, in the case of some subjects. As investigators, we may be labeling such

phenomena as ego states when in fact no prior pre-existing part of the personality actually exist. As such, we are then reifying the abstraction of an ego state and concretizing its existence when it is simply an example of role-playing, whether in an hypnotic or relaxation induction context. How can we discriminate distinct ego states from integrated sub-divisions of a singular ego state manifested in similar fashion as changes in affect, beliefs, behavior, and values in future experimental investigations?

Looking once again at the dissociative continuum, persons with multiple ego states describe their dissociation experience as having separate "parts," with predominantly voluntary conscious awareness of shifts between ego states, usually adaptive to person and setting variables. In covert multiple personalities, which from this point will be considered synonymous with sub-personalities, greater suppression of knowledge of the existence of 1 or more sub-personalities, and more <u>in</u>voluntary, unconscious shifts to covert multiple personalities is the case. Finally, with multiple personalities, shifts from one personality to another are triggered by totally <u>unconscious</u> mechanisms and experienced as an involuntary process outside the person's volitional control.

More hypnosis research is needed to bring together experimental studies of dissociation and clinical studies

of multiple personalities, before sense can be made of multiple ego states research and validity safely assigned to findings of multiple ego states as less encapsulated and more flexible mini sub-selves vis-a-vis a more reductionistic perspective of multiple role enactment. Hypnotic study of distinct multiple personalities, with fixed impermeable ego boundaries and amnesia for alternate personalities, is necessary to help elucidate the similarities and differences between dissociative cognitive/sensory/perceptual phenomena that could merely represent time-limited iatrogenic effects of the experiment vs. those which might suggest the presence of more enduring personality fractions (Hilgard, 1984).

What appears to be needed is an additional means besides the hidden observer model to validly distinguish between real demonstration of multiple ego states from those that may be produced in response to demand characteristics of the experiment. In attempting to invest such a design or measure, one inevitably is forced to explore, once again, questions about the origin of the dissociative split through insults or trauma to the ego. Generally, dissociative theory posits extremely negative life events as critical to the development of separate psychic complexes. Yet, positive stressors may precipitate development of another ego state, as do negative stressors or subjectively experienced traumatic events, which vary

between persons based on subjective sensory/perceptual thresholds. Exemplary are cases in which sudden fame or riches precipitate a change in the personality, because the demands made on the ego to integrate and adapt to a radically different lifestyle, even for a person of normal coping ability and ego strength, are excessive. Other major lifestyle changes stemming from religious conversion or experiences of spiritual enlightenment may facilitate a change in conscious awareness which may be difficult to incorporate within one's personality and previous social arena of family, friends or business associates, since there may be a radical departure of one's previously held beliefs, values, motivations, affectivity, and behavior.

Returning to the original question about alternative experimental models, then, it would be possible to construct a design in which the subject would be presented with a variety of sensory experiences (both pleasant and aversive), moral dilemmas, or completed stories and probed for their reactions. A pre-experimental investigation through verbal report of the subject's past history during an hypnotic or relaxation induction or written report of key life events or "turning points" which resulted in a marked change in one's beliefs, values, behavior, lifestyle, etc., would also be a useful tool for constructing the appropriate dependent measure(s) and design. It may be necessary or advisable in some cases to tailor the experi-

mental design to each subject individually according to pre-defined parameters, but based on idiosyncratic positive or negative stressors, to obtain the optimal response.

Recommendations for Future Research

As Sheehan and McConkey (1982) have pointed out, the investigation into divided consciousness including multiple ego states as it intertwines with hypnotic and non-hypnotic elicitation paradigms has only just begun. Further research is suggested to explore the interface of brain states and other altered states of awareness with uncovering/revelation of multiple levels of awareness, including hidden observers, multiple ego states, or more loosely, multiple levels of sensation, perception, and cognition. Use of an electroencephalogram (EEG), or PET scan, with data obtained from multiple cortical sites bilaterally, could be used to detect differential activation of the hemispheres, or localized sites of activation. Such experimental investigation might reveal differences in relative levels of alpha vs. beta brain waves among various ego states/ hidden observers. The activated objective observer, for example, might demonstrate a higher percentage of beta waves, or higher frequency alpha levels; and the ego state which would be dissociating or blocking sensory awareness, such as in hypnotic analgesia or deafness, might be discovered to be

operating at a lower frequency alpha. Or, perhaps only certain highly susceptible subjects possess the requisite brain wave pattern, most probably a relaxed alert alpha, where flexible and creative multiple cognitive levels can co-exist simultaneously without ego-dystonic dissociative processes occurring.

