

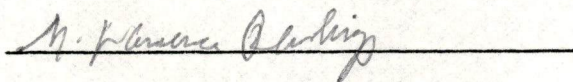
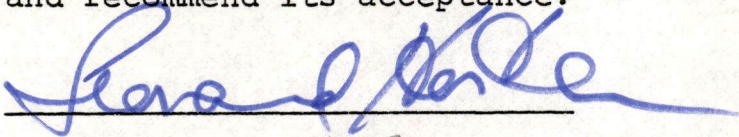
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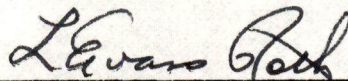


Harold J. Fine, Major Professor

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THE HYPNOTIC DREAM:
ITS RELATION TO NOCTURNAL DREAMS AND WAKING FANTASIES

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Deirdre Barrett
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ABSTRACT

Neurophysiological studies have found that electroencephalogram (EEG) and other physical measures indicate that the person having a hypnotic dream is much closer to a relaxed waking state than to any stage of sleep. The only exception to this generalization is that Rapid Eye Movements (REM) are sometimes observed in the hypnotic dreamer. Characteristics of content of hypnotic dreams are less clearly established. Previous literature tends to conclude that hypnotic dream content is either identical to nocturnal dreams on the basis of theoretical assumptions or very dissimilar on the basis of physiological studies.

The present study examined some comparative characteristics of hypnotic dreams, nocturnal dreams, and waking fantasies from the same subjects. Subjects were divided equally by both gender and deep versus medium trance. Eight-hundred and forty-seven "dream" reports were gathered from 16 subjects over a 6-week period. The reports were rated by two raters who did not know what type of "dream" they were rating. The characteristics rated included the types of characters in the dreams, setting, distortion versus logical storyline, themes of anger, fright, sadness, happiness, or sexuality on the part of the dreamer, activity versus

passivity on the part of the dreamer, hostility or friendliness on the part of other characters, and the presence of planning activity or unelaborated memory. High reliability between raters was obtained. Length of report in words and REM accompaniment were also noted.

Results indicated that there is a significant difference between the hypnotic dreams of medium and deep trance subjects. Deep trance dream reports appeared similar to nocturnal dream reports on all characteristics rated. Medium trance dreams fell somewhere between nocturnal and daydreams on most of these measures. Present results were discussed in terms of the implications for utilization of hypnotic dreams in psychotherapy. While many of the techniques of interpreting nocturnal dreams may be appropriate to deep trance dreams, techniques for utilizing medium trance hypnotic dreams should be ones specifically designed for that purpose, such as Sacerdote's 1967 method.

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CHAPTER I

INTRODUCTION

The hypnotic dream has been advocated as a therapy technique by many hypnotherapists such as Milton Erickson, Schneck, Gill, Brenman and Erika Fromm. A variety of hypnosis-related phenomena are sometimes referred to as "hypnotic dreams" including nighttime dreams influenced by post-hypnotic suggestions and fantasies occurring spontaneously under hypnosis. However, this review will reserve the term for its most common usage--the result of an explicit direction to have a dream while in a hypnotic state.

Erickson (1958) describes a procedure he calls "the rehearsal technique" of having a patient repeat over and over again a dream with the implied freedom of redreaming it different ways. He reports that this serves the dual purpose of progressively deepening the trance and of gaining insight into, and working through of, unconscious conflicts as the dream is reissued in less and less censored versions. For example, he cites the case of a patient who had reported a dream in which he was in a pleasant meadow among comfortable warm hills. At the same time the patient experienced a strong desire for something unknown and a paralyzing fear. On further

elaborations, the locale changed to a valley with a little stream of water flowing under a horrible poisonous bush. Again the dreamer continued to look for something, while feeling terribly frightened, and getting smaller and smaller, as he was terrorized by the unknown that was pushing closer.

In the next repetition, he was a lumberjack picking up logs flowing down the river, and every time he obtained a log, it turned out to be just a skimpy little rotten stick, compared to the big logs of other lumberjacks. In the next dream, he was fishing and while everybody else caught big fish, he only succeeded in obtaining a little sickly looking one which he was finally forced to keep.

Further repetitions eventually resulted in the disappearance of extensive amnesias and conscious blocking, and thus enabled the patient to reveal without further symbolisms his inferiority feelings connected with poor genital development and to discuss strong homosexual inclinations.

Sacerdote (1967a) describes a similar use of hypnotic dreams for rapid therapy, but stresses the experience of the dream as therapeutic aside from any interpretation or insight gained from it. Some of his examples are very analytic and similar to Erickson's usage, while others involve no interpretation or breaking down of defenses. In the case of an obese elderly lady, she was told during the first and only hour of treatment under hypnosis:

The dream will now start; you will be telling me all about that dream. In the dream you will see yourself having some very pleasant experiences, nice and slim as you want to be. What the dream will really be all about, it will be your own affair.

She reported the following dream:

I am in Paris, and then on the Riviera, and I am dancing and dancing; and then I went shopping, and, oh! it is so wonderful to get into clothes, size 10, and I had such a wonderful time.

A second dream the same hour runs:

Oh, it is so wonderful, so wonderful to be thin! Now I am on the beach and people are saying, "What happened? Who are you? I don't recognize you." I am just walking up and down on the beach and it is such fun; it is wonderful! Oh, I love the bathing suits!! I never could wear a bathing suit! Oh, that man! I do so want to go dancing tonight. (Sacerdote, 1967a, pp. 116-117).

While the therapy was not quite limited to this one hypnotic session, it was after this one hour that she became slim and remained slim.

In a further article Sacerdote (1972) reports the successful treatment of a long-standing case of insomnia which was apparently due to a fear of having nightmares by carefully inducing controlled dreams that let the conflicts be expressed more gradually than in a full-blown nightmare.

Gill and Brenman (1959) describe the use of hypnosis both for the production of original dreams and for the continuation of night dreams. In their technique the patients are told that they will continue a dream where it left off and that its meaning will become clearer.

They give the example of a young soldier discharged from the Army in a state of depression and anxiety. He reported a dream of walking up a mountain path leading to a cave and trying to look inside, but waking up before he could see in. Under hypnosis the patient looked in the cave and saw a witch who then becomes his mother, someone who was still somewhat frightening. Eventually, he was able to climb up on her lap and rest there like a young child. He then got up and walked away as a grown man. This dream was accompanied by great emotional expression and seemed to relieve his depression and anxiety greatly, the authors seeing the abreactive effect of the dream in this instance being the main component.

Berheim (1957) also stresses the abreactive effect of hypnotic dreams and gives an example in which he obtained good results by having a veteran go through a hypnotic dream about a real past traumatic memory of a battle and being wounded. He spoke out loud for himself and everyone else present as he reenacted the scene cathartically.

Lecron and Bordeaux (1947) describe how hypnotic subjects can be instructed to dream on any specific topic. In a therapy setting they state that two of the most useful specifics are to have a person have a dream about their attitude toward a significant person or to have a dream about why resistance has appeared in an analysis.

They report that an interpretable dream usually results from these suggestions which frequently speed up the progression of therapy.

Crasilneck and Hall (1975) describe helping a woman to find a lost locket by suggesting she would have a dream under hypnosis which would reveal its location. She had a dream in which she was looking at rows of books. Upon awakening she remembered she had been reading a specific book the night the locket was lost, went to her bookcase, and found the locket marking her place.

Sacerdote (1968) describes a group dream induction technique which he has found helpful with patients who have trouble developing hypnotic dreams at first. He hypnotizes a group and begins with the people who easily produce dreams and they report them out loud. He finds that those who have had more difficulty dreaming can then, after hearing other dreams, begin their own dreams which at the outset incorporate elements of the other patients' reports but go on to represent the dreamer's own unique material.

These clinical descriptions of the use of hypnotic dreams illustrate that it can be both an illuminating projective device for discovering conflicts and a helpful mode for working through these conflicts. How much the hypnotic dream resembles a more common therapy tool, the nocturnal dream, is more difficult to ascertain. Literature which addresses this question is reviewed in Chapter II.

CHAPTER II

EQUIVALENCE OF HYPNOTIC AND NOCTURNAL DREAMS

The most recent review of the hypnotic dream literature (Tart, 1965) concludes that there is a lack of research concerning the equivalence or difference of hypnotic dreams from night dreams. Tart's review covers 34 publications in the area, only 10 of which are characterized as recognizing a need for some comparison of hypnotic dreams to nocturnal dreams. Of the studies making conclusions or assumptions on this issue, 10 asserted that hypnotic and night dreams are the same and 4 indicated differences.

The degree of correspondence between the physiological correlates of hypnotic and nocturnal dreams has been much more thoroughly researched than any potential differences of content or subjective experiences of the dreamer. First, this physiological data will be reviewed.

I. PHYSIOLOGICAL STUDIES

Electroencephalogram (EEG) studies have consistently found hypnotic dreams to have a wave pattern much more similar to a relaxed waking state than to nocturnal dreaming or any other type of sleep pattern. Tart (1964) monitored people having hypnotic dreams and nocturnal

dreams, both groups having received hypnotic suggestions for a specific topic. He found hypnotic dreams to occur with a waking EEG pattern and a lower basal skin resistance than characterized nocturnal dreams. Brady and Rosner (1966) found both a general hypnotic state and hypnotic dreaming periods to be accompanied by a waking EEG pattern characterized by a predominance of alpha rhythms.

Rapid Eye Movements (REM), another widely accepted physiological correlate of nocturnal dreaming yield some information more favorable to the equation of hypnotic and night dreams. Brady and Rosner (1966) found that the range of eye movements greatly increased in subjects who were instructed to dream and reported dreaming under hypnosis, while they did not increase for waking controls instructed to imagine dreaming. They found that the more ocular activity was observed, the more exactly like a nocturnal dream was the subject's report. Schiff, Bunney and Freedman (1969), in an extensive study of one good hypnotic subject, found her hypnotic dreams always to be accompanied by REM; the more active the dreams reported, the greater the ocular movements accompanying them. The subject could not keep her eyes still during the hypnotic dreams even when given a direct suggestion that she would be unable to move them. Eye movements during non-dreaming hypnotic periods were consistently minimal.

