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## **An exploration into the induction of greater reflectiveness and "lucidity" in nocturnal dream reports**

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**Sparrow, Gregory Scott**

**AN EXPLORATION INTO THE INDUCTION OF GREATER REFLECTIVENESS  
AND 'LUCIDITY' IN NOCTURNAL DREAM REPORTS**

*The College of William and Mary in Virginia*

**Ed.D. 1983**

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An Exploration Into the Induction of  
Greater Reflectiveness and  
'Lucidity' in Nocturnal Dream Reports

A Dissertation Presented to  
The Faculty of the School of Education  
The College of William and Mary in Virginia

In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Education

by  
Gregory Scott Sparrow

December, 1983

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## I. Introduction

### Statement of the Problem

In a turn-of-the century paper on psychical research, the British researcher F.W.H. Meyers wrote: "I have long thought that we are too indolent in regard to our dreams; that we neglect precious occasions for experiment for want of a little resolute direction of the will...that we ought to accustom ourselves to look on each dream not only as a psychological observation but as an observation which may be transformed into an experiment..." (Brown, 1936).

Meyers was referring to a phenomenon known as "lucid" dreaming, defined simply as the experience of becoming aware that one is dreaming during the dream itself (Van Eeden, 1913). Despite Meyer's urgings, he himself succeeded in recalling only three such experiences over a ten-year period. In light of his apparent interest in lucid dreaming, his own level of success perhaps casts some doubt on the accessibility of the lucid dream phenomenon.

Even so, several anecdotal studies (Van Eeden, 1913; Delage, 1919; Arnold-Forester, 1947, orig. 1921; Hervey de Saint-Denys, 1964, orig. 1921; Green, 1968, Sparrow, 1976a) attest to the availability of lucid dreams to at least a few dreamers. Furthermore, these accounts offer compelling testimony to the therapeutic impact of consciousness on the dream: Learning to wake up in a dream appears to facilitate an attitude of fearlessness, and a concomitant willingness to interact with the dream figures. For example, after dreaming re-

peatedly about being pursued by a deranged man, a young woman experienced the following lucid encounter:

I'm in a dark, poor section of a city. A young man starts chasing me down an alley. I'm running for what seems to be a long time in the dream. Then I become aware that I am dreaming and that much of my dream life is spent running from male pursuers. I say to myself, "I'm tired of this never-ending chase." I stop running, turn around and walk up to the man. I touch him and say, "Is there anything I can do to help you?" He becomes very gentle and open to me and replies, "Yes. My friend and I need help." I go to the apartment they share and talk with them both about their problem, feeling compassionate love for them both. (Sparrow, 1976a, p. 34).

Although one recent study (Blackmore, 1982) indicated that 73% of a student population reported having at least one lucid dream in the past, the spontaneous occurrence of lucid dreams (i.e. those occurring in the absence of concerted induction efforts) among talented lucid dreamers appears to rarely exceed one per week (Garfield, 1975b; La Berge, 1980a, 1980b; Dane, 1982). Thus statistically speaking, the lucid dream represents an extraordinary event. Nevertheless, laboratory dream researcher Alan Rechtschaffen (1978) argues that lucid dreaming might justifiably be regarded as the normal state of dreaming in so far as it approximates the level of reflective-

ness normally possessed by awake individuals:

I have often been asked why we occasionally have lucid dreams. It is a peculiar question. The question should be why are not all dreams lucid as is most of conscious experience. Yet the fact of occasional ludicity in dreams is useful as a demonstration of what most dreams are not. Only when we can see the possibility of the lucid dream do we fully realize what a massively nonreflective state dreaming usually is -- what a truly distinctive psychological experience it is. In fact, I can think of no other single state short of severe and chronic psychosis in which there is such a persistent, massive, regular loss of reflectiveness...it is only during dreaming that most of us regularly lose so completely the road map of our own consciousness (Rechtschaffen, 1978).

The onset of lucidity occurs by definition at the moment the dreamer actually concludes he/she is dreaming. As such, the categorical label "lucid dream" sets the phenomenon apart as a discrete category of dreaming rather than denoting an increase in some quality already evident in non-lucid dreams. The treatment of lucid dreams as a distinctive phenomenon may explain why researchers seem to have ignored, until recently, the possible precursors to lucidity contained in the non-lucid dream.

Green (1968) attempts to bridge the non-lucid/lucid gap

by defining the "pre-lucid" dream as one in which the dreamer questions the reality of the experience without ever concluding that the experience is, in fact, a dream. However, this phenomenon too is an infrequent and rather abrupt departure from most dreams. The failure to explore the possible antecedents to pre-lucidity and lucidity in the non-lucid dream has created the impression that lucid dreaming bears a discontinuous relation to non-lucid dreams.

Rossi (1972) was the first researcher to postulate that a continuum of awareness and self-reflection operates on the dream level, much as it does in the waking state (Pelletier, 1979). For Rossi, the achievement of lucidity represents one of several possible realizations available to the dreamer as the capacity for reflectiveness expands on the dream level. From this perspective, the expansion of self-reflection may or may not lead the dreamer to question the ultimate reality of the experience (i.e. become pre-lucid), or to conclude that the experience is a dream (i.e. become lucid). Whereas Rossi acknowledges the special importance of the lucid dream, (1972, p. 80) he also tends to subordinate this conclusion to the overall development of self-reflection on the dream level. In contrast to earlier researchers who have focused primarily on the lucid dream, thus ignoring the possible developmental processes in the non-lucid dream, Rossi has succeeded in demonstrating that the expansion of self-reflection in non-lucid dreams leads naturally (but not necessarily) to the realization that one is dreaming.

In recognition that the pursuit of lucidity may result in a measurable increase in dreamer reflectiveness without ever resulting in lucidity, this study will employ two different but related scales for evaluating a subject's performance on a lucid dream induction task: One rating scale, referred to in this study as the Dream Lucidity Scale (DLS), will categorize a dream as non-lucid, incipiently pre-lucid, pre-lucid, or lucid according to operationally defined criteria. A second scale, referred to in this study as the Dreamer Development Scale (DDS), will assess (on five-point continua) four aspects of dreamer development based on Rossi's work (1972): 1) reflectiveness, 2) role or status changes, 3) interaction with the dream figures, and 4) act-ualization of constructive behaviors in the dream. Since Rossi considers reflectiveness to be the sine qua non of dreamer development (and waking personality development, for that matter), and the other three criteria to be sequential outgrowths of expanded reflectiveness, the four Dreamer Development Subscales represent a rudimentary continuum, at least from Rossi's theoretical perspective. (See Theoretical Rationale for a further elucidation of Rossi's theory.)

Justification for This Study: Its Relevance to Counseling Theory and Practice

The aforementioned anecdotal treatises and the clinical literature to date (Rossi, 1972; Halliday, 1982) suggest that the achievement of greater reflectiveness/lucidity can exert a therapeutic impact on an individual, leading some

researchers to suggest that lucid dream/reflectiveness induction strategies could serve as an effective tool in counseling, as well as in the context of a program of self-directed dreamwork. However, the outstanding problem remains: Is an increase in dreamer lucidity/reflectiveness an achievable goal for more than a few individuals? If not, then such induction strategies will forever remain an impractical tool in counseling and self-directed dreamwork. The purpose of this study will be to assess the inducibility of greater lucidity/reflectiveness in the dreams of individuals who possess the kind of motivation and capacity for informed consent that any prospective counseling client or dream student would possess before adopting such induction procedures.