In addition to physiological measures, other techniques of behavior observation such as those utilized by the Neuro-Linguistic therapists, could be incorporated as dependent measures. Neuro-Linguistic practitioners observe for signs of parasympathetic activation such as relaxed and symmetrical facial musculature, peripheral dilation of blood vessels, slower breathing, and increased lower lip size, which could also correspond to different ego states, depending on the response pattern of the individual. Utilization of these behavioral indices to ascertain the presence of various ego states or hidden observers might prove a fruitful avenue for future experiments.

The high correlation between duality in age regression and dissociative processes in conjunction with multiple ego states or hidden observers (Perry & Laurence, 1980; Laurence & Perry, 1981) also merits further exploration. In those two studies, all subjects who showed a hidden observer response also showed duality during age regression. Accordingly, subjects who experienced no

duality subsequently did not manifest a hidden observer effect.

Consideration of clinical diagnostic issues in the study of multiple ego states is also suggested for future research. Information obtained in pretest measures regarding personality features and/or psychopathology, using CPI, MMPI, 16 PF, or other instruments, could be used to determine clinically normal vs. neurotic, character-disordered, or psychotic individuals. Examination of the relation between multiple ego states, dissociative states, and clinical diagnostic groups could therefore be pursued.

Also, it is proposed that future studies investigate the question of multiple cognitive controls or ego states by investigating differential sensory/perceptual processing in a normal awake or relaxed state without the need to consider hypnotic susceptibility or the use of hypnotic elicitation models which may cloud the interpretation of results with unnecessary "noise" attributable to hypnotic artifact.

More emphasis in hypnosis research is recommended to be placed on the use of subjective report measures, both pre- and post-experimentally, to obtain critical information necessary for interpretation of findings. This data would enable more correct hypotheses regarding the motives and responses of experimental subjects to be obtained. As Spanos and D'Eon (1980) have pointed out, such data provide

valuable corroborative or disconfirmative evidence to prevent erroneous assumptions about the nature of subjects' pre- and post-experimental impressions, and the experimental process itself. Hopefully, then, formulation of false theoretical postulates will be less likely to occur.

Finally, multiple dependent measures, including the hypnotist's behavioral rating or physiological measures such as EEG, as previously described, should be combined with self-report data to provide information with which a multi-trait, multi-method matrix (Campbell & Fiske, 1959) could be constructed. This approach would enable measures of convergent and discriminant validity and reliability to be systematically obtained across hypnotic items and data collection methods.

REFERENCES

Allison, R. B. (1974). A new treatment approach for multiple personalities. American Journal of Clinical Hypnosis, 17, 15-32.

American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders (DSM-III.) (3rd ed.), Washington, D.C.: APA.

Ashley, W. R., Harper, R. S., & Runyon, D. K. (1951). The perceived size of coins in normal and hypnotically induced economic states. American Journal of Psychology, 64, 564-591.

Barber, T. X. (1969). Hypnosis: A scientific approach. New York: Van Nostrand.

Barber, T. X. (1961). Physiological effects of "hypnosis." Psychological Bulletin, 58, 390-419.

Barber, T. X., Spanos, N. P. & Chaves, J. F. (1974). Hypnosis, imagination, and human potentialities. New York: Pergamon Press.

Berne, E. (1961). Transactional analysis in psychotherapy. New York: Grove Press.

Blatt, S. J., Goodman, J. T., & Wallington, S. A. (1969). Is the hypnotist also being hypnotized? The International Journal of Clinical and Experimental Hypnosis, 17, 160-166.

Bliss, E. L. (1980). Multiple personalities: A report of 14 cases with implications for schizophrenia and hysteria. Archives of General Psychiatry, 37, 1388-1397.

Bowers, K. S. (1973). Hypnosis, attribution and demand characteristics. The International Journal of Clinical and Experimental Hypnosis, 21, 226-238.

Bowers, M. K., Brecher-Marer, S., Newton, B. W., Piotrowski, Z., Spyer, T. C., Taylor, W. S., & Watkins, J. G. Therapy of multiple personality. The International Journal of Clinical and Experimental Hypnosis, 19, 57-65.