Solovey and Milechin (1960), while keeping nine subjects in a prolonged trance of about two hours without giving them specific instructions except to remain hypnotized, found that in periods of prolonged silence or while listening to music, four of their subjects would spontaneously begin rapid eye movements like those of nocturnal dreaming and if awakened after several minutes of these REM's, would report a "dream." If the music had been played during the REM period, subjects frequently incorporated it into a report which still appeared very similar to a natural dream.

For example, after one REM period during which soft music had been played,

One of the subjects reported her onerotic experience saying that she had seen herself in a street in Shanghai by a store waiting for her sister. She was looking carefully at the faces and clothes of all the passers-by and the passengers of the rickshaws in search for her. Soon she saw that in one of these vehicles sat her sister, embracing the young man with which the latter was in love. On her sister's wrist was a watch that was playing soft music at the moment. It amazed her to learn that a wrist-watch could contain a music box. The couple disappeared in the crowd, but the music from the wristwatch could still be heard (pp. 132-133).

Of five subjects who did not have these spontaneous dreams, the authors described three as poor hypnotic subjects who remained in a very light trance and the other two as developing stuporous trances with no memory of anything transpiring during the hypnotic period.

Kratochvil and MacDonald (1969) demonstrated the ability of a hypnotically suggestible state to coexist with normal sleep. Their procedure was to hypnotize six highly suggestible subjects in the evening. Depth of hypnosis was assessed as adequate by several difficult suggestions including hallucinations and age regression.

Electrodes were attached and the subjects were sent to bed and allowed to fall asleep. All subjects were awakened after one complete sleep cycle, and were retested with similar hypnotic suggestions and found to still--or again--be in a deep hypnotic state. They were then allowed to fall asleep again and simple suggestions were given during each sleep stage such as "Your nose itches and you will scratch it" and "You feel cold and will pull the blanket over you."

In stages three and four, subjects did not respond except for one subject who showed a waking EEG from the middle of the suggestion to the completion of the response. In stage two, most subjects carried out the suggestions with some individuals showing waking EEG's while executing the instructions and others remaining in a stage two pattern while doing so. In REM periods, subjects responded to the suggestions usually while still in REM sleep, but on a few occasions showed waking alpha patterns briefly while carrying out their instructions. The subjects all awakened the next morning in a deep

hypnotic trance; the authors tended to favor the explanation that sleep was superimposed upon the hypnotic state but acknowledged that its temporary displacement was also a possibility. This study seems to show that while hypnotic suggestibility is most commonly accompanied by a waking EEG pattern, it can also occur during sleep. The REM period (identified with nocturnal dreams) was found to be the most similar to regular hypnosis in terms of suggestions being able to be carried out.

Albert and Boone (1975) found hypnosis was able to influence night REM time. A dream deprivation group, who was given a post-hypnotic suggestion not to dream for one night, spent more time in stage one sleep, with some subjects having less than half as much REM time as usual. A dream facilitation group instructed to dream all night did not show any alteration of physiological sleep pattern. Subjective dream reports of both subject groups were dramatically affected in the suggested direction.

Torda (1975) monitored subjects instructed to have a hypnotic dream in which they would be either anxious or angry. She found not only did their subjective reports differ in the directions suggested but they also developed galvanic skin responses (GSR), blood pressure, and heart rate changes appropriate to the suggested emotion. Torda observed that the dream content was often tied in to old memories involving such emotions.

II. CONTENT STUDIES

The majority of clinical writings on the use of hypnotic dreams are much more concerned with the degree of similarity of content and the psychological significance of hypnotic and nocturnal dreams than with their physiological correlates. Sacerdote (1968), the leading proponent of this technique in therapy states:

I have accepted on the basis of my experience that dreams hypnotically or post-hypnotically induced are psychodynamically equivalent and at times physiologically identical to natural dreams and therefore therapeutically valuable (p. 168).

Most of the clinicians dealing with this issue tend to agree on this equivalence; some state the assumption rather perfunctorily while others make elaborate arguments. Several theorists see the equivalence as logically following from their theoretical concept of hypnosis. Fromm (1965) sees their equivalence merely by both being primary process thought productions; she begins her article:

Dreams are "the Royal Road to the Unconscious." Freud was referring to ordinary nocturnal dreams but the same is true for the fantasies and dreams produced in hypnosis (p. 119).

Gill and Brenman (1959), while not arguing for an exact equivalence between hypnotic and nocturnal dreams, state that since both hypnosis and dreaming are regressive states this fact would facilitate switching easily from one to the other. They believe a person should be able

to state unconscious conflicts more sharply via hypnotic dreams than in a waking state.

Schneck (1959) details his observations on the points of similarity between hypnotic and nocturnal dreams, stressing that all the same primary process mechanisms are employed:

Hypnotic dreams may bear such close structural resemblance to nocturnal dreams as to be essentially indistinguishable from them. They may be simple or complex in concordance with the manner in which the patient tends to express himself in this fashion and in keeping often with the form and content of his spontaneous nocturnal dreams. The variety of dream mechanisms employed in the latter are evident in the former and the analysis of hypnotic dreams is often therapeutically beneficial. . . . Symbolizations, condensations, displacements and substitutions, representations by the opposite and a broader array of mechanisms are readily discernible (pp. 156-157).

In another article Schneck (1966) discusses the frequent argument that hypnotic dreams are short, simple and non-symbolic compared to the stereotype of intricate nocturnal dreamwork. He points out that in actuality, real nocturnal dreams also show this wide range of complexity. Schneck (1974) gave examples of the same individual's hypnotic nightmares (which had occurred merely at the request for a dream under hypnosis) together with his nocturnal nightmares. He concluded that both were structurally and dynamically equivalent, and that both dealt primarily with Oedipal conflicts the patient was working through in an analysis with the author at that time. Both

types of nightmares seemed to yield an equal number of associations and interpretations by the patient.

In two other studies, Schneck compared hypnotic dreams and nocturnal dreams with yet another category, the "self-hypnotic dream," in which the subject would put himself into autohypnosis and suggest to himself that he would dream. Schneck found all three types of dreams were indistinguishable with respect to degree of activity, extent of embellishment, and nature of symbolizations. Furthermore, he found that all categories included sudden changes in locus, cast of actors and types of action (Schneck, 1953). In another article, however, Schneck (1954) does allude to a difference he observed between hypnotic and self-hypnotic versus nocturnal dreams. He reports that in contrast to the nocturnal dreams, the two types of hypnotic dreams for one specific patient typically included lengthy conversational situations during which the patient spoke for herself or projected onto others various points of view conveying her immediate problems.

Sweetland and Quay (1952) found that initial attempts at hypnotic dreams sometimes differed from nocturnal dreams but that after some practice all subjects were able to produce dreams which they, the subjects, could not distinguish in any way from their night dreams. Mazer (1951) experimented with 26 subjects giving them suggestions to dream while in hypnosis that specified that the dream

would be "symbolic, with a disguised meaning." He concluded that while all hypnotic dreams were not exact duplications of nocturnal dreams, differences were minimal.

He gives examples not only of the hypnotic dream but also of extensive associations and interpretations by the patients. He also reported a relationship between depth of the hypnotic trance and dream quality, finding that the more deeply hypnotized the subject, the more symbolic and the more exactly like a night dream their hypnotic dream was.

Domhoff (1964) reviewed the evidence against equating hypnotic and night dreams and concluded that there were not any data to indicate differences of content. He pointed out that all empirical studies concluding that there are differences between the two categories have looked at only hypnotic dreams, making unsupported assumptions about nocturnal dream content. He argued that not all nighttime dreams fit the stereotype that the researchers presume. He believes that hypnotic dreams likely differ no more from that stereotype than a representative group of nocturnal dreams from the same subjects might, and the two categories could very well be equivalent.

Moss (1967) conducted a survey which shows a narrow majority of the diplomates in clinical and experimental hypnosis created by the American Board of Examiners in

Psychological Hypnosis to be in accord with this equation of hypnotic and nocturnal dreams. He received 46 replies from 52 diplomates canvassed in response to the question of whether they viewed hypnotic dreams as "similar in essential respects to nocturnal dreams." The disagreement and uncertainty of these experts on this question is illustrated in the following distribution of his answers, despite the majority agreement.

Yes	25 Respondents
No	10 Respondents
Uncertain or No Opinion	10 Respondents
Unclassifiable	1 Respondent

Some authors do propose some specific differences between hypnotic and nocturnal dreams on theoretical or empirical grounds. Kanzer (1953), on a theoretical basis, argues that the setting of the hypnotic dream is bound to make it different from a spontaneous night dream. He states:

In such induced dreams, the voice of the hypnotist takes the place of the day's residues, his ideas shape the latent thoughts, his comments give rise to the dream wish (p. 231).

He observed that dreams induced under hypnosis showed greater censorship than did spontaneous dreams. He also found that the form and imagery of the hypnotic dream were more typical of preconscious than unconscious mental activity.

Brenman (1949) also assumes that the context of hypnosis must have a significant effect on the dream. She states:

In spite of the many similarities to night dreams in the formal structure of the hypnotic dreams, it must not be forgotten that while the primary function of the night dream is to guard sleep, the motive power for the hypnotic dream derives from the need to comply, in so far as possible, with the expressed wishes of the hypnotist; thus to guard an interpersonal relationship (p. 458).

She belittles the assumption that hypnotic instructions to dream will result in a "real" dream, saying this employs the same logic as assuming that a hypnotic instruction to fly will result in real flight. She examined responses to the suggestion "You will now have a dream" and observed:

By and large, these productions employ "primary processes" more than does normal conscious, waking thought but less than does the "typical" night dream described by Freud. It might be said that often the hypnotic dream is a kind of second-rate poetry compared to the tight, complex outcome of the dreamwork. Thus, although a wide range of phenomena appears, it may be said, from the point of view of the formal qualities, that the average hypnotic dream takes a position which is intermediate between the conscious waking day-dream and the night dream (p. 457).