The inducibility of greater dream lucidity/reflectiveness in a wide range of individuals would be a necessary but insufficient condition to warrant the adoption of lucid dream/reflectiveness induction by professional therapists. For, the ethics of the professional counselor require that a potentially effective tool fit into the context of acceptable counseling theory and practice, prior to its use. Some new developments in dream theory and research have paved the way for a theoretical acceptance of such induction strategies by: 1) certain individual therapies such as Gestalt (Perls, 1973) and psychosynthesis (Rossi, 1972), and 2) by systems-oriented family counseling (Bynum, 1980; Kaplan, Saayman and Faber, 1981).



Individual Counseling. One of the most important new developments in dream theory can be described as a move away from an interpretive approach to dreams in favor of a phenomenological approach.

Traditionally, psychoanalytic practitioners have regarded the dream as a symbolized thought process which achieves a release of reprehensible, repressed impulses in a disguise which satisfies the ego's need to restrict the expression of such impulses (Freud, 1953). Since the manifest dream is actually a cleverly compromised expression of latent underlying impulses, it is regarded as merely a point of departure in the process of unravelling a patient's internal dynamics. The manifest dream is, therefore, a largely worthless artifact which the client eventually leaves behind in pursuit of veiled meanings.

In contrast, the "phenomenological-descriptive" (Hunt, 1982) or "process" approach (Bynum, 1980) suspends theoretical preconceptions in favor of examining what is simply happening during the dream encounter; that is, the "forms and styles of relating rather than the content of specific symbolic meaning of the dreamwork" (Bynum, 1980). Exponents of this approach regard the dream as: an experience which need not be considered as less real than, or inferior to, waking experiences (Hunt, 1982); as an encounter between the dreamer and the emergent novelty within the mind (Rossi, 1972); and as an opportunity to interact with and integrate this emergent novelty (Rossi, 1972; Perls, 1973). At least two forms of

individual therapy -- Gestalt and psychosynthesis -- have adopted aspects of this orientation to dreams. These two therapies share the following theoretical principles:

1) The dreamer's expression toward, and interaction with, the dream drama -- both within the dream itself and during a re-enactment of the dream in the counseling setting -- is the most important aspect of dreaming and dream analysis.

Gestalt therapy rejects the traditional interpretive analysis of the dream, which relegates the dream to a shadowy past-tense existence. Instead, the Gestalt approach re-invokes the affective intensity of the dreamer/dream encounter through a present-tense re-enactment of the dream in the counseling setting. Perls (1973) describes several steps through which the dream drama in its fullness may be brought into the present. These steps include: telling the dream in the present tense as a story which is unfolding right now; having the dreamer "set the stage" (1973, p. 179) of the dream by describing in detail the characters and their relationship to each other; dialoguing with various dream characters, especially those with whom the dreamer is maintaining a conflictual relationship; and taking on the roles of these characters, and describing their feelings and perspectives.

Whereas the Gestalt therapist helps the dreamer to re-surrender the dream from the past and to achieve a here-and-now re-enactment of the dream, psychosynthesis (as articulated by Rossi) emphasizes that therapeutic interaction can occur within the confines of the dream itself, as well as

through after-the-fact fantasy re-enactments of the dream. Rossi contends that "the growth of personality is effected through a uniquely personal interaction between one's old self and the new states of being that arise...within the phenomenal realm" (1972, p. 39). He goes on to state that this growth process takes place through an "active interaction with one's psychological problems on the phenomenological level of dream and fantasy" (1972, p. 39).

2) The dreamer can potentially alter his/her expression and level of self-reflecting awareness in the course of the dream. The dreamer is thus seen as an agent in the unfolding of the dream, rather than a passive witness to it; and the dream outcome is regarded as largely a function of the dreamer's self-determined responses to the dream characters and events.

Perls argues that the experience of the dream "happening to us" is a fiction born of our unwillingness to take responsibility for the dream. Speaking of the dream's frustrating qualities, he says, "You want to cope with the situation and achieve something -- and again and again you frustrate yourself. You prevent yourself from achieving what you want to achieve. But you don't experience this as you're doing it. You experience this as some other power that is preventing you" (1973, p. 178).

Rossi observes that the committed dreamworker may eventually experience within the dream itself his/her latent capacity to affect the course of the dream. Such a discovery

makes it more difficult to continue to disavow responsibility for the dream's outcome. Describing this discovery process, Rossi says, "The dreamer...notices that he is trying to make the dream work out in a certain way... The dreamer becomes aware, within the dream itself, of the different directions the plot can take and the alternative endings that are possible. The dreamer finds that he now has the surprising ability to intervene in the drama of the dream and direct it in the way he would like to go" (1972, p. 20).

3) Personality growth can be furthered by encouraging a greater awareness of, and willingness to integrate the new or previously disowned aspects of oneself which appear as other people and objects in our dream experiences.

In both Gestalt therapy and psychosynthesis, personality growth takes place when there is a synthesis of the dreamer and the perspectives embodied by the dream characters. This goal of synthesis is accomplished primarily by having the dreamer dialogue with and ultimately identify with the perspectives expressed by the dream characters. This broadening of perspective facilitates the "creation of a new identity" (Rossi, 1972, p. 162) as well as the release of psychic energy which has been invested in the unassimilated aspects (Perls, 1973). Commenting on this release of psychic energy, Perls says "suddenly it appears that there are valuable energies somewhere hidden in those projections [i.e. the dream symbols]. We can assimilate these and make them our own again" (1973, p. 180).

In the context of the above three principles for individ-

16.  
ual dreamwork, greater dreamer reflectiveness and "lucidity" can be seen as desirable achievements, since they obviously increase the chances that the dreamer will be able to interact creatively with the dream images within the confines of the dream itself. That is, instead of having to re-enact a dream encounter in the counseling setting, so that waking reflectiveness might illuminate the dreamer's previous blindness after the fact, the arousal of reflectiveness/lucidity on the dream level permits a more direct encounter between the waking self and the emergent dream drama. Such an encounter between the waking self and the dream images could feasibly increase the therapeutic benefits that would otherwise be sought through an after-the-fact, imaginary enactment of the dream encounter. (See Theoretical Rationalé for a further exposition of these ideas.)

Systems-Oriented Counseling. A second recent development in dream theory and research also ties lucid dreaming into systems-oriented counseling approaches.

Traditionally, dreams have been regarded primarily as reflections of internal dynamics (Freud, 1953). If they appeared to comment on the status of ongoing social relationships, they could nevertheless be traced to internal conflicts borne of childhood traumas and unfulfilled desires. Such a retrospective, intrapsychic approach succeeded for over a half century in ignoring the possibility that dreams might also provide accurate portrayals of ongoing social and family relationships.

The hypothesis that dreams may transcend the personal sphere and accurately depict the state of the social system has been supported in a recent study by Kaplan, Saayman and Faber (1981). These researchers found that when a dream researcher analyzed only the dreams of family members, he was able to arrive at a systematic diagnosis which was as accurate as a diagnosis made by a family therapist who had interviewed the family. In specific, the study indicated that "the affect associated with the presenting problem, the areas of difficulty, the family transactions and the outcome of therapy were all correctly identified by the dream researcher" (Kaplan, Saayman and Faber, 1981).