Braun, B. G. (1984). Hypnosis creates multiple personality: Myth or reality. International Journal of Clinical and Experimental Hypnosis, 32, 191-197.

Brome, V. (1978). Jung. New York: Atheneum.

Campbell, D. J., & Fiske, D. W. (1959). Convergent and discriminant validation using the multitrait-multimethod matrix. Psychological Bulletin, 56, 81-105.

Coe, W. C. (1973). A further evaluation of responses to an uncompleted post-hypnotic suggestion. American Journal of Clinical Hypnosis, 15, 223-228.

Coe, W. C., & Sarbin, T. R. (1977). Hypnosis from the standpoint of a contextualist. Annals of the New York Academy of Sciences, 296, 2-13.

Fagan, J., & Shepherd,I. L. (1970). Gestalt therapy now. New York: Harper and Row.

Federn, P. (1952). Ego psychology and the psychoses. (E. Weiss, Ed.) New York: Basic Books.

Freud, S. (1953). On narcissism: An introduction. In Collected papers (Vol. IV) London: Hogarth Press & The Institute of Psychoanalysis.

Gill, M. M., & Brenman, M. (1961). Hypnosis and related states. New York: International Universities Press.

Gruenewald, D. (1977). Multiple personality and splitting phenomena: A reconceptualization. Journal of Nervous and Mental Disease, 164, 385-393.

Gruenewald, D., Fromm, E., & Oberlander, M. I. (1979). Hypnosis and adaptive regression: An ego-psychological inquiry. In E. Fromm and R. Shor (Eds.), Hypnosis: Developments in research and new perspectives. New York: Aldine.

Harriman, P. L. (1943). A new approach to multiple personalities. American Journal of Orthopsychiatry, 13, 636.

Harriman, P. L. (1942). The experimental induction of a multiple personality. Psychiatry, 5, 179-186.

Hartmann, H. (1958). Ego psychology and the problem of adaptation. New York: International Universities Press.

Herzog, A. (1984). On multiple personality: Comments on diagnosis, etiology and treatment. International Journal of Clinical and Experimental Hypnosis, 32, 210-221.

Hilgard, E. R. (1979). Divided consciousness in hypnosis: The implications of the hidden observer. In E. Fromm and R. E. Shor (Eds.), Hypnosis: Developments in research and new perspectives (2nd ed.) (pp 45-79). New York: Aldine.

Hilgard, E. R. (1977). Divided consciousness: Multiple cognitive controls in human thought and action. New York: John Wiley and Sons.

Hilgard, E. R. (1973). The domain of hypnosis: With some comments on alternative paradigms. American Psychologist, 23, 972-982.

Hilgard, E. R. (1984). The hidden observer and multiple personality. International Journal of Clinical and Experimental Hypnosis, 32, 248-253.

Hilgard, E. R. (1965). Hypnotic susceptibility. N.Y. Harcourt, Brace and World.

Hilgard, E. R. (1974). Toward a neodissociation theory: Multiple cognitive controls in human functioning. Perspectives in Biology and Medicine, 17, 301-316.

Hilgard, E. R., & Hilgard, J. (1975). Hypnosis in the relief of pain. Los Altos, CA: William Kaufmann.

Hilgard, E. R., Hilgard, J. R., MacDonald, H., Morgan, A. H., & Johnson, L. S. (1978). Covert pain in hypnotic analgesia: Its reality as tested by the real-simulator design. Journal of Abnormal Psychology, 87, 655-663.

Hilgard, E. R., Morgan, A. H., & MacDonald, H. (1975). Pain and dissociation in the cold pressor test: A study of hypnotic analgesia with "hidden reports" through automatic key pressing and automatic talking. Journal of Abnormal Psychology, 84, 280-289.

James, W. (1890). Principles of psychology. New York: Holt.

Janet, P. (1973). L'automat isme psychologique. Paris: Centre National de la Recherche Scientifique. (Originally published 1889).

Jung, C. G. (1963). Memories, dreams, reflections. (A. Jaffe, Ed.) New York: Pantheon Books.

Kampman, R. (1975). The dynamic relation of the secondary personality induced by hypnosis to the present personality. Psychiatria Fennica, 169-172.

Kampman, R. (1976). Hypnotically induced multiple personality: An experimental study. The International Journal of Clinical & Experimental Hypnosis, 24, 215-227.