Barber (1962) and Walker (1974) take a more extreme position--that the hypnotic dream is exactly the equivalent of a conscious waking daydream. Barber claims:

The "hypnotic dream" is typically an unembellished imaginative product containing very little evidence of "dreamwork." In some instances it consists of straightforward recall of previous happenings or of former night dreams; in the majority of instances, it consists of banal verbal or imaginal associations to the suggested dream topic (p. 218).

While Barber admits he has occasionally seen hypnotic dream accounts that appear to resemble nocturnal dreams, he

offers the following three explanations for this resemblance:

1. They come from sophisticated subjects having great familiarity with Freudian dream theory who are likely to apply this to conscious productions.

2. Hypnotic dreams published in the literature are a few atypical ones selected from a large sample of failures.

3. The experimenters either implicitly, or explicitly, have given the expectation that they want their subjects to come up with elaborate symbolization.

Barber concludes by saying:

. . . even with dreams suggested to deeply hypnotized subjects, it is difficult if not impossible to differentiate these from the imaginative productions of non-hypnotized controls who are instructed to imagine scenes vividly or to make up dreamlike material (p. 219).

Walker (1974) writes:

A more useful way of conceptualizing the hypnotic dream may be to see it as qualitatively no different from the response a person gives when simply asked to have a fantasy. . . . It is time that the knowledge about the hypnotic dream be integrated into the broader area of fantasy.

Walker does not believe the hypnotic dream can be appropriately used in therapy in the manner a night dream would be interpreted. Instead, she suggests it should be employed more in the manner of Desoille's (1965) "Directed Daydreaming," that is, as a kind of guided fantasy with systematic relaxation.

Tart (1964) found a difference in how easily nocturnal and hypnotic dreams could be influenced by topic. He had good hypnotic subjects listen to a tape recorded narrative and told them to dream about it upon falling asleep that night and to have a dream about it immediately under hypnosis. Hypnotic dreams were found to conform much more closely to the narrative, although sleep dreams were also influenced.

Several researchers enumerated different types of "hypnotic dreams" of which only one type resembled the night dream. Tart (1966) and Gill and Brenman (1959) both suggested four such divisions. Tart categorized responses to suggestions as: (1) simply thinking about something, (2) daydreaming, (3) vivid hallucinations, like watching a film, and (4) feeling "bodily located in a dream world."

He gave dream suggestions to both waking subjects and to those who had been through a hypnotic induction routine and then had them rate their own dreams as falling into one of these categories. A minority of subjects rated their experiences as feeling bodily located in a dream world even with hypnotic induction.

There was also a positive correlation of dream vividness to depth of hypnosis as measured by responses to other hypnotic suggestions. However, there was no correlation between dream vividness and having gone through the

induction routine. Tart criticizes other studies on hypnotic dreams for defining hypnosis as having gone through hypnotic induction procedures; he believes it is more rightfully judged by the subject's state of consciousness.

Gill and Brenman distinguished four different types of productions issuing from the hypnotic instruction to dream. They were:

1. The embellished reminiscence.
2. The static pictorial image.
3. The quasi-allegory (which they described as resembling a conscious daydream but including in a rather obvious and primitive fashion some elements of unconscious symbolism).

4. The quasi-dream (which they said taken out of context is often indistinguishable from a night dream).

They found that analyzing all categories of productions was helpful in therapy, but did not conclude that even the fourth category is the exact psychodynamic equivalent of a night dream.

Spanos and Ham (1975) studied the characteristics of hypnotic dreams, working largely from a Barber-style theoretical orientation. They used 49 female student nurses at Medfield State Hospital (where Barber teaches) as their subjects. All subjects were administered the Barber Suggestibility Scale (Barber, 1969) in a group

setting. Their hypnotic dream reports, one per subject, were transcriptions of their verbal responses in an individual hypnotic session.

Following the "dream" session, all subjects rated the extent to which they (1) became involved in their imaginings, and (2) experienced their imaginings as an involuntary process. Furthermore, two judges independently rated the transcribed "dream" protocol of each subject for imaginative involvement. Judges also rated the "dream" protocols of 30 subjects for implausibility, fearfulness and fragmentation. (The remaining 19 subjects had reported that nothing happened in a response to the suggestion to "dream.") Subjects' self-ratings of "dream" protocols for involvement correlated highly with one another. Both involvement measures also correlated with self-ratings of involuntariness of imaginings and with Barber Suggestibility Scale scores.

The main emphasis, however, was upon how little dreamlike quality was involved in the hypnotic dream reports. Nineteen subjects experienced nothing and of the remaining 30, the authors noted that:

. . . for the overwhelming majority of these subjects a "hypnotic dream" consisted of a plausible, non-fragmented, non-fearful, imaginary story (Spanos and Ham, 1975, p. 47).

The authors did mention that a few subjects reported "imaginings" that were implausible, fearful and/or

fragmented--an experimenter would say more like nocturnal dreams, although they did not put it in those terms.

Spanos and Ham concluded by stressing a significant point: the often overlooked vast individual differences in response to the same instruction to "dream." They also concluded by making hypnotic dreams sound like very superficial waking thought processes, without taking into account the brevity of the induction and instruction procedure or the biases of the people involved. The experimenters, and quite possibly the nurse-subjects, were already firm believers in Barber's idea that hypnotic phenomena should not be viewed as something different from waking consciousness.

The most quantitative study to date concerning possible differences among hypnotic and nocturnal dreams was done by Hilgard and Nowlis (1972). They collected a number of hypnotic dreams in the course of administering the Stanford Hypnotic Susceptibility Scale, Form C (Weitzenhoffer and Hilgard, 1962). One step on this scale is an instruction to have a dream about the meaning of hypnosis specifically.

Once the dreams were collected, Hilgard and Nowlis had subjects rate their own dreams on a three-point scale of vividness, counted the number of words in the dream account, and using Hall and Van de Castle's (1966) system, scored the number and categories of human characters in

the dreams. They found 63 percent of their subjects rated their dreams as vivid as a night dream; 33 percent rated them like watching a movie, and 4 percent like thinking or daydreaming. In order to compare these results to night dreams, Hilgard and Nowlis used the data of Hall and Van de Castle (1966) who had collected nocturnal dreams from a variety of subjects, including university undergraduates and prisoners. They were not well matched with Hilgard and Nowlis' subjects on age, geographic region, or most other variables. Hilgard and Nowlis acknowledged this as a rather unsatisfactory procedure, but characterized it as a pilot study and hoped it would indicate any gross differences among hypnotic and nocturnal dreams even though obtained from rather different subjects. The specification of the dream topic of hypnotic dreams only, also negatively affects comparability.

Hilgard and Nowlis did, however, find several marked differences: hypnotic dreams were much shorter (a range of 13 to 238 words for hypnotic dreams as compared to 50 to 300 for nocturnal dreams). They averaged 1.3 characters instead of the 2.6 Hall and Van de Castle had reported for night dreams, and the hypnotic dreams had fewer relatives as characters. The hypnotic dream was also characterized, by the authors, as having more "Alice-in-Wonderland, psychedelic-type distortions." They did feel them to be quite similar to nocturnal dreams in many ways and concluded

that they are best considered as projective products falling somewhere between Thematic Apperception Test (TAT) stories and night dreams.

A comparative study by Mixer (1961) reported no differences on "reality orientation" of hypnotic and nocturnal dreams from the same group of deep trance subjects. In his study, three experienced clinicians independently rated the degree of reality orientation expressed in each dream as "impossible," "improbable," or "probable." Mixer interpreted the absence of significant differences between the two sets of data as confirming his hypothesis that

. . . there is no difference in the degree of realism shown in hypnotic and nocturnal dreams of the same subjects, when their hypnotic dreams occur in a deep trance under conditions which duplicate night dreaming as closely as possible.

Mixer did not use a medium trance group or draw any conclusions about whether hypnotic and nocturnal dreams would show the same reality orientation for them.

In summary, the physiological correlates of the hypnotic dream are the aspects which have been clearly established. Physiologically the person having a hypnotic dream resembles a person in a relaxed waking state much more than someone in dreaming sleep, the one exception being the occasional mention of REM movements in the hypnotic dreamer. In terms of content of hypnotic dreams, the tentative indications of some differences from nocturnal

dream content has been much less thoroughly researched. What is most lacking is a study that examines a wide variety of content characteristics of hypnotic dreams in relation to characteristics of both nocturnal dreams and waking fantasies. These different types of "dreams" should be gathered from the same subjects to avoid some of the confounding variables of the Hilgard and Nowlis (1972) study.

CHAPTER III

OBJECTIVES OF PRESENT EXPERIMENT

This experiment was designed to systematically examine how hypnotic dream content resembled the content of night dreams and waking fantasies of the same subjects. A wide variety of content variables were used, including those that had been suggested by previous studies, to demonstrate some differences such as amount of distortion, length in words, REM accompaniments and Hall and Van de Castle's rating categories of characters, setting, and themes. The data were also analyzed separately for some groups that might show different relationships between content in types of "dreams": males, females, medium trance subjects, and deep trance subjects.

CHAPTER IV

METHOD OF PROCEDURE

I. SUBJECTS

Sixteen university undergraduates were selected from among a group who had previously been hypnotized by graduate students taking a seminar in hypnosis. The group was balanced for gender and depth of trance. Depth evaluations were made by the Davis and Husband (1931) scale with the addition of Hilgard's (1965) determination of where the hypnotic dream would fall on that scale (see Appendix A). There were four deep trance males, four deep trance females, four medium trance males, and four medium trance females. No subjects who achieved only a light trance by David and Husband criteria were used, as the successful response to a suggestion to have a hypnotic dream falls near the beginning of the medium trance ranking (see Appendix A). Subjects' ages ranged from 18 to 26 years old.

Subjects read and signed a consent form which described the procedure and guaranteed their anonymity in any reporting of data (see Appendix B). They were also given a similar verbal description of the project. All subjects received two hours of course credit for their participation. One medium trance female, who originally

agreed to participate, dropped out in the first week of the experiment. She was replaced by another medium trance female from the group of former hypnosis seminar subjects. All other subjects completed the six-week experiment.