Considering the accuracy with which dreams portrayed the family's problems, the authors of the above study suggest that the use of dream reporting can help to alleviate one of the most significant problems encountered in family therapy -- the family's resistance to therapeutic control:

A central factor in psychotherapeutic outcome concerns the resolution of the issues of power struggles and therapeutic control (Haley, 1963). The present results suggest that the resolution of the resistance by the family system to therapeutic control might be facilitated to a large degree by using dream material in the therapeutic endeavor. Dreams, the problems they pose, and the solutions they suggest are all "products" of the dreamer. Thus,

the open discussion of dreams, it is suggested, would provide a framework in which the family could work on the affective problems portrayed by the dreams...and, if they do indeed suggest solutions to the problems they reflect, such solutions would ultimately be seen to originate from the dreamers, thus bypassing the problem of therapeutic control (Kaplan, Saayman and Faber, 1981).

Bynum's (1980) clinical use of dream work in family therapy supports the findings of Kaplan, Saayman and Faber (1981). Building upon an earlier study by Markowitz (1968), which indicated that dream discussion can be a way of re-opening family communication, Bynum's clinical findings go a step further by indicating that the actual restructuring of family relationships can be effectively accomplished by using material elicited in the dream work. It is Bynum's position that :

Dreams of any "significant other" in the family that incorporates and represents that family member also reflects his particular skew or perception of that family's constellation and conflicts. The unconscious understanding and assumptions about how the family network operates is expressed in the dynamic structure of the dream work (Bynum, 1980).

Bynum requests that his client-families keep a dream log

from week to week. Although a family often resists this homework task at the outset (which, in itself, provides a glimpse into the family's style of response to intrusion, its boundaries and its projected image to the public), the amount of time required to tabulate the dreams is usually very little. Furthermore, Bynum reports that only a few dreams are needed to provide a wealth of clinical data. Summarizing his experience using dreams in family therapy, Bynum concludes that "the reflection on the family's process through reflection on the dream's process opens the way to overcoming denial, scapegoating and other resistances" (1980).

These research and clinical contributions justify the exploration of lucid dream induction as an adjunct to systems-oriented counseling. For, if dreams provide accurate portrayals of ongoing family dynamics, and if the dreamer can learn to become more reflective in the dream in order to modify his/her responses to this portrayal, then the dream encounter can possibly exert a therapeutic impact on an individual's actual relationships with other family members, and upon the system as a whole. From this perspective, instead of merely providing a glimpse into a client's intrapsychic sphere, the dream can now be seen as a potential arena in which a dreamer can, at times, interact in strategic new ways with an accurate model of the family system.

On the surface, the systems orientation to dreamwork may seem to conflict with the Gestalt and psychosynthesis positions. For, the systems orientation regards the dream



as a portrayal of interpersonal and family dynamics. In contrast, Gestalt and psychosynthesis treat the dream primarily as a commentary on the dreamer's intrapsychic sphere.

This apparent conflict can be resolved by acknowledging the dream's capacity to provide a commentary which portrays simultaneously the dreamer's intrapsychic and social realities. Of course, this perspective can greatly complicate any subsequent dreamwork by making it possible to consider the dream from at least two perspectives. But on a practical level, clinical dreamwork tends to emphasize one or the other dimensions, not because the particular paradigm embraced by the practitioner denies the dream's capacity for multileveled commentary, but because the paradigm defines one of these realities as the principal arena for change. For example, Minuchin (1978) acknowledges the reality and importance of the intrapsychic world, but claims that inner change can best be accomplished by manipulating the systemic forces which impinge on the individual's intrapsychic world. On the other hand, Freud (1953) never denied the importance of the real parents in providing the objects onto which the emerging personality would cathect its psychosexual energies. However, he regarded the intrapsychic sphere as an a priori reality, to which all social and familial relationships could be reduced.

Thus the apparent conflict between individual and systemic approaches to dreams can be seen as merely a

difference in emphasis, which is affordable given the dream's capacity to reflect simultaneously the inner and outer dimensions of a person's life.

### Theoretical Rationale

The theoretical framework for understanding the growth of dreamer self-reflection and lucidity is admittedly in its nascent stages. The most thoroughly developed ideas in this area of enquiry can be found in a seminal work by Rossi (1972).

In his book-long phenomenological study of the role of dreaming in the development of personality, Rossi introduces an approach to psychotherapeutic dreamwork which differs significantly from previous approaches. The pioneers of modern dreamwork -- the psychodynamic theorists -- have, as a rule, focused as on the analysis or interpretation of the dream's symbolic or visual content in order to arrive at a clearer understanding of a person's unconscious desires, aspirations and fears. Whether the particular school regards the manifest dream as a clever disguise of reprehensible urges (Freud, 1953), or as an undisguised message which simply requires effort and skill to be understood (Jung, 1969), the psychodynamic theorists have nonetheless emphasized the analysis of the dream content.

While not belittling this approach, Rossi subordinates

the analysis of visual content to a consideration of what is happening within the dreamer as the dream unfolds. His approach focuses on the level of self-reflecting awareness possessed by the dreamer, the level of interaction between the dreamer and the dream content, the synthesis of a new identity as a result of dreamer/dream content interaction, and the actualization of new behaviors.

Rossi believes that the fundamental challenge of psychological development is to integrate the new that is constantly unfolding within the mind. As one encounters the new, there is a feeling of disequilibrium, and a loss of security as it undermines the present basis of identity. To protect oneself from having to accommodate this intrusive novelty, one tends to adopt a passive or standardized orientation to the new, and to respond habitually and unreflectingly to its presentation.

Based on this assumption, Rossi (1972) postulates that "the major developmental block for the average individual is his lack of awareness of the new within his own mind" (p. 8). Since dreams are experienced in the relative isolation of sleep, away from the recognizable settings and routine activities of everyday life, they "are usually the most original of our psychological experiences" (p. 14). Rossi theorizes that for the average individual, the dream is virtually the only arena in which the new can find expression. Achieving greater awareness in the dream itself, is, therefore, an effective means to interact with and integrate the emergent novelty within the mind.

At the heart of Rossi's theory is his observation that most dreams are a composite of two forces interacting: the phenomenal field or "content" comprised of the objects and characters perceived by the dreamer; and the dreamer's self-reflecting awareness and self-directed efforts in relation to the content (1972, p. 161). When one is resisting the awareness of the new, the dreamer typically exhibits a complete lack of self-reflection and flexibility. The dreamer's "one-dimensional" (1972, p. 9) or passive response to the content effectively impedes creative interaction with the dream. Rossi regards this standoff between the old habitual responses of the dreamer and the emergent novelty of the dream as a condition which eventually gives rise to a sequence of developmental stages in the dream.

He observes that this standoff eventually escalates into a crisis, whereby the autonomous content begins to assume a more threatening and bizarre appearance as a result of having been continually frustrated by the dreamer's passive response to it. Commonly experienced as a nightmare, this crisis creates a fertile condition for the arousal of self-reflection within the dreamer. The dreamer discovers that the one-dimensional response is no longer adequate to stave off the demands of the intrusive novelty. Under pressure, the dreamer begins to ask questions in the course of the dream, and to ponder the dream's increasingly bizarre and threatening qualities.

Rossi says that this incipient self-reflection "meditates

a phenomenological shift from a state of being to an expansion of awareness" (1972, p. 28). In other words, the process of questioning within the dream frees the dreamer to abandon a static way of being and to experience an expansion of awareness regarding the new possibilities open to the dreamer. This greater self-awareness, in turn, encourages dialogue between the dreamer and the dream figures, thus facilitating the synthesis of a new identity comprised of the old and new aspects of the personality. As a final stage in the growth process, the synthesis of a new identity leads to the actualization of new behavior, which manifests in the waking state as well as the dream state.