Kampman, R., & Hirvenoja, R. (1972). Research of latent multiple personality phenomenon using hypnosis, projective tests and clinical interview. Hypnose und psychosomatische medizin, 106-109.

Kernberg, O. F. (1976). Object relations theory and clinical psychoanalysis. New York: Aronson.

Knox, V. J., Morgan, A. H., & Hilgard, E. R. (1974). Pain and suffering in ischemia: The paradox of hypnotically suggested anesthesia as contradicted by reports from the "hidden observer". Archives of General Psychiatry, 30, 840-847.

Lankton, Stephen (Ed.). (1981). Elements and dimensions of an Ericksonian approach (Ericksonian Monographs, No. 1), Bruner/Mazel: New York.

Laurence, J. R., & Perry, C. (1981). The "hidden observer" phenomenon in hypnosis: Some additional findings. Journal of Abnormal Psychology, 90, 334-344.

Laurence, J. R., Perry, C., & Kihlstrom, J. (1983). "Hidden observer" phenomena in hypnosis: An experimental creation? Journal of Personality and Social Psychology, 44, 163-169.

Leavitt, H. C. (1947). A case of hypnotically produced secondary and tertiary personality. Psychoanalytic Review, 34, 274-295.

Ludwig, A. M., & Ludwig, A. C. (1972). The objective study of a multiple personality. Archives of General Psychiatry, 26, 298-310.

Nogrady, H., McConkey, K. M., Laurence, J. R., & Perry, C. (1983). Dissociation, duality and demand characteristics in hypnosis. Journal of Abnormal Psychology, 92, 223-235.

Orne, M. T. (1969). Characteristics and the concept of quasi-controls. In R. Rosenthal and R. Rosnow (Eds.) Artifact in behavioral research (pp 143-179). New York: Academic Press, 143-179.

Orne, M. T. (1979). On the simulating subject as a quasi-control group in hypnosis research: what, why and how. In E. Fromm and R. E. Shor (Eds.) Hypnosis: developments in research and new perspectives (pp 519-565). Chicago: Aldine Publishing Co.

Orne, M. T. (1959). The nature of hypnosis: Artifact and essence. Journal of Abnormal and Social Psychology, 58, 277-299.

Perry, C., & Laurence, J. R. (1980). Hilgard's "hidden observer" phenomenon: Some confirming data. In M. Pajntar, E. Roskar, and M. Lavric (Eds.), Hypnosis in psychotherapy and psychosomatic medicine (pp. 75-92). Ljubljana, Yugoslavia: University Press.

Piaget, J., & Inhelder, B. (1973). Memory and intelligence. New York: Basic Books.

Prince, M. (1906). The Dissociation of a personality. New York: Longmans Green.

Reich, W. (1949). Character analysis. New York: Orgone Institute Press.

Rossi, E. (Ed.) (1980). The collected papers of Milton H. Erickson on hypnosis (Vol I) (pp. 1-256). New York: Irvington Publishers, Inc.

Rubinstein, R., & Newman, R. (1954). The living out of "future" experiences under hypnosis. Science, 119, 472-473.

Salama, A. A. (1980). Multiple personality: A case study. Canadian Journal of Psychiatry, 25, 569-572.

Sarbin, T. R., & Andersen, M. L. (1967). Role-theoretical analysis of hypnotic behavior. In J. E. Gordon (Ed.), Handbook of clinical and experimental hypnosis (pp. 96-121). New York: Crowell-Collier & MacMillan.

Sarbin, T.R., & Coe, W.C. (1979). Hypnosis and psychopathology: Replacing old myths with fresh metaphors. Journal of Abnormal Psychology, 88, 506-526.

Sarbin, T. R., & Coe, W. C. (1972). Hypnotic behavior: The psychology of influence communication. New York: Holt.

Scheff, T. J. (1966). Being mentally ill. New York: Aldine.

Schreiber, F. (1974). Sybil, Norwich: Fletcher & Son Ltd.

Schuyler, B. A., & Coe, W. C. (1981). A physiological investigation of volitional and nonvolitional experience during posthypnotic amnesia. Journal of Personality and Social Psychology, 40, 1160-1169.

Sheehan, P. W., & McConkey, K. M. (1982). Hypnosis and experience: The exploration of phenomena and process, Hillsdale, N. J.: Erlbaum.

Sheehan, P. W., & Perry, C. W. (1976). Methodologies of hypnosis. New York: John Wiley & Sons.