II. COLLECTING DATA

The three main parts of this procedure were (1) recording of nocturnal dreams, (2) recording of waking fantasies, and (3) hypnotic sessions with recording of hypnotic dreams. For the first item, during a six-week period subjects were asked to write down the first three dreams they remembered each week, stopping for the week when they reached three. Occasionally, one subject did not recall three dreams a week so a smaller data sample was analyzed. For the second item, subjects were asked to record three dreamlike fantasies or "daydreams" a week for the same six-week period.

All hypnotic sessions were individual, once weekly for the same six-week period. All hypnosis was done by the experimenter who had completed a practicum-oriented course in hypnosis and a quarter of supervised independent studies practice at hypnotic inductions. The initial induction method that was used was eye fixation (utilizing a spot on the wall) and suggestions of drowsiness, relaxation, slow deep breathing, and heaviness of eyelids

repeated until eyes closed. For most subjects, this was abbreviated after one session by a suggestion that any time in the future that the subject wished to be hypnotized and the experimenter wished to hypnotize him/her, the subject would merely lean back in a chair while the experimenter counted to three, and on the count of three the person would be deeply hypnotized again. This shorter induction was used for all subjects who responded satisfactorily to it including all the deep group, although a minority needed the longer induction routine each time.

For several minutes after induction, the subject was given repeated suggestions that they were relaxing more and more completely and going deeper and deeper asleep. They were then instructed to perform two introductory tasks--arm catalepsy and visualization exercise. They were then told:

In a moment you are going to have a dream or dreamlike thoughts. I want you to raise your left hand and lower it once when the dream begins and again when it is over.

A few subjects initially required repeated suggestions to the effect that they may have had a bit of trouble at first but they would find a dream coming to them. The suggestion to dream was repeated twice, interspersed only with a few suggestions that they remain deeply asleep and completely relaxed and comfortable. The experimenter watched and noted whether REM's were occurring during dream periods.

The person was then awakened with a suggestion that after the experimenter counted backward from 10 to 1, he/she would be able to remember as much of the three hypnotic dreams as he/she chose. Once awake, subjects were asked to write down everything they remembered about all three dreams. This same procedure was repeated once a week for six weeks.

III. ANALYSIS OF THE DATA

These three groups of night dream reports, hypnotic dream reports, and daydream reports were rated on a wide variety of variables. The raters were the experimenter and a male senior psychology major. The experimenter rated all the data and the other rater did one-third of each category for each subject in order to obtain percentages of rater agreement for every rating category. All data were coded and read blind so that raters would not know if a given report was of a night dream, hypnotic dream, or daydream. The only exception was that 9 reports, or approximately 1.5 percent of the data, contained references to what type of "dream" they were.

One group of variables on which dreams were rated consisted of the main variables in the Hall and Van de Castle (1966) system. Each dream's setting was rated on a three-point scale indicating whether it took place primarily outdoors, primarily indoors, or in an approximately equal

combination of the two. There was also a frequency count of types of characters occurring in the dream broken down to female family, male family, female strangers, male strangers, female acquaintances, and male acquaintances. "Crowds" and other indications of large, inexact numbers of people were arbitrarily counted as 10 people in order to avoid huge numbers of relatively insignificant characters in 1 dream influencing the mean dramatically. Therefore, rating categories were combined into totals for gender of characters, for each type of acquaintanceship, and for all characters. Characters were recorded only for categories on which they were scorable. For instance, "someone" would appear only in the total, not by gender and acquaintanceship categories. "A relative" would appear in the family category but not in gender categories.

There were also seven two-point scales indicating the presence or absence of the following themes within a dream: anger, fright, sadness, happiness, and sexuality on the part of the dreamer as well as hostility and friendliness on the part of other characters in the dream. Reports could be scored as having none, any, or all of these characteristics present. For example, the following hypnotic dream report was rated by both raters as containing anger, fright, and sadness on the part of the subject:

I was in a boat alone on the lake. I was mad about something and was trying to drive away from it. I drove the boat until I saw an old man on the shore. I stopped and we went into

his cottage and ate. We laughed until I was no longer mad. When I left it was dark. I couldn't see my way home so I stopped the boat. I looked straight up. The boat began to spin one way and I spun the other way. What little light there was closed in to a tiny circle and shot over to the left and disappeared.

Other variables in addition to the Hall and Van de Castle system were used. Dreams were rated on a three-point scale of "distortion and illogical sequence" versus "coherence of story-line." For example, the following hypnotic dream was rated at the distortion end of the scale by both raters:

I am standing on a beach or an island in the South Pacific. I turn around and notice that a group of people are chasing me. They chase me all over the island until I am trapped at the edge of a cliff which faces the ocean. I know that if I jump I will not be killed but still there is some fear of dying. Finally I jump off the cliff and into the water. Upon hitting the water I slowly float to the bottom of the ocean. When I get to the bottom I see a big orange fish which asks me what I am doing there. I tell the fish that I have come to learn. The fish then tells me that I am not ready and that I should go back. I then begin to float back up to the surface. The dream ends.

The following hypnotic dream was rated by both raters at the straight story-line end:

I was somewhere with my girlfriend and we were talking about her going to this school in Philadelphia. I was mentioning that I didn't want her to go away to that school. But I told her that I understood that she had to go where she'd be happy. And she turned all emotional and started crying and told me she was glad I was so understanding. And then she kissed me on the cheek and left to go inside. (My girlfriend was, in fact, up looking at this school the week-end I had the dream.)

Dream reports were rated on a three-point scale of activity versus passivity of the dreamer's role within the dream. Passivity could be present but inactive as in the following hypnotic dream scored "passive" by both raters.

I'm at a striptease show. The main "attraction" comes out, and my friends and I cheer. She comes out dancing and wiggling about. Suddenly she pulled out a gun and began shooting people in the audience, yelling about "male pigs" and getting revenge. We are all in a daze under chairs, but then she lays down her gun and finishes the dance.

Also rated as passive were dreams with the subject absent such as this night dream:

There were some horses running in a field. They were being led by a white stallion. This stallion was very big and powerful. He kept running faster and faster until he began to fly. Then all of them were flying. They flew to the north till I couldn't see them.

As an example of a dream rated as very active by both raters was the following nighttime dream:

I'm lying in my bed--and hear sudden screams outside on the dimly lit street. Being on the second floor, I jumped up and looked out and saw a woman being raped by a gorilla. Thinking I was awake, I ran outside and threw a paper cup at him and he fell over dead. I then jumped back up into my window and went back to bed.

The presence or absence of two other characteristics, unembellished memory and realistic planning, were rated on a two-point scale. An example of a report scored as unembellished memory by both raters was this hypnotic dream:

Images from a more recent event, spring break. Flying with my uncle in his Cessna Cardinal, four-seater aircraft. Vivid image of him, some feel of the plane, interesting, exciting. Could look out the window and see the ground below clearly. Farms, wooden, white farm houses, roads, woods, ponds, fields, fences.

An example of a daydream report scored realistic planning by both was:

The thought of getting a new stereo system has loomed across my mind quite often. Since I had never owned one, I was excited about getting one. It would be a Marantz or Pioneer cassette player-receiver. I seldom think of any other kind.

Dreams were also rated on a two-point scale for the presence or absence of people other than the dreamer. In addition, length in words of all "dream" accounts were counted.

A percentage of agreement between raters was computed and the experimenter's ratings only were used in the analysis of the data.

Statistical analysis consisted of Wilcoxin matched-pairs, signed-ranks tests between variable means for the three different types of "dreams." The Statistical Package for the Social Sciences program (Nie, 1975) was used for the Wilcoxin tests and descriptive statistics on the variables. This program converts Wilcoxin T scores to Z scores for the purpose of determining significance levels if, as in the present study, the number of pairs is less than 25.

CHAPTER V

RESULTS

The percentages of rater agreement in scoring dream characteristics ranged from a low of 92 percent to a high of 100 percent with the general value in the 94 percent range. The percentages for specific variables are presented in Table 1.

All dream categories had some missing data largely because subjects did not report three dreams each week. Nocturnal dreams were the category least likely to be remembered as they ranged as low as 7 out of a possible 18 for 1 subject. See Table 10, Appendix C, for details of number of each type of dream reported by different categories of subjects.

Table 2 presents the means and standard deviations for ratings on all 19 of the variables rated. The categories appearing in night and hypnotic dreams were quite similar, and both differed from content categories appearing in daydreams. The greatest difference was that there were many more family members in hypnotic and nocturnal dreams than in daydreams. There were also more strangers in them than in daydreams.

Table 3 reports Wilcoxin Z scores for these differences which show them to be statistically significant.

TABLE 1

PERCENTAGE OF RATER AGREEMENT IN SCORING DREAM CHARACTERISTICS

Characteristic	Percent Agreement				
	Total Subjects	Deep Subjects	Medium Subjects	Male Subjects	Female Subjects
Total Characters	94	93	94	94	94
Male Relatives	98	98	99	99	98
Female Relatives	98	98	98	99	98
Male Acquaintances	92	91	92	92	93
Female Acquaintances	93	91	92	92	93
Male Strangers	92	92	92	93	92
Female Strangers	93	93	93	93	93
Distortion	93	91	95	94	93
Anger	94	93	95	95	94
Fright	93	93	93	94	93

TABLE 1 (Continued)

Characteristic	Percent Agreement			
	Total Subjects	Deep Subjects	Medium Subjects	Male Subjects Female Subjects
Sadness	95	96	94	94 95
Happiness	94	93	94	95 94
Sexuality	97	96	98	98 97
Hostility	93	93	94	94 92
Friendliness	95	95	95	94 95
Setting	92	91	92	92 93
No Characters	100	100	100	100 100
Length in Words	100	100	100	100 100
Memory	96	95	97	96 96
Planning	94	95	93	95 93
Action	96	94	96	96 95

TABLE 2

MEANS AND STANDARD DEVIATIONS OF VARIABLE RATINGS
FOR TOTAL SUBJECTS

	Hypnotic	Day	Night
<u>Female Family</u>			
Mean	.16	.04	.21
Standard Deviation	.14	.04	.20
<u>Male Family</u>			
Mean	.22	.03	.13
Standard Deviation	.17	.04	.14
<u>Female Acquaintances</u>			
Mean	.44	.43	.30
Standard Deviation	.42	.37	.34
<u>Male Acquaintances</u>			
Mean	.54	.46	.42
Standard Deviation	.38	.32	.37