To summarize, Rossi describes six stages in the process of dream development:

- 1) The dreamer exhibits a complete lack of self-reflection, and responds in a one-dimensional fashion.
- 2) A crisis arises, which stems from the conflict between the dream's emergent newness and the dreamer's unreflecting responses to it. In this stage, the dreamer is often chased or threatened by an animal or person.
- 3) The dreamer begins to reflect upon the conflict. At this stage, the dreamer may ask questions such as "Why is this happening," or "What can I do?"
- 4) The dreamer experiences an expansion of self-

awareness mediated by the reflecting process. Realizations such as "She looks just like mom," or "This must be a dream, so I can't be hurt" are common at this point.

- 5) There is a synthesis of new identity within the dreamer through dialogue and interaction with the dream content.
- 6) The dreamer actualizes constructive new behaviors in the dream based on the new expanded sense of identity e.g. "I found that I could sing really well, so I really got into it," or "I decided to try to help the mugger, so I went with him to his ghetto apartment." This actualization of new behavior carries over to the waking state, as well.

According to Rossi, dreamer self-awareness is not an all-or-nothing factor; instead, it manifests along a continuum. He has also observed that as self-awareness increases, the dream's autonomous quality decreases such that "there is a continuum of all possible balances of control between the autonomous process and the dreamer's self-awareness and consciously directed effort" (p. 163). Rather than regarding the dominance of the dreamer over the autonomous content as an ideal, Rossi contends that "the ideal balance is like a hero myth with a happy ending: the dreamer interacts with the autonomous forces in an emotionally stimulating adventure so that new identity is generated from the encounter" (p. 162).

A significant aspect of Rossi's theory is his assumption that the expansion of dreamer self-awareness frequently leads to the realization that the dream is a subjective reality. This ability to become aware that one is dreaming is considered of crucial importance. In fact, Rossi states that the "ability to maintain an awareness of the subjective nature of the inner drama is the most crucial factor in the entire process of psychic transformation" (1972, p. 80). Referred to by other dream theorists as "lucid dreaming," this ability is considered by Rossi to be the best way to overcome one's fear of the dream's threatening aspects.

Rossi also observes that the expansion of dreamer awareness can result in an intense, ecstatic experience, characterized by the perception of brilliant light, and a sense of wholeness and meaning. He equates this experience with the "mystical states of consciousness described by the cultivated minds throughout the ages" (p.18).

It is also important to note that the expansion of self-reflection and self-awareness in the dream is frequently mirrored by changes in the dream imagery itself. Some of the specific imagery changes noted by Rossi are: the creation of altogether new images, divisions in dream images, transformations of dream imagery, and unification of dream imagery (1972, p. 147-151). These changes in imagery may, in turn, stimulate an even further expansion of self-awareness in the dreamer, as he or she contemplates the captivating changes in the phenomenal field. Depending upon the dreamer's re-

27.  
sponses to these changes, the imagery may or may not continue to confirm and stimulate the process of expanding self-awareness.

In recognition that his approach to dreams is as yet unverified by extensive research, Rossi has generated 19 hypotheses which he introduces at appropriate places throughout his book. Furthermore, he devotes a section of his study to a review of various exercises such as meditation, artwork and autogenic training -- which might be used to foster greater self-awareness in the waking and dream states. Thus Rossi has taken care to provide the researcher with a rich array of testable hypotheses regarding ways to induce greater self-awareness in the dream.

#### Sample and Data Gathering Procedures

As stated previously, the purpose of this study is to determine whether or not individuals can induce greater reflectiveness and lucidity in their dreams. Because this researcher is especially interested in the potential use of lucid dream/reflectiveness induction in the counseling process and in the context of a self-directed program of dream work, the sample will be self-selected and informed regarding the global objectives of the study. Although the ideals of controlled research might argue against the use of such a sample, the ethics of professional counseling would require any prospective candidate for lucid dream induction to be willing and informed. Furthermore, these candidates would, ideally, be already involved in ongoing dream work. Thus,



because of the specific nature of the target population, a sample will be drawn from a population whose members are known for their interest in dream research, and their ongoing involvement with their own dreams.

The Ss will participate in a three-week field experiment during which time they will supply the following data:

1. questionnaire responses in order to assess Ss' previous experience of dream recording, meditation practice, lucid dreams, and other possible predictor variables suggested by the literature.
2. baseline dream recall during a five-day pre-treatment period.
3. dream recall during a five-day period of lucid dream/reflectiveness induction.
4. post-treatment dream recall during a five-day period.

Dream recall will be assessed by having Ss record all dreams on 5½"x 8½" sheets of white paper. They will send each set of weekly reports to the researcher for evaluation at the completion of the study.

#### Definition of Terms

1. Lucid dream - the experience of becoming aware that one is dreaming during a dream. Operationally defined in terms of the actual content of a dream report, lucidity necessarily entails a statement such as "I am dreaming," or "This is a dream."
2. Pre-lucid dream - a dream in which the dreamer

questions the reality of the experience, but ultimately never concludes that the experience is a dream. Operationally defined in terms of the actual content of a dream report, pre-lucidity necessarily entails a question such as "Is this a dream?" or "Am I dreaming?", which is never answered in the affirmative.

3. Incipient Pre-Lucid Dream - a dream in which the dreamer is aware of the dreamlike nature of some occurrence, or the violation of laws which normally govern waking reality. Although such dreams have been traditionally regarded as pre-lucid, the absence of questioning sets this dream apart from a "full" pre-lucid dream, as it is operationally defined in this study.
4. Non-lucid dream - a dream in which the dreamer never asks or concludes that the experience is a dream. Operationally defined, there is a complete lack of the questions and statements characteristic of pre-lucid and lucid dreams.
5. Dreamer reflectiveness or self-reflection - the extent to which a dreamer questions, ponders or thinks critically about the situations which arise in the dream. (Measured by subscale one of the Dreamer Development Scale.)
6. Dreamer status or role change - the extent to which the

dreamer experiences a role or status change in the course of a dream. (Measured by subscale two in the Dreamer Development Scale.)

7. Dreamer/Dream content interaction - the extent to which the dreamer interacts with the dream characters. (Measured by subscale three of the Dreamer Development Scale.)

8. Dreamer actualization of constructive behaviors - the extent to which the dreamer manifests constructive behaviors, within the context of the dream. (Measured by subscale four of the Dreamer Development Scale.)

9. Developmental Dream - a dream that receives "critical" scores on at least three of the four dimensions of dream development, based on Rossi (1972) and measured by the four subscales on the Dreamer Development Scale.

10. Non-developmental dream - a dream that receives less than three high or "critical" scores on the Dreamer Development Scale.

11. Critical Score - a score of 3, 4 or 5 on one of the five-point subscales of the four-part Dreamer Development Scale.

12. Degree of dream development - the number of critical scores received by a dream. Since there are four subscales, a dream may receive from 0 - 4 critical scores (4 or 5 on a five-point continuum).