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

Shor, R. E. (1962). Three dimensions of hypnotic depth. The International Journal of Clinical and Experimental Hypnosis, 10, 23-28.

Shor, R. E., & Orne, M. T. (1962). Harvard group scale of hypnotic susceptibility, Form A. Palo Alto, CA: Consulting Psychologists Press.

Sidis, B. (Ed.) (1902). Psychopathological researches: study in mental dissociation. New York: Stechert.

Spanos, N. P., & D'Eon, J. L. 1980). Hypnotic amnesia, disorganized recall, and inattention. Journal of Abnormal Psychology, 89, 744-750.

Sarbin, T.R., & Coe, W.C. (1979). Hypnosis and psychopathology: Replacing old myths with fresh metaphors. Journal of Abnormal Psychology, 88, 506-526.

Sarbin, T. R., & Coe, W. C. (1972). Hypnotic behavior: The psychology of influence communication. New York: Holt.

Scheff, T. J. (1966). Being mentally ill. New York: Aldine.

Schreiber, F. (1974). Sybil, Norwich: Fletcher & Son Ltd.

Schuyler, B. A., & Coe, W. C. (1981). A physiological investigation of volitional and nonvolitional experience during posthypnotic amnesia. Journal of Personality and Social Psychology, 40, 1160-1169.

Sheehan, P. W., & McConkey, K. M. (1982). Hypnosis and experience: The exploration of phenomena and process, Hillsdale, N. J.: Erlbaum.

Sheehan, P. W., & Perry, C. W. (1976). Methodologies of hypnosis. New York: John Wiley & Sons.

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

Shor, R. E. (1962). Three dimensions of hypnotic depth. The International Journal of Clinical and Experimental Hypnosis, 10, 23-28.

Spanos, N. P., & Hewitt, E. C. (1980). The hidden observer in hypnotic analgesia: Discovery or experimental creation? Journal of Personality and Social Psychology, 39, 1201-1214.

Spanos, N. P., Jones, B., & Malfara, A. (1982). Hypnotic deafness: Now you hear it--Now you still hear it. Journal of Abnormal Psychology, 91, 75-77.

Sutcliffe, J. P. (1961). "Credulous" and "skeptical" views of hypnotic phenomena: Experiments on esthesia, hallucination, and delusion. Journal of Abnormal and Social Psychology, 62, 189-200.

Sutcliffe, J. P. (1958). Hypnotic behavior: Fantasy or simulation? Unpublished doctoral dissertation, University of Sydney, Australia.

Taylor, W. S., & Martin, M. F. (1944). Multiple personality. Journal of Abnormal and Social Psychology, 39, 281-300.

Thigpen, C. H., & Cleckley, H. M. (1957). The three faces of eve, New York: McGraw-Hill.

Watkins, J. G. (1978). The therapeutic self. New York: Human Sciences Press.

Watkins, J. G., & Watkins, H. H. (1979-1980). Ego states and hidden observers. Journal of Altered States of Consciousness, 5(1).

Watkins, J. G., & Watkins, H. H. (1979). The theory and practice of ego state therapy. In H. Grayson (Ed.) Short term approaches to psychotherapy (pp. 45-72). New York: National Institute for the Psychotherapies and Human Sciences Press.

Weiss, E. (1966). Paul Federn 1871-1950: The theory of the psychoses. In F. Alexander, S. Eisenstein, and M. Grotjaken (Eds.) Psychoanalytic pioneers (pp. 98-132). New York: Basic Books.

Zolik, E. S. (1958). An experimental investigation of the psychodynamic implications of the hypnosis "previous existence" fantasy. Journal of Clinical Psychology, 14, 179-183.

APPENDIXES

Appendix A

Agreement to Participate in Group Hypnosis Experiment

Principal Investigator: Laura M. Sturgis
Tripler Army Medical Center
Honolulu, HI
Phone: 595-8110

I agree to serve as a hypnotic subject in the following experiment conducted for the purpose of learning more about hypnotic susceptibility. I understand that I will be administered a standard scale constructed to measure hypnotic susceptibility. The scale contains a brief introduction to the topic of hypnosis, a waking suggestion, an hypnotic induction, and standard hypnotic items which measure my responsiveness to hypnosis. Afterwards, I will be asked to complete a self-rating scale about my experiences during hypnosis.