TABLE 2 (Continued)

	Hypnotic	Day	Night
<u>Female Strangers</u>			
Mean	.39	.34	.50
Standard Deviation	.32	.66	.48
<u>Male Strangers</u>			
Mean	.30	.23	.51
Standard Deviation	.12	.34	.37
<u>Distortion</u>			
Mean	1.49	1.07	1.48
Standard Deviation	.25	.08	.28
<u>Anger</u>			
Mean	.14	.04	.17
Standard Deviation	.16	.09	.24
<u>Fright</u>			
Mean	.24	.04	.38
Standard Deviation	.12	.06	.17

TABLE 2 (Continued)

	Hypnotic		Day	Night
<u>Sadness</u>				
Mean	.10		.09	.23
Standard Deviation	.11		.16	.24
<u>Happiness</u>				
Mean	.41		.68	.26
Standard Deviation	.19		.21	.17
<u>Sexuality</u>				
Mean	.04		.12	.11
Standard Deviation	.06		.25	.12
<u>Hostility</u>				
Mean	.30		.13	.40
Standard Deviation	.19		.14	.21
<u>Friendliness</u>				
Mean	.36		.43	.30
Standard Deviation	.21		.23	.21

TABLE 2 (Continued)

	Hypnotic	Day	Night
<u>Setting (1 = indoors; 3 = outdoors)</u>			
Mean	2.22	2.01	1.85
Standard Deviation	.37	.55	.37
<u>Any People Present</u>			
Mean	.69	.56	.78
Standard Deviation	.22	.22	.27
<u>Length in Words</u>			
Mean	78.05	62.90	98.72
Standard Deviation	34.10	26.90	33.87
<u>Unembellished Memory</u>			
Mean	.21	.35	.12
Standard Deviation	.18	.20	.13

TABLE 2 (Continued)

	Hypnotic	Day	Night
<u>Planning</u>			
Mean	.24	.49	.11
Standard Deviation	.23	.29	.10
<u>Action</u>			
Mean	1.72	1.51	2.20
Standard Deviation	.58	.52	.47

TABLE 3
Z SCORES BETWEEN AVERAGE FREQUENCIES OF TYPES OF CHARACTERS
IN DREAM REPORTS FOR TOTAL SUBJECTS

Types of Characters	Z Score
<u>Total</u>	
Hypnotic with Day	-1.86
Day with Night	-1.14
Hypnotic with Night	-0.05
<u>Strangers</u>	
Hypnotic with Day	-2.02*
Day with Night	-2.43*
Hypnotic with Night	-1.58
<u>Acquaintances</u>	
Hypnotic with Day	-0.11
Day with Night	-0.62
Hypnotic with Night	-1.66
<u>Family</u>	
Hypnotic with Day	-3.18**
Day with Night	-2.82**
Hypnotic with Night	-0.71

TABLE 3 (Continued)

Types of Characters	Z Score
<u>Males</u>	
Hypnotic with Day	-1.81
Day with Night	-1.29
Hypnotic with Night	-0.21
<u>Females</u>	
Hypnotic with Day	-1.19
Day with Night	-1.34
Hypnotic with Night	-0.21
<u>Any Characters Present</u>	
Hypnotic with Day	-1.62
Day with Night	-2.35*
Hypnotic with Night	-1.56

*2-tailed $p < .05$.

**2-tailed $p < .005$.

There was also a tendency for daydreams to average more "acquaintances" and fewer total characters although neither of these trends achieved statistical significance.

Means for gender and depth subgroups are presented in Tables 11 through 14 (see Appendix C). Z scores of the character rating differences for these subgroups are in Table 15 (see Appendix C). Taken together, these tables show that male and female subjects had no distinct differences on these variables. The deep group, however, had higher Z scores than the medium group, but both showed the same trend of nocturnal and hypnotic dream characters differing from daytime ones. There were no significant differences in gender of the characters for any of the groups. In terms of the total number of dreams that had any characters, the only significant difference was that daydreams were slightly more likely to be totally without characters than were night dreams.

Table 2, page 37, also indicates that emotional themes were similar in nocturnal and hypnotic dreams and differed from those regarded as daydreams. In the medium trance group there were some differences between nocturnal and hypnotic dreams. Here, hypnotic and nocturnal dreams received significantly higher ratings on anger, fright, and sadness, while daydreams scored higher on happiness. Night dreams received somewhat higher ratings on fright and sadness than did hypnotic dreams.

Table 4 indicates that these differences are statistically significant. However, Table 16 (see Appendix C) shows that this trend in the total scoring concerns medium subjects; fear and sadness scores for deep subjects did not differ significantly between hypnotic and night dreams. There were no significant differences for the sexuality theme; it occurred equally in hypnotic, night, and daydreams.

Attitudes characteristic of other characters showed similar trends to the subjects' emotions. Hostility of other characters was more common in nocturnal and hypnotic dreams than in daydreams. Table 5 presents the Wilcoxin Test Z scores between these differences, showing them to be statistically significant. Friendliness of other characters also showed no significant differences among types of dreams.

Table 17 (see Appendix C) reports attitude rating differences between types of dreams for the various subject subgroups. For medium trance subjects only, hostility was significantly more common in nocturnal than hypnotic dreams.

Table 6 presents the Z scores of differences between settings of dreams. The only significant variation was that hypnotic dreams were more likely to be set outdoors than those of nocturnal dreams. All subgroups followed

TABLE 4
Z SCORES BETWEEN AVERAGE FREQUENCIES OF TYPES OF
EMOTIONAL THEMES IN DREAM REPORTS
FOR TOTAL SUBJECTS

Emotion Theme	Z Score
<u>Anger</u>	
Day with Night	-2.54*
Hypnotic with Day	-3.06**
Hypnotic with Night	-0.21
<u>Fright</u>	
Day with Night	-3.41**
Hypnotic with Day	-3.41**
Hypnotic with Night	-2.29*
<u>Sadness</u>	
Day with Night	-2.61*
Hypnotic with Day	-0.97
Hypnotic with Night	-3.08**

TABLE 4 (Continued)

Emotion Theme	Z Score
<u>Happiness</u>	
Day with Night	-3.52**
Hypnotic with Day	-2.79**
Hypnotic with Night	-2.07*
<u>Sexuality</u>	
Day with Night	-0.51
Hypnotic with Day	-0.92
Hypnotic with Night	-1.84

*2-tailed $p < .05$.**2-tailed $p < .005$.

TABLE 5

Z SCORES BETWEEN AVERAGE FREQUENCIES OF ATTITUDES
OF OTHER CHARACTERS IN DREAM REPORTS
FOR TOTAL SUBJECTS

Attitude of Other Characters	Z Score
<u>Hostile</u>	
Hypnotic with Day	-3.01*
Day with Night	-3.35*
Hypnotic with Night	-1.36
<u>Friendly</u>	
Hypnotic with Day	-0.83
Day with Night	-1.29
Hypnotic with Night	-0.67

*2-tailed $p < .005$.

TABLE 6

Z SCORES BETWEEN AVERAGE TYPES OF SETTINGS IN
DREAM REPORTS FOR TOTAL SUBJECTS

Setting	Z Score
Hypnotic with Day	-1.29
Day with Night	-1.29
Hypnotic with Night	-3.01*

*2-tailed $p < .005$.

this trend; Z scores of their differences in setting are given in Table 18 (see Appendix C).

Distortion was much more common in hypnotic and nocturnal dreams than in daydreams (see Table 7), and this trend did not differ appreciably among the various subgroups (see Table 19, Appendix C).

Table 8 reports the magnitude of difference for frequency of action, planning and memory. Action ratings were significantly higher for hypnotic and nocturnal dreams than for daydreams. Table 20 (see Appendix C) presents subgroup differences for medium trance subjects only; nocturnal dreams had a higher action rating than hypnotic dreams.

TABLE 7

Z SCORES BETWEEN AVERAGE DEGREES OF DISTORTION
IN DREAM REPORTS FOR TOTAL SUBJECTS

Distortion	Z Score
Hypnotic with Day	-3.52*
Day with Night	-3.41*
Hypnotic with Night	-0.27

*2-tailed $p < .005$.

TABLE 8

Z SCORES BETWEEN AVERAGE FREQUENCIES OF MEMORY,
PLANNING, AND ACTION IN DREAM REPORTS
FOR TOTAL SUBJECTS

Dream Characteristic	Z Score
<u>Memory</u>	
Hypnotic with Day	-2.56*
Day with Night	-3.30**
Hypnotic with Night	-2.17*
<u>Planning</u>	
Hypnotic with Day	-3.30**
Day with Night	-3.30**
Hypnotic with Night	-1.73
<u>Action</u>	
Hypnotic with Day	-1.98
Day with Night	-3.52**
Hypnotic with Night	-2.67**

*2-tailed $p < .05$.

**2-tailed $p < .005$.

Planning and memory were both more common in day-dreams than nocturnal or hypnotic dreams. For medium trance subjects only, both were more common in hypnotic than in nocturnal dreams.

Table 9 shows that length in words for the total group was significantly greater for hypnotic and nocturnal

TABLE 9

Z SCORES BETWEEN AVERAGE LENGTH IN WORDS OF
DREAM REPORTS FOR TOTAL SUBJECTS

Length in Words	Z Score
Hypnotic with Day	-2.33*
Day with Night	-3.52**
Hypnotic with Night	-2.53*

*2-tailed $p < .05$.

**2-tailed $p < .005$.

dream reports than for daydreams. In addition, such reports were greater for nocturnal than for hypnotic dreams. This variable also differed by subject gender (see Table 21, Appendix C). Females' hypnotic dream reports were similar in length of words to nocturnal dreams while significantly longer than daydreams. Males' hypnotic dream reports were similar in length to their daydream ones, while significantly shorter than nocturnal dream ones.