### Limitations

One limitation of this study is its reliance upon self-reported dreams as the sole measure of the dependent variables. This limitation plagues all attempts to assess empirically a non-empirical event through the use of self reports. Even though the advent of laboratory dream research has succeeded in clarifying a few objective physiological correlates of dreaming, researchers have a long way to go before they will be able to say they have succeeded in making the dream experience itself an object of direct scientific observation. Despite this limitation, dream researchers have sought to discover the psychological and contextual variables which produce "demand characteristics" in dream reporting (Stern and Saayman, 1980). This study will incorporate safeguards designed to minimize compliance effects in dream reporting, especially during the pre-treatment baseline data collection period.

Another limitation is the self-selected nature of the sample, and the "extreme" nature of the population from which the sample will be drawn (See Chapter III). As mentioned previously, the use of motivated, informed subjects is based on the need to approximate as closely as possible to mind-set of 1) consenting, knowledgeable counseling clients and/or 2) individuals involved in personal dream work, for whom lucid dream/reflectiveness induction might serve as an appropriate therapeutic or growth tool.

A further limitation derives from the general difficulty

in conducting a field experiment. Since all contact between the researcher and Ss will take place through the mail, the problem of inadequate controls over extraneous environmental and psychological variables poses a threat to the validity of the study. However, the research methodology will employ a variety of safeguards which should permit the study to meet its objectives. For example, the research materials will be sealed, and opened in stages; the specific hypotheses of the study will remain unknown to the Ss; the dreams will be recorded according to a standardized procedure; the Ss will be randomly assigned to groups, etc. (See Chapter III).

#### General Hypothesis

The principal hypothesis of this study is that greater dream reflectiveness and lucidity (i.e., the actual realization that one is dreaming) is available to motivated, consenting and dreamwise individuals who represent the most likely candidates for reflectiveness/lucidity induction in counseling or in the context of self-directed personal dream work.

## II. Review Of The Research

### Part One: Historical and Theoretical Overview

#### Review of the Research on the Phenomenology of Lucid

Dreaming. The phenomenon of lucid dreaming has only recently attracted the attention of psychological dream researchers. Defined simply as the experience of becoming aware that one is dreaming during a dream, lucidity typically emerges when the percipient faces a stressful, novel or incongruous situation which provokes the dreamer into questioning the reality of the experience (Green, 1968).

In "normal," non-lucid dreams, the dreamer rarely questions the reality of the phenomenal realm; nor does the dreamer exhibit a reflective, questioning attitude toward the dream. Instead, the dreamer typically reacts to the panorama of images in a "one-dimensional" manner, without ever considering the alternatives which might be available (Rossi, 1972, p. 8). For all practical purposes, the waking, reflective ego is absent during most ordinary dreams.

In contrast, the lucid dreamer is more or less aware that the phenomenal field is a self-created, subjective reality. Such a realization prompts the dreamer either to awaken to avoid further confrontation with threatening dream figures; or to confront the dream fearlessly, to experiment with less habitual responses to stress and novelty, and to participate in a creative dialogue with the autonomous dream content. The emotional quality of a lucid encounter with the dream has been described as filled with bliss and gratitude (Van

Eeden, 1913), ecstatic (Rapport, 1948), clear-brained, divinely powerful (Fox, 1962, orig. 1929), and sexual (Faraday, 1972).

Unfortunately, the labels "lucid" and "non-lucid" serve to obscure the fact that a dreamer can exhibit a high degree of questioning and self-reflection without ever achieving lucidity. Some researchers have attempted to account for this in-between stage by referring to it as a "pre-lucid" dream (Green, 1968). Rossi (1972) goes a step further and argues that dreamer self-awareness manifests along a continuum rather than as an all-or-nothing factor. From this perspective, the rather abrupt and apparently discontinuous realization that one is dreaming arises as a part of the dreamer's expansion of awareness along a continuum.

Prior to the 1960's, a few anecdotal studies were published that either dealt with lucid dreaming directly (Van Eeden, 1913; Delage, 1919; Arnold-Forester, 1947, orig. 1921; Brown, 1936; Hervey de Saint-Denys, 1964, orig. 1967), or as it related to the phenomenologically similar "out-of-body" experience (Fox, 1962, orig. 1929). As a rule, these authors focused on their own experiences and published their observations as book-long treatises. Because these authors tended to invoke "occult" notions to explain various phenomena associated with lucid dreaming, their studies failed to impress the mainstream of psychology. When confronted with lucid dreaming, traditional dream theorists have, until recently, tended to dismiss lucid dreams as an unlikely possibility or as mere artifacts of the arousal process (Hartmann, 1975; Berger, 1977).

The subject of lucid dreaming has traditionally aroused interest among researchers who have been willing to entertain psychic or transpersonal theories of the mind. Most notably, Oliver Fox (1962, orig. 1929) dealt with the obvious relationship between lucid dreaming and out-of-body experiences. Fox was one of the first to consider lucid dreams as incipient or inferior versions of the full-fledged out-of-body experience. Even though he regarded lucid dreams as valuable experiences in their own right, he believed that the arousal of consciousness in the dream-state was simply one avenue into the more desirable out-of-body experience, in which the perceived environment could and should become congruent with waking reality, rather than retaining a dream-like, subjective quality. This apparent congruence between the perceptual field and recognizable settings in the waking state has been used by others to distinguish the out-of-body experience from the "inferior" lucid dream (Green, 1968).

Prior to 1968, no systematic empirical research on lucid dreaming had been conducted. Celia Green broke with the tradition of merely studying one's own experiences by conducting a survey of the experiences of several talented lucid dreamers, both living and dead, to ascertain the common elements of the phenomenon. Green succeeded in clarifying the conditions in the ordinary dream which typically precede the arousal of lucidity: stress, novelty and incongruity. She also made one of the strongest statements to date regarding the essential equivalence of the lucid dream and out-of-body experience: "...out-of-body experiences must be regarded as philosophically indistinguishable from lucid dreams. In both types of experience



the percipient is observing a complete and self-consistent field of perception, and recognizes at the same time that he is in a state which differs from that of waking life" (p. 20).

In the 1970's, psychologists and writers in the field of dreams began to recognize the therapeutic potential of lucid dreaming. Various writers (Faraday, 1973; Rossi, 1972; Garfield, 1974a, 1974b, 1975a, 1975b; Sparrow, 1975, 1976a, 1976b) pointed to the obvious value of being able to confront fearlessly the frightening aspects of the dream, and to reconcile during the dream itself the differences which exist between the prevailing conscious identity and unconscious perceptions, desires, fears and self-actualizing forces. Although the anecdotes presented by these writers offered further compelling evidence of the therapeutic impact of consciousness in the dream-state, there was still a conspicuous absence of systematic empirical research to back up their speculations.

In addition to noting the therapeutic value of lucid dreaming, some researchers began to introduce an idea that was new to the West, but well established in the Tibetan Buddhist tradition -- the notion that lucid dreaming was an avenue into profound experiences of inner illumination (Rossi, 1972; Sparrow, 1975, 1976a, 1976b, 1978a), and a preview of the near- and presumed after-death phenomenal realms (Evans-Wentz, 1958, 1960; Chang, 1977; Segal and Segal, 1982). This position is thoroughly developed in a series of recently translated Tibetan Buddhist texts (Evans-Wentz, 1958, 1960). Two of six yogas developed by the Tibetans -- the yoga of the dream-

state and the yoga of the after-death state -- are virtually identical in method and objective.

The yoga of the dream-state involves an attempt to become fully conscious (i.e. lucid) while dreaming, not only to discern the illusory or subjective nature of the dream's phenomenal field, but to encourage a similar realization about the waking state, as well. The Tibetan Buddhists thus regard lucid dreaming as an appropriate starting point toward realizing the self-created nature of all phenomenal experience (Evans-Wentz, 1958).