My personal affairs will not be delved into or investigated in any way and nothing will be done to make me appear foolish. I understand that this susceptibility scale has been administered to hundreds of persons and that it is unlikely that any disturbing effects will occur. There is a slight possibility that I might experience feelings of uneasiness or perhaps a slight headache. However, most persons have reported their experiences to be interesting and pleasurable.

_____

I certify that I have read and understand the foregoing, that I have been given satisfactory answers to my inquiries concerning project procedures and other matters and that I have been advised that I am free to withdraw my consent and to discontinue participation in the experiment at any time. I herewith give my consent to participate in the project with the understanding that such consent does not waive my legal right nor does it release the principal investigator or the institution or any agent thereof from liability for negligence or for any wrongful act or conduct.

_____ _____
Signature Date

Age: _____ Sex: F M (Circle) Ethnicity: _____

Would you be willing to participate in further hypnosis experiments:

Yes No (Circle)

If so, please indicate the phone number where you can be reached:

cc: Signed copy to subject

If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in the study, contact: Committee on Human Studies, University of Hawaii, 2540 Maile Way, Honolulu, HI 96822. Phone: 948-8612.

*** MAHALO FOR YOUR PARTICIPATION ***

Appendix B

Agreement to participate in Individual Hypnosis Experiment

Principal Investigator: Laura M. Sturgis
Tripler Army Medical Center
Honolulu, HI
Phone: 595-8110

In the following experiment, I understand that I will be administered a standard hypnotic induction. The induction will include standard performance items to measure my responsiveness or depth of hypnosis. Afterwards, I will be asked to complete a self-rating scale about my experiences. During the experimental procedures nothing will be done to embarrass me or make me appear foolish. The purpose of my participation is to learn more about individual responsiveness to hypnosis. I understand that it is unlikely that any disturbing effects will occur. There is a slight possibility that I may experience feelings of uneasiness or perhaps a slight headache. However, most people find their second experience more interesting than the first, and an enjoyable opportunity to learn more about their range of abilities while deeply hypnotized.

I certify that I have read and understand the foregoing, that I have been given satisfactory answers to my inquiries concerning project procedures and other matters and that I have been advised that I am free to withdraw my consent and to discontinue participation in the experiment at any time. I herewith give my consent to participate in the project with the understanding that such consent does not waive my legal right nor does it release the principal investigator or the institution or any agent thereof from liability for negligence or for any wrongful act or conduct.

_____ _____
Signature Date

Age: _____ Sex: F M (Circle) Ethnicity: _____
We may need to contact you regarding further hypnosis experiments if you meet certain subject characteristics. Please indicate your willingness to participate further by including your phone number(s) where you can be most easily reached.

Phone: _____

cc: Signed copy to subject

If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in the study, contact: Committee on Human Studies, University of Hawaii, 2540 Maile Way, Honolulu, HI 96822. Phone: 948-8612.

*** MAHALO FOR YOUR PARTICIPATION ***

Appendix C

Hypnosis Induction and Interview Format*

1. Subject will be hypnotized by an arm-lowering method and deepened by the visualization of walking down stairs.

2. Now, I would like you to focus on your right arm and hand. Your right arm and hand are beginning to feel very insensitive to any kind of sensations. Your r. arm and hand are starting to feel numb, perhaps a little tingly. In a little while it will no longer be able to sense cold or heat, pain or pressure. Any sensation will be outside of your awareness. You begin to notice the creeping feeling of numbness from your fingertips into the hand, past your wrist . . . forearm . . . upper arm . . . and shoulder. The entire r. arm and hand is becoming anesthetized, unable to feel any sensations whatsoever. More and more numb. Your right arm and hand can no longer feel anything.

   (Now, take a sharpened pencil and drop on exposed area of the inside of Ss' forearm 3 times and observe for flinching or other movement. Repeat entire item if Ss shows movement.) That's fine. Now just relax.

3. Now allow the feeling to go back into your right arm and hand. Notice whether there may be a slight coolness or warmth in your hand and arm. Your right arm and hand are normal again.

   I'm going to give you another suggestion. In a moment, I'm going to ask you to open your eyes but still remain as hypnotized as you now are. You will open your eyes when I tell you to do so, but still remain completely hypnotized. All right, (subject's name), open your eyes now. (Wait till eyes open and hold for 5 seconds.) Now, close your eyes once again.