Rapid Eye Movement (REM) was completely consistent for a given subject: it was observed in either 0 to 100 percent of their hypnotic dreams. All eight deep subjects and one medium subject exhibited REM accompaniment to dreams. All other seven medium trance subjects did not.

CHAPTER VI

DISCUSSION

The most clearcut and significant finding of this experiment was the relationship between depth of trance and hypnotic dream characteristics. It is certainly possible that some characteristic not included in this study might show some difference between deep subjects' hypnotic and nocturnal dreams. In this population of subjects, however, it is quite clear that the two categories had very much in common. For deep subjects, symbolic interpretation of hypnotic dreams in the same manner that one would use nighttime dreams in psychotherapy appears appropriate. Hypnotic dreams have the obvious advantages of ability to direct the topic and recall the dream in patients who seldom remember nocturnal dreams. For medium trance subjects, content differences between hypnotic and nocturnal dreams found in this study were great enough to indicate that hypnotic dreams cannot be used interchangeably with techniques designed for nocturnal dreams.

The distortion versus straight story-line continuum in the present study bears similarity to Sullivan's (1953) primary process versus secondary process theoretical model. The medium trance subjects' hypnotic dreams in this

experiment reflected more secondary process thinking than their somewhat more primary process nocturnal dreams.

On the basis of the distortion scores, medium trance hypnotic dreams can also be viewed as having less unconscious content than either nocturnal or deep trance hypnotic dreams. The lower scores on negative emotional themes of fright, sadness, and anger also support a conceptualization of the medium trance dreams as more closely aligned with normal waking consciousness than with nocturnal dreams, although not as much as are daydreams. Thus, medium trance hypnotic dreams should not be used with the presumption that they are yielding primary process, predominately unconscious, material.

This presumption seems implicit in some clinical hypnotic dream articles such as that by Fromm (1965). The suggestion of Walker (1974) that hypnotic dreams be used more like guided fantasies does not seem completely appropriate either, as even medium trance dreams still differ significantly in content from daydreams. The approach most strongly indicated by findings of the present study on medium trance subjects would be to use their hypnotic dreams in a therapeutic medium designed specifically for them. Sacerdote's (1967) and Erickson's (1958) clinical techniques meet this criteria quite well. Both authors describe gaining insight from the projective qualities of hypnotic dreams in a way that is not predicated

on the basis of their being exactly like nocturnal dreams. Sacerdote and Erickson also use techniques such as suggesting repetitions and elaborations of hypnotic dreams that would not be possible with nocturnal dream interpretations. For medium trance subjects, who do not produce as much unconscious material to begin with in hypnotic dreams, this type of technique may be most useful.

Rapid Eye Movements (REM) during hypnotic dreams also had a clear relationship to dream content. Since REM corresponded so closely with whether the subject was from the medium or deep trance group, it seems to be almost synonymous with, rather than an addition to, the depth of trance differences. Since there was one medium trance subject with REM during hypnotic dreams, it is possible that there may be subtle differences between the qualities of a trance as indicated by the Davis and Husband scale and by REM during dreams. This could be pursued in further research by selecting from a very large population the small percentages of subjects who either score in the deep trance and yet do not show REM with dreams or those who score in the medium range and do have hypnotic dream REM accompaniment. Hypnotic dream content produced by these individuals could be analyzed on similar variables to those used in the present study to determine whether they resembled medium subjects, resembled deep subjects, fell in between these groups, or had unique features of their own.

The rather consistent presence of REM in deep trance dreams demonstrated in the current experiment has implications for research on nocturnal dreams and physiological psychology. REM has previously been discussed mainly in terms of the stage of sleep and distinctive electroencephalogram (EEG) pattern which it accompanies. The present experiment reveals that despite being an obviously physical, behavioral measurement, REM relates more directly to subjective experience than it does to other physiological measures such as EEG.

To the extent that the present study duplicates some of the factors in Hilgard and Nowlis (1972), the findings are fairly similar. Both experiments found hypnotic dreams to be of shorter average length in words and to contain fewer relatives as characters than nocturnal dreams. While the present study found such differences mainly for medium trance subjects, Hilgard and Nowlis did not make depth of trance distinctions.

The one finding that may be inconsistent between the two studies is in terms of comparative amounts of "distortion" between hypnotic and nocturnal dreams. The present study used a scale of distortion in terms of a break in logical sequence similar to the characteristics discussed by Gill and Brenman (1959) and Schneck (1959). Hilgard and Nowlis had described an "Alice-in-Wonderland, psychedelic distortion" that consisted largely of things changing

size unexpectedly. The present experimenter assumed they would overlap so that it would be useful to include only one "distortion" scale. Apparently, however, the Gill, Brenman, Schneck, and present study "distortion" in terms of primary process thought is more prominent in nocturnal dreams for medium trance subjects. Size change distortion appears to be more prevalent in hypnotic dreams based on research produced by the Hilgard and Nowlis study. Since Hilgard and Nowlis did not use the same subjects for hypnotic and nocturnal dream samples, future research might find it useful to consider both types of "distortion" in order to clarify this apparent difference.

A final area of significance in the present experiment was not as apparent in the statistical analysis as in dealing with the individual dream reports. Although statistical averages do show a general trend of difference in dream type, they do not reflect any of the dramatic exceptions. As mentioned by previous authors such as Domhoff (1964), all categories of "dreams" have a range of reports which vary from the stereotype of simple fantasy, memory, or image to long, intricate symbolizations such as one associates with classic night dreams. I think examples of one nocturnal dream and one daydream which differed from the experimenter's expectations for their respective categories will best illustrate this point. The following is a nocturnal dream from a deep trance subject:

Our fraternity was having a basketball game at Alumni Gym, and I was on the team. I was sitting on the end of the bench, and when one of our players was hurt, Steve decided to put me in. It took me awhile to get going, but finally I began moving pretty good. I wanted to score badly, so when I got the ball I shot and made it. The next time down court, I put a great move on my man and scored easily. Then when the opponent came down the court, the ball was tipped out of someone's hand, and I dived sic after the ball, but someone else dived sic after it too. He landed on my legs. His legs and mine became intertwined and he twisted my ankle. I had to be carried off the court.

In contrast to this rather straightforward, secondary process narrative, the following daydream was reported by another deep trance subject:

This daydream occurred in Special Ed. Class. I wasn't actually asleep, but I was definitely in another world. I dreamed that I was in my house getting ready to go somewhere. My sister came upstairs to get me and bring me downstairs. She acted as if there was some sort of surprise waiting for me. We got to the staircase and started to walk to the foyer downstairs. I seemed to recognize the two visitors waiting downstairs. All I can remember is their big floppy hats covered most of their faces and their flowing dresses. I think that I was excited over their visit and I was about to go and greet them, but my instructor spoke to me.

In trying to select the above example of a dreamlike daydream, another intriguing pattern became clear. Of the eight daydreams originally sorted out as good illustration, all eight were obtained from the same three deep subjects. The potential nocturnal dream examples were more evenly distributed. While the current experiment was not designed to control for, or to statistically measure this phenomena,

it indicates that the daydreams of at least some deep subjects may differ from dream description from the average person and, in fact, may resemble other peoples' nocturnal dreams. Further research would be necessary to determine how common these dreamlike daydreams are in deep subjects and whether they occur only in a minority of deep subjects. If they occur only in a minority of deep subjects, one would want to examine whether this minority represented a distinctive group--for instance, the very deepest subjects.

This indication of distinctive qualities of some deep subject daydreams is in accord with one previous study of Spanos and McPeake (1975) which found that degree of involvement in everyday imaginative activities such as daydreaming, reading fiction, or watching a movie dictated subjects' hypnotic susceptibility. If deep subjects' daydreams were consistently found to differ in quality from other peoples, this would extend some of the indications of the present study. Guided fantasies as well as hypnotic dreams might then be used differently in psychotherapy according to the patient's hypnotic susceptibility.

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APPENDICES

APPENDIX A

DAVIS AND HUSBAND (1931) SUSCEPTIBILITY

SCORING SYSTEM

<u>Depth</u>	<u>Score</u>	<u>Objective Symptoms</u>
Insusceptible	0	
Hypnoidal	2	Relaxation
	3	Fluttering of lids
	4	Closing of eyes
	5	Complete physical relaxation
Light Trance	6	Catalepsy of eyes
	7	Limb catalepsies
	10	Rigid catalepsy
	10-1/2*	Hypnotic dream
	11	Anaesthesia (glove)
Medium Trance	13	Partial amnesia
	15	Post-hypnotic anaesthesia
	17	Personality changes
	18	Simple post-hypnotic suggestions
	20	Complete amnesia
Deep Trance	21	Ability to open eyes without affecting trance
	23	Bizarre post-hypnotic suggestions
	25	Complete somnambulism
	26	Positive visual hallucinations, post-hypnotic

*Hilgard (1965), p. 238.

APPENDIX B

METHOD OF OBTAINING "INFORMED CONSENT"

FROM SUBJECTS

(The following consent form was given to all subjects to sign.)

This experiment is a comparison of hypnotically induced dreams, ordinary nighttime dreams, and "daydreams." All subjects will be requested to participate in six hypnotic sessions of approximately one hour each. These sessions will be taped, but the tapes will be kept strictly confidential. During each session you will be instructed to perform a couple of introductory tasks under hypnosis-- arm stiffening and visualization of food objects and then instructed to have three hypnotic dreams. You will be asked to recount one dream out loud while still under hypnosis and to write down as much as you remember about all three dreams and any associations to them when you are awakened. You will be asked to try to have three waking dreamlike fantasies or daydreams and write them down also every week for six weeks. You will also be asked to write down your first three nighttime dreams per week and any associations to them for six weeks. There will, of course, be no penalty for those who cannot produce this number of dreams or fantasies.

All subjects will receive university credit for two hours of Independent Studies in Psychology--it is your responsibility to sign up for this course, of course.

The experience of paying more than usual attention to your dreams and fantasies and the induction of hypnotic dreams will probably be interesting and pleasant to the extent that it has any effect; however, it is possible that some of you will experience discomfort similar to that of having a "bad dream" at night and that some of the dreams you are being asked to recall will deal with unpleasant subjects. The experience of the hypnotic sessions will probably be quite similar to your previous experience as subjects for students in the Hypnosis Seminar, as all hypnotic suggestions will be ones included in those previous sessions.