Similarly, the yoga of the after-death state revolves around a diligent effort to maintain full waking awareness during the transition from bodily death to the after-death phenomenal realm. The Tibetians believe that the dying person encounters a brilliant Light at the moment of death. If the person is "asleep" to the fact that death is occurring, then the Light will go unrecognized for what it is -- an invitation to transcend the cycle of birth, death and rebirth. By failing to acknowledge this invitation, the perceptive will soon become distracted by the panorama or images which arise, and will begin another descent into materiality.

If, however, the dying person can recognize the Light for what it is and merge with it, the death/rebirth cycle will be forever transcended. The ability to maintain lucidity at the moment of death is considered, therefore, a necessary prerequisite for achieving liberation from the reincarna-

tion cycle (Evans-Wentz, 1960).

Despite the rich phenomenological and theoretical contributions of the aforementioned anecdotal and religious treatises, two crucial criticisms remained unchallenged until the last decade. First of all, despite the apparent therapeutic potential of lucid dreaming, there was as yet no research evidence that lucid dreams correlated with, or furthered, healthy personality functioning. Although Rossi (1972) makes a convincing argument in this regard, he bases his conclusions on a single, in-depth case study. Second, as mentioned previously, some researchers were still dismissing lucid dreaming as merely an artifact of the awakening process rather than a true dream phenomenon. These two criticisms perhaps represent the final obstacles to lucid dreaming's widespread acceptance as a subject worthy of scientific study.

Personality Studies. In response to the first criticism, a few studies have explored the possible personality differences between frequent and infrequent lucid dreamers (Gackenbach, 1978, 1981a, 1981b; Gackenbach, et. al, 1983; Hearne, 1981; Belicki and Hunt, 1981). Except for Gackenbach's studies, no significant differences have been reported.

Gackenbach has investigated the personality differences between frequent and infrequent dreamers in three separate studies (1978, 1981a, et. al, 1983). In one study (Gackenbach, 1978), 90 adults completed The Sixteen Personality Factor Questionnaire (16PF), the A.R.E. Research Workbook Questionnaire, The Self Analysis Form and the Mooney Problem

Check List. They were also asked to indicate the frequency with which they experienced dream lucidity. Later (Gackenbach, 1981a, 1981b) administered the 16PF and the lucidity questionnaire to 147 college students.

In these first two studies, Gackenbach found that "the first three subscales of the 16PF loaded on a stepwise multiple regression, regressing on self-reported lucid dream frequency, were completely different for these two samples. The top three factors which loaded for the college students were, in order, surgency, superego, and dominance while the top three subscales for the adults were radicalism, tough poise and self sentiment control (Gackenbach, 1981b)." Analyses of variance on the 16 factors calculated separately for the two samples revealed a further divergence in trait patterns: "For the students, frequent lucid dreamers were found to be enthusiastic and practical, while adult frequent lucid dreamers were not anxious nor guilt prone, had high ego strength and were liberal" (Gackenbach, 1981b).

When Gackenbach took sex differences into account, the following personality profiles emerged: The female adult lucid dreamer "takes care of herself physically and does not have problems. She is practical minded, forthright, experimenting, nonanxious, and in touch with her emotions -- a "together woman" (1981b). The adult male lucid dreamer exhibited a more perplexing trait portrait: He seems to be a seeker with some religious conflicts, who is nonetheless in control of

his emotions. In regard to the college students, the female lucid dreamer is imaginative, tense and independent, while the male is classically introverted. Seeking to link the trait patterns of the two samples Gackenbach says, "One wonders if these introverted males might not evolve into religious seekers as adults and the young women actualized as they age" (1981b).

A third study (Gackenbach, et. al, 1983) investigated the intelligence, creativity and personality differences between individuals who varied in their self-reported frequency of lucid dreaming. Conducted through the mail with 102 adults, the survey battery included four scales of the Comprehensive Ability Battery (CAB) to assess intellectual differences; and the Remote Associates Test (RAT) and four scales (i.e. fluency, flexibility, originality and elaboration) from the Torrance Test of Creative Thinking (TTCT) to assess creativity. Personality characteristics that were assessed included: masculinity, femininity and androgyny scores from the Personal Attributes Questionnaire (PAQ); public and private self-consciousness and social anxiety from the Self-Consciousness Scale (SCS); and internal and external risk from the Dane Risk Scale (DRS).

Respondents were classified as either frequent (more than once a month) or infrequent (once in a lifetime to several times a year) lucid dreamers. Frequent lucid dreamers were found to be significantly more intelligent and nonverbally creative across all scales of the CAB and TTCT. The intelli-

gence differences were accounted for predominantly by the females. Frequent lucid dreamers were also found to prefer externally risky situations significantly more than the infrequent lucid dreamers. In step-wise multiple regressions, high private self consciousness and femininity scores emerged as the best predictors of frequent lucidity among the males. For the females, low social anxiety and high perceptual completion scores were the two best predictors of lucid dream frequency.

In addition to investigating the personality differences between frequent and infrequent lucid dreamers, Gackenbach, Heilman and Boyt (1983) have compared the perceptual and sensorimotor capabilities of frequent lucid dreamers, infrequent lucid dreamers and those who report never having had a lucid dream. Although most of the comparisons were insignificant, the researchers found that frequent lucid dreamers were found to be significantly more field independent than the other two groups, as measured by The Embedded Figures Test.

Considering the "philosophical indistinguishability" (Green, 1968) of lucid dreams and out-of-body experiences, and their correlated occurrence within the same people, (Palmer, 1979; Blackmore, 1983) it is significant that Jones and his associates (1980) found that 339 respondents who reported having had an out-of-body experience were significantly healthier than a psychiatric control group, and no different than a group of student controls, according to scores on the Profile of Adaptation to Life (Ellsworth, 1979). These findings indirectly

suggest that lucid dreaming may occur with greater frequency among persons of normal psychological adjustment.

Laboratory Studies. In response to the criticism that lucid dreaming is merely an artifact of the awakening process, Hearne (1978), La Berge (1981) and Dane (1982) have independently shown that many if not most lucid dreams occur in unambiguous dream-correlated (REM) sleep.

Hearne (1978) was the first to pioneer a technique by which lucid dreamers could signal the onset of lucidity to laboratory researchers. Even though there is general bodily paralysis during dream-correlated, rapid-eye-movement (REM) sleep, the eyes remain largely free to move. By asking lucid dreamers to make prearranged atypical eye movements at the onset of lucidity, Hearne found that the dreamers could circumvent their paralysis and provide clear signals to the laboratory observers.

Since the atypical eye movements were recorded on the EOG scale of the polygraph, Hearne was able to compare the signals with simultaneous readings on the other polygraph scales (e.g., EEG and EMG). He found that virtually every signal occurred in unambiguous REM sleep, as indicated by characteristic readings on the other scales. This finding dealt a blow to the "waking artifact" theory of lucid dreaming.