4. As you close your eyes, allow yourself to fall back into a deep hypnotic state, a state in which you will be able to do all sorts of things that I will ask you to do. You will choose to focus on the suggestions and concentrate on them. In a short while I am going to offer you another suggestion. I will ask you to open your eyes and emerge from your state of hypnosis. When you open your eyes, you will see a black and white cat on the (table, chair) in front of you. (Pause)

---

*Adapted from Watkins, J. G., & Watkins, H. H., Ego states and Hidden Observers, Journal of Altered States of Consciousness, 5(1), 1979-1980.

5. Open your eyes once again, and look at the (table, chair) in front of you. (Pause) Can you tell me what you see? (Question Ss further if necessary to clarify positive visual hallucination of cat--colors, size, etc.) That's fine. You can let your eyes close now.

6. You feel pleasantly drowsy and sleepy as you continue to listen to my voice. Just keep your thoughts on what I am saying. You are going to get much more drowsy and sleepy. Soon you will be more deeply hypnotized, but you will have no trouble hearing me. I'm going to count from one to ten. As I count, you will feel yourself going down farther and farther into a deep restful sleep, but you will be able to do all sorts of things I ask you to do without waking up. One--you are going to go more deeply asleep . . . Two . . . down, down, into a deep sound sleep . . . Three, four--allow your whole body to become more relaxed and heavy. Five . . . halfway there, always more and more drowsy and sleepy. Six . . . Seven . . . I would like you to hold your thoughts on my voice and those things I tell you to think of. Eight . . . Nine . . . Let you whole body sink comfortably into the chair. Ten--Deep asleep! You are now deeply hypnotized.

   Repeat #2 but change instructions to left arm and hand.

7. As I continue to talk, you will begin to notice that my voice will become more and more difficult to hear. Eventually, you will no longer be able to hear my voice at all. Your hearing will diminish so much so that you will be unable to hear anything at all, and you will be totally deaf. You will be unable to hear my voice or any other sounds around you.

   In a little while you will not be able to hear my voice at all . . . Your hearing will have been lost, and you will be deaf. You will be unable to hear my voice until I touch you on the shoulder. Your hearing is going . . . going . . . fading, . . . fading . . . more and more . . . fading completely. Your hearing is gone now. You can no longer hear me.

8. Shout Ss' name followed by "wake-up" three times. Then strike 2 large blocks of wood (or hardcover books) behind his/her ear 3 times.

9. (If there is no response to sound (blinking or flinching) then it is assumed that hypnotic deafness has been induced. If movement is noted, repeat the item once again to achieve hypnotic deafness. In the event that the Ss fails this item a second time, terminate the experiment.)

10. Subject will next be instructed as follows (using the same words as reported by Hilgard): "Although you are hypnotically deaf, perhaps there is some part of you that is hearing my voice and processing the information. If there is, I should like the index finger of your right hand to rise as a sign that this is the case."

11. If the finger rises the subject will be addressed as follows: "I see. There is a part of you that can hear me. Part, I want to talk to you. Will you please come out, and when you're here just say, 'I'm here.'"

12. "Part, tell me about yourself." (non-directive so as not to suggest specific content.)

13. "Do you have a particular name that you would like me to call you?" (If a name is given, it will be used in addressing the "state" further. If no name or the name of the subject is given, the "state" will be addressed as "Part.")

14. "Part (or Part's name), you have indicated that you have heard me. What did you hear?" (If necessary, non-directive questioning will be continued until we are assured that the "part" has heard the shouting and the blocks.)

15. "How long have you been a part of (subject's name)? When were you born?"

16. "Why were you born?"

17. "What is your function within (subject's name)? What purposes do you serve?"

18. "Thank you, Part (or Part's name). You can now go where you need to go."

19. "Is there some other part of (subject's name) that also has been able to hear me? If there is, I should like the index finger of the left hand to rise as a sign that this is the case." (Repeated three times if no initial response. If still no response, we will move to instruction No. 26. If index finger on left hand raises we will proceed as follows.)

20. "I see. There is another part of (subject's name) that can hear me. Part, will you please come out, and when you're here just say, 'I'm here.'"

21. "Part, tell me about yourself."

22. "Do you have a name you would like me to call you?"

23. "Thank you, Part (or Part's name). You can now go where you need to go." (In some cases before dismissing this "part" further time will be spent exploring its content.)