The experimenter will be glad to answer any future questions you might have about the procedure. You are also advised to contact the experimenter any time you are experiencing any discomfort you feel might be related to the experiment. You are free to withdraw your consent and discontinue participation in the project at any time without penalty, except that if you withdraw after the drop deadline or after the add deadline and need the two credits, you will be asked to do a paper on hypnosis or another psychology-related topic that the experimenter approves to earn the two credits.

I have read and understand the above description of the experiment and consent to participate in it, realizing that I may withdraw my consent and discontinue participating at any time.

Subject's signature

Date

APPENDIX A

TABLE 10
NUMBER OF DREAM REPORTS

<u>Subjects</u>	<u>Hypnotic</u>	<u>Daydream</u>	<u>Nocturnal</u>
<u>Deep Males</u>			
Subject 1	18	18	16
Subject 2	18	18	17
Subject 3	17	18	18
Subject 4	18	18	19
<u>Deep Females</u>			
Subject 1	18	18	18
Subject 2	18	18	18
Subject 3	18	18	18
Subject 4	18	18	7
<u>Medium Males</u>			
Subject 1	18	18	18
Subject 2	16	18	14
Subject 3	18	18	18
Subject 4	18	18	17
<u>Medium Females</u>			
Subject 1	18	18	18
Subject 2	18	15	16
Subject 3	18	18	18
Subject 4	18	18	18
Total Subjects	285	285	277

TABLE 11
MEANS AND STANDARD DEVIATIONS OF VARIABLE RATINGS FOR DEEP SUBJECTS

	Hypnotic	Day	Night
<u>Female Family</u>			
Mean	.17	.04	.24
Standard Deviation	.12	.05	.25
<u>Male Family</u>			
Mean	.24	.03	.09
Standard Deviation	.14	.04	.12
<u>Female Acquaintances</u>			
Mean	.44	.65	.27
Standard Deviation	.52	.37	.46
<u>Male Acquaintances</u>			
Mean	.45	.58	.36
Standard Deviation	.38	.35	.49

TABLE 11 (Continued)

	Hypnotic	Day	Night
<u>Female Strangers</u>			
Mean	.28	.18	.64
Standard Deviation	.11	.13	.66
<u>Male Strangers</u>			
Mean	.25	.12	.53
Standard Deviation	.09	.15	.48
<u>Distortion</u>			
Mean	1.56	1.04	1.49
Standard Deviation	.31	.04	.38
<u>Anger</u>			
Mean	.14	.01	.21
Standard Deviation	.11	.03	.33
<u>Fright</u>			
Mean	.32	.07	.36
Standard Deviation	.07	.07	.18

TABLE 11 (Continued)

	Hypnotic	Day	Night
<u>Sadness</u>			
Mean	.11	.04	.27
Standard Deviation	.12	.04	.30
<u>Happiness</u>			
Mean	.32	.72	.22
Standard Deviation	.18	.04	.15
<u>Sexuality</u>			
Mean	.06	.04	.11
Standard Deviation	.08	.05	.12
<u>Hostility</u>			
Mean	.35	.16	.43
Standard Deviation	.25	.16	.27
<u>Friendliness</u>			
Mean	.37	.41	.31
Standard Deviation	.18	.21	.21

TABLE 11 (Continued)

	Hypnotic	Day	Night
<u>Setting (1=indoors; 3=outdoors)</u>			
Mean	2.22	1.98	1.98
Standard Deviation	.29	.73	.46
<u>Any People Present</u>			
Mean	.68	.50	.71
Standard Deviation	.21	.22	.34
<u>Length in Words</u>			
Mean	77.64	58.82	83.88
Standard Deviation	32.70	20.97	30.87
<u>Unembellished Memory</u>			
Mean	.17	.38	.12
Standard Deviation	.18	.17	.12

TABLE 11 (Continued)

	Hypnotic	Day	Night
<u>Planning</u>			
Mean	.16	.46	.14
Standard Deviation	.20	.24	.11
<u>Action</u>			
Mean	2.15	1.63	2.16
Standard Deviation	.36	.38	.36

TABLE 12

MEANS AND STANDARD DEVIATIONS OF VARIABLE RATINGS
FOR MEDIUM SUBJECTS

	<u>Hypnotic</u>		<u>Day</u>	<u>Night</u>
<u>Female Family</u>				
Mean				
Standard Deviation	.16	.03	.18	
	.16	.04	.14	
<u>Male Family</u>				
Mean				
Standard Deviation	.21	.04	.18	
	.20	.05	.15	
<u>Female Acquaintances</u>				
Mean				
Standard Deviation	.45	.22	.33	
	.35	.22	.18	
<u>Male Acquaintances</u>				
Mean				
Standard Deviation	.63	.34	.49	
	.38	.25	.21	

TABLE 12 (Continued)

	Hypnotic	Day	Night
<u>Female Strangers</u>			
Mean	.50	.49	.35
Standard Deviation	.43	.93	.16
<u>Male Strangers</u>			
Mean	.34	.34	.48
Standard Deviation	.14	.45	.25
<u>Distortion</u>			
Mean	1.42	1.10	1.48
Standard Deviation	.17	.09	.14
<u>Anger</u>			
Mean	.13	.08	.13
Standard Deviation	.21	.13	.07

TABLE 12 (Continued)

	Hypnotic	Day	Night
<u>Fright</u>			
Mean	.17	.02	.36
Standard Deviation	.11	.03	.17
<u>Sadness</u>			
Mean	.10	.14	.19
Standard Deviation	.10	.23	.16
<u>Happiness</u>			
Mean	.49	.66	.31
Standard Deviation	.17	.29	.19
<u>Sexuality</u>			
Mean	.02	.20	.10
Standard Deviation	.03	.33	.14

TABLE 12 (Continued)

	<u>Hypnotic</u>	
	Day	Night
<u>Hostility</u>		
Mean	.25	.40
Standard Deviation	.10	.13
<u>Friendliness</u>		
Mean	.34	.30
Standard Deviation	.25	.22
<u>Setting (1=indoors; 3=outdoors)</u>		
Mean	2.22	1.72
Standard Deviation	.45	.19
<u>Any People Present</u>		
Mean	.70	.85
Standard Deviation	.25	.17

TABLE 12 (Continued)

	Hypnotic		Day	Night
<u>Length in Words</u>				
Mean	78.46		66.36	113.55
Standard Deviation	37.72		32.84	31.66
<u>Unembellished Memory</u>				
Mean	.25		.32	.11
Standard Deviation	.18		.22	.14
<u>Planning</u>				
Mean	.32		.52	.08
Standard Deviation	.25		.35	.09
<u>Action</u>				
Mean	1.30		1.40	2.24
Standard Deviation	.42		.63	.58

TABLE 13
MEANS AND STANDARD DEVIATIONS OF VARIABLE RATINGS
FOR MALE SUBJECTS

	Hypnotic	Day	Night
<u>Female Family</u>			
Mean	.16	.03	.15
Standard Deviation	.15	.05	.16
<u>Male Family</u>			
Mean	.25	.03	.13
Standard Deviation	.20	.05	.15
<u>Female Acquaintances</u>			
Mean	.32	.46	.24
Standard Deviation	.27	.31	.22
<u>Male Acquaintances</u>			
Mean	.52	.50	.38
Standard Deviation	.38	.27	.33

TABLE 13 (Continued)

	Hypnotic	Day	Night
<u>Female Strangers</u>			
Mean	.49	.45	.37
Standard Deviation	.42	.93	.13
<u>Male Strangers</u>			
Mean	.26	.23	.44
Standard Deviation	.13	.47	.22
<u>Distortion</u>			
Mean	1.44	1.07	1.55
Standard Deviation	.16	.08	.14
<u>Anger</u>			
Mean	.16	.05	.12
Standard Deviation	.18	.09	.12

TABLE 13 (Continued)

	Hypnotic	Day	Night
<u>Fright</u>			
Mean	.24	.04	.34
Standard Deviation	.14	.06	.16
<u>Sadness</u>			
Mean	.15	.04	.21
Standard Deviation	.12	.04	.14
<u>Happiness</u>			
Mean	.37	.69	.29
Standard Deviation	.14	.23	.15
<u>Sexuality</u>			
Mean	.07	.19	.17
Standard Deviation	.07	.34	.14

TABLE 13 (Continued)

	Hypnotic	Day	Night
<u>Hostility</u>			
Mean	.34	.16	.38
Standard Deviation	.20	.16	.15
<u>Friendliness</u>			
Mean	.35	.39	.35
Standard Deviation	.19	.24	.18
<u>Setting (1=indoors; 3=outdoors)</u>			
Mean	2.13	1.86	1.98
Standard Deviation	.35	.67	.32
<u>Any People Present</u>			
Mean	.67	.54	.81
Standard Deviation	.23	.24	.17

TABLE 13 (Continued)

	Hypnotic	Day	Night
<u>Length in Words</u>			
Mean	75.54	72.51	96.46
Standard Deviation	34.51	27.37	31.57
<u>Unembellished Memory</u>			
Mean	.21	.37	.15
Standard Deviation	.19	.19	.13
<u>Planning</u>			
Mean	.23	.46	.08
Standard Deviation	.22	.30	.11
<u>Action</u>			
Mean	1.76	1.29	2.14
Standard Deviation	.45	.33	.49

TABLE 14

MEANS AND STANDARD DEVIATIONS OF VARIABLE RATINGS
FOR FEMALE SUBJECTS

	Hypnotic	Day	Night
<u>Female Family</u>			
Mean	.17	.04	.26
Standard Deviation	.13	.05	.22
<u>Male Family</u>	.		
Mean	.20	.03	.13
Standard Deviation	.14	.05	.14
<u>Female Acquaintances</u>			
Mean	.56	.41	.36
Standard Deviation	.53	.44	.44
<u>Male Acquaintances</u>			
Mean	.56	.42	.47
Standard Deviation	.41	.37	.43

TABLE 14 (Continued)