La Berge independently developed the same method for evaluating whether lucid dreams take place "during sleep or during brief periods of hallucinatory wakefulness" (1981). In the course of La Berge's study, "35 lucid dreams were

reported subsequent to spontaneous awakening from various stages of sleep as follows: rapid-eye-movement (REM) sleep in 32 cases, non-REM (NREM) stage 1 twice, and during the transition from NREM stage 2 to REM once" (La Berge, 1981). Though highly suggestive, the juxtaposition of REM periods with lucid dream reports failed to retire the "waking artifact" argument. A more conclusive test took place when an independent judge was asked to review the polysomnograms. La Berge reports:

The subjects reported signalling during 30 of these lucid dreams. After each recording, the reports mentioning signals were submitted along with the polysomnogram to a judge uninformed of the time of the reports. The judge was asked to determine whether one (or more) of the polysomnographic epochs corresponded with the reported lucid dream signal. In 24 cases, the judge was able to select the appropriate 30-second epochs (out of about 1,000 per polysomnogram) on the basis of correspondence between reported and observed signals... All signals associated with lucid dream reports occurred during epochs of unambiguous REM sleep... (1981).

In a dissertation study, Dane (1983) reports that his preliminary findings confirm those of Hearne (1978) and La Berge (1981) by showing that "at least some lucid dreams are true 'dream' phenomena and are not simply due to hypnagogic



or hypnapompic imagery or to hallucinations during micro-awakenings from the REM state" (Dane, 1982). In his laboratory study, Dane found that approximately 45% of the lucid dream signals coincided with unambiguous indices of REM sleep (Van de Castle, 1983).

Critique of Research on the Phenomenology of Lucid

Dreaming. The anecdotal studies of Van Eeden (1913), Brown (1936) and other early researchers eventually helped to awaken contemporary interest in lucid dreaming (Green, 1968; Tart, 1969). However, these early researchers failed to provide any systematic empirical data to buttress their claims. The anecdotes were compelling, and the speculations often credible; but the absence of systematic research simply postponed lucid dreaming's admission into the domain of legitimate scientific enquiry.

Green's study (1968) brought dream researchers up to date with past efforts in the field by sampling from among current lucid dream reports and previous anecdotal accounts, and then drawing conclusions based on the common threads running through these accounts. Although her work can be criticized as an unsystematic investigation of selected anecdotes, Green was the first to explore the accounts of several talented lucid dreamers at once. Her observations, therefore, carry more weight than previous researchers who focused on their own experiences.

Rossi (1972) makes a lengthy and thorough case for the therapeutic impact of consciousness in the dream-state.

However, he bases his conclusions on a single case study of one of his own psychotherapy patients. Thus his claims regarding the therapeutic potential of self awareness in dreams, as well as its accessibility to others, still await confirmation from more systematic studies with wider populations.

Gackenbach's (1978, 1981a, 1981b, et. al 1983) studies represent the first glimpse into the personality of the frequent lucid dreamer. Despite the emerging patterns in her findings a "lucid personality" has not yet emerged. Even so, her findings at least help to dispel the possible argument that lucid dreaming represents underlying pathology. Clearly, much more research into the relationship between lucid dreaming and personality is required before any generalizations can be made.

Hearne (1978), La Berge (1981) and Dane (1982) have removed any remaining doubts as to whether some, if not most, lucid dreams are in fact genuine dream phenomena. These laboratory studies have essentially given the go-ahead for a concerted investigation into this long-neglected, intriguing dream phenomenon.

## Part Two: Review of the Research on the Treatment

Review of the Research on the Induction of Lucid Dreaming: Although the previously mentioned research has helped pave the way for the acceptance of lucid dreaming as a genuine dream phenomenon with possible therapeutic benefits, the question still remains: Can lucid dreams be induced with any degree of regularity in inexperienced subjects? If the answer

is no, then the potential use of lucid dream induction as a tool in psychotherapy would be restricted to those clients who are already experiencing some degree of lucidity in their dreams. Preliminary research indicates that frequent lucid dreamers constitute a distinct minority. In two separate surveys Blackmore (1982) found that only 13 per cent and 27 per cent of two student samples claimed to have had five or more lucid dreams. Less than three per cent of the SS claimed to be able to have a lucid dream at will.

But if lucid dreaming can be induced or nurtured, then counselors and psychotherapists could feasibly pursue a type of in-depth dream therapy, in which the dream's phenomenal realm could become the experimental arena for: developing greater assertiveness (Garfield, 1974a, 1974b, 1975a, 1975b), changing anxiety-provoking dream content (Tart, 1979), expressing feelings (Corriere and Hart, 1977; Corriere, Hart, et. al. 1977), entering into mystical experiences (Evans-Wentz, 1958; Sparrow, 1975, 1976a, 1976b, 1978a) and obtaining a preview of the near-death and presumed after-death phenomenal realms (Evans-Wentz, 1958, 1960).

Thus far, only a few induction studies have been conducted, even though a number of induction strategies have been presented in the literature. These strategies include altering diet and increasing exercise (Evans-Wentz, 1958), concentration and self-suggestion (Evans-Wentz, 1958; Tart, 1979; Sparrow, 1978b; La Berge, 1980a, 1980b; Malamud, 1980; Dane, 1982), meditation (Rossi, 1972; Sparrow, 1976a, 1976b, 1976c,

Reed, 1977), artwork, autogenic training, psychedelic drugs, more thorough dream reporting (Rossi, 1972), and hypnosis (Tart, 1979; Dane, 1982).

In a home study dream recall experiment, Reed (1977) found that subjects who reported a lucid dream in the morning tended to report having meditated on the previous day. However, this significant correlation accounted for only a small portion of the variance.

Sparrow (1978) conducted a lucid dream induction pilot study with 91 subjects, in which he compared the effectiveness of merely trying to have a lucid dream (i.e. "simple try" condition) with that of engaging in a pre-sleep strategy based on rewriting and reliving in fantasy a previous unpleasant dream (i.e. "dream reliving" condition). Sparrow found a near-significant increase in lucid dreams on both the simple-try and dream-reliving nights over baseline levels established at the beginning of the pilot study.

Malamud (1980) employed a dialectically rather than classically experimental research design in an attempt to extend by analogy the concept of lucidity into the waking life. Instead of focusing her efforts on inducing lucid dreams per se, Malamud worked by mail with six young adults toward developing a lucid response to their waking and dream lives. The treatment included: instructions for having "lucid waking dreams"; a lucidity training manual; and an exercise for becoming more aware of "dreamlike happenings". The subjects were also instructed to send to the researcher at least one

dream each week. The result (as measured by global nonstatistical procedures) of the lucidity training was to enhance the subjects' imaginative power, increase their awareness of freedom and safety in the "imaginal" realm; and promote insight into the self-reflecting aspects of dreams and waking imagery. Although some subjects reported changes in their dreams, there was not a significant increase in lucid dreaming per se.

In a study of attempts to induce lucid dreaming in herself, Patricia Garfield (1975b) used a pre-sleep suggestion to increase her frequency of lucid dreams to a terminal frequency of three per week. After collecting 30 lucid dreams in an 18-month period, Garfield found that her lucid dreams tended to occur: after a busy day, regardless of affective tone; following sexual intercourse in the middle of the night; after several hours of sleep, usually between 5:00 a.m. and 8:00 a.m.; when she slept on her back rather than on her side; and in the midst of an ordinary dream in which she was swimming or flying.

La Berge (1980a, 1980b) has recently developed and tested an induction procedure which appears to be effective in increasing the frequency of lucid dreams. Referred to as the MILD technique (i.e. Mnemonic Induction of Lucid Dreams), La Berge's method involves: awakening several hours into the sleep cycle; recalling the most recent dream; reliving the dream in fantasy while affirming to oneself that one will become lucid upon returning to sleep; and finally repeating

over and over as one drifts off to sleep a statement of intention to become lucid in the sleep period. Serving as his own subject over a period of six months, La Berge succeeded in increasing his frequency of lucid dreams from four to twenty per month.