24. "Are there still other parts of (subject's name) who have been able to hear me? If there are, I should like the entire left hand to rise as a sign that this is the case." (Repeated three times if necessary. If hand does not lift, we will proceed to instruction No. 26.)

25. "Thank you, Parts." I do not need to talk with you at the present time."

26. "Now, let all parts of (subject's name) who have been able to hear me go down and let remain only the part that is deaf and cannot hear."

27. Call subject's name and shout, "wake-up" three times.

28. Strike two blocks of wood together behind subject's ears three times.

29. Place your hand on Ss' shoulder to reinstate hearing. In a moment, I will begin to count backwards from 10 to 1. As I count, you will awaken gradually. When I get to "five" you will open your eyes, but you will not be fully awake. When I get to "one," you will be entirely roused up, in your normal state of wakefulness. After you wake up, you will feel refreshed, and not have any pain or stiffness or other unpleasant after effects. I shall now count backwards from 10, and at "five," not sooner, you will open your eyes but not be fully awake until I reach "one." At "one," you will be fully awake. Ready, now: 10 - 9 - 8 - 7 - 6 - 5 - 4 - 3 - 2 - 1. Now you feel wide awake. I want to ask you a few questions about your experience. Please tell me in your own words about your experience since we began the hypnosis.

30. (After giving the Ss adequate time to discuss their reactions and responses, present the questionnaire.) Now I would like to ask you to fill out a questionnaire about your hypnotic/relaxation experience. Please circle the number in the first 3 questions which best represents your level of response. In the remaining section (4-20) put a check mark under the appropriate column as you feel it best represents your experience.

THANK YOU FOR YOUR COOPERATION!!!

Appendix D

Report of Induction Experiences

1. How would you rate your overall experience during hypnosis of having an additional part that could hear? (Circle the number)

1 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

I	I	I	I	I
Not Real	Somewhat Real	Real	Very Real	

2. How would you rate the level of hypnosis you just experienced?

1 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

I	I	I	I	I
Not Hypnotized	Somewhat Hypnotized	Moderately Hypnotized	Deeply Hypnotized	

3. How much control over your own behavior did you experience?

1 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

I	I	I	I	I
Very Little Control	Some Control	Moderate Control	High Degree of Control	

For each of the following items, rate how real (intense) your experience was: (Put a check under the appropriate column)

		1 Not Real	2 Real	3 Very Real
4.	Arm anesthesia (numbness)	____	____	____
5.	Eyes open but still in a trance	____	____	____
6.	Black and white cat hallucination	____	____	____
7.	Induced deafness	____	____	____
8.	Lift right finger to indicate first hearing part	____	____	____
9.	First part says "Here"	____	____	____

		1 Not Real	2 Real	3 Very Real
10.	First part tells about self	____	____	____
11.	First part states name	____	____	____
12.	Did part hear (yes)	____	____	____
13.	States when born	____	____	____
14.	States why born	____	____	____
15.	States function	____	____	____
16.	Lifts left finger to indicate second hearing part	____	____	____
17.	Second part says "Here"	____	____	____
18.	Second part tells about self	____	____	____
19.	Second part states name	____	____	____
20.	Lift left hand to indicate other parts	____	____	____

VITA

Laura M. Sturgis

Candidate for the Degree of

Doctor of Philosophy

Dissertation: Demand Characteristics in the Hypnotic Elicitation of Multiple Ego States

Major Field: Psychology

Biographical Information:

Personal Data: Born in Appleton, Wisconsin, March 7, 1955, daughter of Harrison and Bette Sturgis.

Education: Attended elementary school in Neenah, Wisconsin; completed high school at St. Mary Central in 1973; received the Bachelor of Arts degree summa cum laude from Edgewood College, Madison, Wisconsin in 1977; completed requirements for the Master of Arts degree at California State University-Fresno, Fresno, California in 1980 in General/Experimental Psychology; and in 1986 completed requirements for the degree of Doctor of Philosophy in Professional-Scientific Psychology at Utah State University.

Professional Experience: 1985 to present, Psychotherapist and Co-founder, Transformational Life Center, Honolulu, Hawaii; 1984-1986, Clinical Psychologist and Psychology Section Supervisor, Waimano Training School and Hospital, Pearl City, Hawaii; 1984-1985, Consulting Psychologist, Sultan Easter Seals School, Honolulu, Hawaii; 1982-1983, Clinical Psychology Intern, VA Regional Office, Honolulu, Hawaii.