	Hypnotic	Day	Night
<u>Female Strangers</u>			
Mean	.29	.23	.62
Standard Deviation	.16	.17	.67
<u>Male Strangers</u>			
Mean	.33	.22	.57
Standard Deviation	.12	.17	.49
<u>Distortion</u>			
Mean	1.54	1.06	1.42
Standard Deviation	.33	.08	.37
<u>Anger</u>			
Mean	.12	.04	.22
Standard Deviation	.15	.11	.32

TABLE 14 (Continued)

	Hypnotic	Day	Night
<u>Fright</u>			
Mean	.25	.05	.22
Standard Deviation	.10	.06	.32
<u>Sadness</u>			
Mean	.05	.14	.37
Standard Deviation	.08	.23	.19
<u>Happiness</u>			
Mean	.44	.69	.25
Standard Deviation	.23	.19	.32
<u>Sexuality</u>			
Mean	.01	.04	.23
Standard Deviation	.04	.05	.20

TABLE 14 (Continued)

	<u>Hypnotic</u>		<u>Day</u>	<u>Night</u>
<u>Hostility</u>				
Mean	.26		.10	.43
Standard Deviation	.18		.12	.26
<u>Friendliness</u>				
Mean	.36		.44	.26
Standard Deviation	.25		.22	.24
<u>Setting (1=indoors; 3=outdoors)</u>				
Mean	2.30		2.16	1.72
Standard Deviation	.39		.40	.39
<u>Any People Present</u>				
Mean	.71		.59	.76
Standard Deviation	.22		.20	.35

TABLE 14 (Continued)

	Hypnotic	Day	Night
<u>Length in Words</u>			
Mean	80.57	52.67	100.97
Standard Deviation	35.88	24.01	38.08
<u>Unembellished Memory</u>			
Mean	.21	.34	.09
Standard Deviation	.18	.21	.12
<u>Planning</u>			
Mean	.24	.52	.15
Standard Deviation	.26	.30	.09
<u>Action</u>			
Mean	1.69	1.74	2.26
Standard Deviation	.71	.59	.48

TABLE 15

Z SCORES BETWEEN AVERAGE FREQUENCIES OF TYPES
OF CHARACTERS IN DREAM REPORTS
FOR SUBJECT SUBGROUPS

Type of Characters	Deep Subjects	Medium Subjects	Male Subjects	Female Subjects
<u>Total</u>				
Hypnotic with Day	-0.70	-0.98	-1.01	-1.96*
Day with Night	-0.28	-1.12	-0.41	-1.54
Hypnotic with Night	-0.84	-1.18	-1.52	-0.70
<u>Family</u>				
Hypnotic with Day	-2.37*	-2.20*	-2.20*	-2.37*
Day with Night	-1.57	-2.20*	-1.78	-2.20*
Hypnotic with Night	-1.15	-0.41	-1.21	-0.31
<u>Acquaintances</u>				
Hypnotic with Day	-1.26	-2.03	-0.70	-0.51
Day with Night	-1.26	-1.26	-1.12	-0.28
Hypnotic with Night	-1.36	-0.84	-1.01	-1.35

TABLE 15 (Continued)

Type of Characters	Deep Subjects	Medium Subjects	Male Subjects	Female Subjects
<u>Strangers</u>				
Hypnotic with Day	-1.40	-1.40	-1.40	-1.26
Day with Night	-2.24*	-1.40	-1.40	-1.96
Hypnotic with Night	-1.54	-0.07	-0.98	-1.26
<u>Males</u>				
Hypnotic with Day	-0.70	-1.54	-0.84	-1.68
Day with Night	-0.42	-1.54	-0.84	-1.12
Hypnotic with Night	-0.28	-0.56	-0.56	-0.00
<u>Females</u>				
Hypnotic with Day	-0.14	-1.12	-0.14	-1.96*
Day with Night	-0.70	-0.98	-0.00	-1.82
Hypnotic with Night	-0.70	-1.12	-1.26	-0.70
<u>Any Characters Present</u>				
Hypnotic with Day	-1.44	-1.54	-0.84	-1.12
Day with Night	-1.40	-2.03*	-1.82	-1.54
Hypnotic with Night	-1.12	-0.56	-1.12	-0.70

*2-tailed $p < .05$.

TABLE 16

Z SCORES BETWEEN AVERAGE FREQUENCIES OF TYPES OF EMOTIONAL THEMES
IN DREAM REPORTS FOR SUBJECT SUBGROUPS

Emotion Theme	Deep Subjects	Medium Subjects	Male Subjects	Female Subjects
<u>Anger</u>				
Hypnotic with Day	-2.52*	-1.83	-2.20*	-2.20*
Day with Night	-2.37*	-1.18	-1.99*	-1.68
Hypnotic with Night	-0.63	-0.17	-0.40	-0.56
<u>Fright</u>				
Hypnotic with Day	-2.52*	-2.37*	-2.36*	-2.52*
Day with Night	-2.37*	-2.52*	-2.52*	-2.37*
Hypnotic with Night	-0.67	-2.37*	-1.57	-1.61
<u>Sadness</u>				
Hypnotic with Day	-1.05	-0.25	-2.03*	-0.70
Day with Night	-2.52*	-1.18	-2.37*	-1.54
Hypnotic with Night	-2.11*	-2.37*	-1.68	-2.52*

TABLE 16 (Continued)

Emotion Theme	Deep Subjects	Medium Subjects	Male Subjects	Female Subjects
<u>Happiness</u>				
Hypnotic with Day	-2.52*	-1.12	-1.96*	-1.96*
Day with Night	-2.52*	-2.52	-2.52*	-2.52*
Hypnotic with Night	-0.61	-1.86	-0.93	-2.03*
<u>Sexuality</u>				
Hypnotic with Day	-1.28	-1.78	-0.68	-1.60
Day with Night	-1.46	-0.84	-0.42	0.00
Hypnotic with Night	-0.91	-1.48	-1.52	-1.34

*2-tailed $p < .05$.

TABLE 17

Z SCORES BETWEEN AVERAGE FREQUENCIES OF ATTITUDES OF
OTHER CHARACTERS IN DREAM REPORTS
FOR SUBJECT SUBGROUPS

Attitude of Other Characters	Deep Subjects	Medium Subjects	Male Subjects	Female Subjects
<u>Hostile</u>				
Hypnotic with Day	-2.03*	-2.52*	-2.37*	-1.96*
Day with Night	-2.37*	-2.38*	-2.52*	-2.20*
Hypnotic with Night	0.00	-2.24*	-0.85	-0.26
<u>Friendly</u>				
Hypnotic with Day	-0.56	-0.70	-0.70	-0.56
Day with Night	-0.91	-0.98	-0.35	-1.26
Hypnotic with Night	-1.79	-0.17	-0.41	-0.85

*2-tailed $p < .05$.

TABLE 18
Z SCORES BETWEEN AVERAGE TYPES OF SETTINGS IN DREAM
REPORTS FOR SUBJECT SUBGROUPS

Setting	Deep Subjects	Medium Subjects	Male Subjects	Female Subjects
Hypnotic with Day	-1.12	-0.84	-0.98	-0.84
Day with Night	-0.28	-2.10*	-0.07	-1.82
Hypnotic with Night	-1.52	-2.52*	-1.68	-2.37*

*2-tailed $p < .05$.

TABLE 19
Z SCORES BETWEEN AVERAGE DEGREES OF DISTORTION IN DREAM
REPORTS FOR SUBJECT SUBGROUPS

Distortion	Deep Subjects	Medium Subjects	Male Subjects	Female Subjects
Hypnotic with Day	-2.52*	-2.52*	-2.52*	-2.52*
Day with Night	-2.36*	-2.52	-2.52*	-2.37*
Hypnotic with Night	-0.83	-0.67	-1.15	-1.75

*2-tailed $p < .05$.

TABLE 20

Z SCORES BETWEEN AVERAGE FREQUENCIES OF ACTION, PLANNING, AND MEMORY
IN DREAM REPORTS FOR SUBJECT SUBGROUPS

Dream Characteristic	Deep Subjects	Medium Subjects	Male Subjects	Female Subjects
<u>Action</u>				
Hypnotic with Day	-2.38*	-0.21	-2.20*	-0.51
Day with Night	-2.52*	-2.52*	-2.52*	-2.52*
Hypnotic with Night	-0.11	-2.52*	-1.86	-1.86
<u>Planning</u>				
Hypnotic with Day	-2.52*	-2.20*	-2.20*	-2.52*
Day with Night	-2.37*	-2.37*	-2.27*	-2.37*
Hypnotic with Night	-0.21	-2.20*	-1.44	-0.93
<u>Memory</u>				
Hypnotic with Day	-2.52*	-1.18	-2.37*	-1.40
Day with Night	-2.52	-2.20*	-2.37*	-2.37*
Hypnotic with Night	-0.31	-2.37*	-1.01	-1.99*

*2-tailed $p < .05$.

TABLE 21

Z SCORES BETWEEN AVERAGE LENGTH IN WORDS OF DREAM REPORTS
FOR SUBJECT SUBGROUPS

Length in Words	Deep Subjects	Medium Subjects	Male Subjects	Female Subjects
Hypnotic with Day	-1.68	-1.68	-0.42	-2.38*
Day with Night	-2.52*	-2.52*	-2.52*	-2.52*
Hypnotic with Night	-1.40	-2.24*	-2.24*	-1.40

*2-tailed $p < .05$.

VITA

Deirdre Leigh Barrett was born in Raleigh, North Carolina on May 8, 1954 to John and Barbara Barrett. She was educated in the Oak Ridge, Tennessee school system, graduating from Oak Ridge High School in 1972. She majored in psychology at Emory University in Atlanta, and was active in the educational program of Georgia Regional Psychiatric Hospital during that time. She received her B. A. degree from Emory University in March, 1974.

Deirdre was a graduate student in The University of Tennessee Psychology Department from 1974 to 1978. She did her first year practicum at The University of Tennessee Hospital's Cancer Research Unit and worked two years at The University of Tennessee Student Health Clinic. She completed an internship in clinical psychology at the University of Colorado Health Science Center in August, 1979.