Since La Berge's introduction of the MILD technique, other studies have attempted to compare it with alternative induction strategies. In a combined study of lucid dream induction strategies and ocular signalling, Dane (1982) has compared the effectiveness of the MILD (La Berge, 1980a) technique with that of the posthypnotic suggestion (i.e. a researcher/hypnotist instilling the suggestion in a S to have a lucid dream on a night following the hypnosis session). Preliminary results have failed to indicate any differences between the two induction methods. It is important to note that Dane has employed both frequent and moderately frequent lucid dreamers in his study.

Gackenbach and La Berge (1982) are presently comparing all combinations of two types of mental induction techniques -- MILD and pre-sleep visualization -- with two types of physical induction techniques -- balance training and static stretching. Employing a small number ( $n = 30$ ) of experienced subjects, the study has thus far indicated that two of the four combinations -- MILD/balance training and visualization/static stretching -- have produced the best results. However, cell sizes are quite small, since the Ss are divided into four conditions. The researchers have

arrived at no conclusions on the basis of these early rough analyses.

A Clinical Application of Lucid Dream Induction. For the purposes of the present study, it is important to cite a preliminary clinical application of lucid dream induction. Halliday (1982) claims that lucid dream induction has proven effective in helping his clients overcome the fear of repetitive nightmares. For example, in working with a 39-year-old female factory worker suffering from frequent upsetting dreams, Halliday presented her with a list of 10 tests (Hearne, 1982) one may conduct while awake or dreaming to help differentiate a dream from a waking experience. Halliday reports that the woman was able to implement the techniques within a few days, resulting in episodes of lucidity and a concomitant alleviation of her fear toward her dreams. Halliday's brief contact with the woman further limits the conclusions that can be drawn from this single case example. But the results illustrate the possible therapeutic benefits of lucid dream induction in the contexts of counseling and psychotherapy.

Critique of the Research on the Induction of Lucid Dreaming. The research on the induction of lucid dreams is in a preliminary stage, characterized by investigating small, samples with loosely controlled methodology.

Sparrow's (1978) pilot study is merely a source of hypotheses, since the study was loosely controlled (i.e. announced as a lucid dream study) and only superficially analyzed (i.e. chi-square only). However, the addition of a "simple try"

condition alongside the induction technique is an aspect that future studies should include in order to assess the extent to which individuals can induce lucid dreams in the absence of a researcher-imposed cognitive strategy.

Garfield's self-study (1975b) suggests that the frequency of lucid dreams can be increased by individuals already experiencing relatively frequent lucid dreams. Her study also generates some hypotheses concerning the pre-sleep conditions which promote lucidity. However, her self-study contributes little toward an understanding of whether or not lucid dreams can be induced in a wider, less experienced population of dreamers.

Malamud (1980) is to be commended for extending the concept of lucidity into the waking realm and for developing counseling interventions based on the lucidity metaphor. As a lucid dream induction study, however, Malamud's study is lacking on several fronts. First of all, her subject population was small (6) and homogeneous. Second, if a significant number of lucid dreams has resulted it would have been impossible to isolate the causes from the hodge-podge of treatment components, which were not varied at all from subject to subject.

La Berge's (1980a, 1980b) efforts with the MILD technique are certainly encouraging; but his results to date have been achieved by using himself or other previously adept lucid dreamers as subjects. Thus he has failed to demonstrate that lucid dreams can be induced in 1) a wider populations



comprised of 2) individuals who report a moderate or low frequency of lucid dreams in the first place. At this point, La Berge has succeeded in merely showing that lucid dreamers can have more lucid dreams than they already were experiencing.

Preliminary efforts to compare the MILD technique with post-hypnotic suggestion (Dane, 1982) and visualization (Gackenbach and La Berge, 1982) have thus far failed to indicate any significant differences between induction strategies.

Considering that a particular technique has not yet emerged as clearly superior, the present study will build upon a previous study by Sparrow (1978) in which two induction strategies were pilot tested with a relatively large sample ( $n=91$ ) of subjects who varied considerably in their previous frequency of lucid dreaming. Since both techniques produced a near-significant increase in lucid dreams in such a heterogeneous (i.e. different with respect to previous lucid dream frequency) sample, it seems justifiable to employ slight variations of these particular techniques in a better controlled, more thoroughly analyzed study of a similar subject population.

### III. Methodology

#### The Population

Acquisition of Subjects. The sample for the dream induction study was comprised of 161 volunteer members of the Association for Research and Enlightenment, a parapsychological research organization located in Virginia Beach, Virginia. Over a period of two months, brief requests for research volunteers were printed in one of A.R.E.'s monthly membership publications. This announcement followed the procedures established by previous A.R.E. research studies involving the membership.

The announcements made no mention of lucid dreaming, nor were any research objectives divulged. The project was described simply as a "study of the induction of certain helpful dream states". This somewhat vague but truthful description enabled the subjects to give informed consent without seriously compromising the integrity of the research design.

The Association for Research and Enlightenment. The A.R.E. is a non-profit parapsychological research organization founded around the psychic work of the famous clairvoyant, Edgar Cayce. As an open-membership educational association, the A.R.E. sponsors seminars, retreats, and symposia in most major U.S. cities, as well as in many foreign countries. The A.R.E. also oversees a network of

over 1,700 study groups around the world; publishes books on a variety of topics in transpersonal psychology; and conducts research from time to time with its interested members.

The A.R.E. has built its research program around the ideal of "participatory research", in which the "subjects" are regarded as partners in the process of doing research. Before any study is approved, the A.R.E. Research Committee asks the question: What's in it for the participant? In other words, each project must involve a potentially valuable, growth-enhancing experience for the member/participants. The challenges and benefits of this research ideal have been discussed previously (Thurston, 1975; Reed, 1976a).

As mentioned in Chapter One, the target population for this study is perhaps a small percentage of the general population; that is, those individuals who are pursuing counseling (or making concerted self-directed efforts to change) and who are interested in dreamwork, if not already involved in it. Because of the restricted nature of the target population, the A.R.E. sample gains legitimacy as a representative sample. Specifically, about two-thirds (Sparrow, 1981) of A.R.E. research volunteers currently work with their dreams. And by joining an organization which openly espouses a spiritual approach to life, emphasizes the importance of spiritual disciplines such as prayer and meditation, and places service above all other

ideals, the A.R.E. member is clearly expressing an involvement in a self-directed program for personal growth.

Thus it can be argued that a sample drawn from the A.R.E. membership comes closer to representing at least a segment of the target population than a sample drawn from the general population. However, the question still remains: Does the interest in psychic phenomena and related experiences render an A.R.E. sample too deviant from the standpoint of external validity?

This question has not been conclusively answered, due to the lack of studies comparing A.R.E. members with non-A.R.E. samples. Even so, two studies have provided some basis for comparing A.R.E. research volunteers with non-A.R.E. subjects (Palmer, 1979; Kohr, 1980).

In the first study, parapsychologist John Palmer surveyed a group of Charlottesville, Virginia, townspeople by mail to ascertain their claimed frequencies of previous psi and psi-related experiences, as well as demographic characteristics such as age, sex, marital status, political stance, religiosity, income, education level, and occupation. Since the 46-item questionnaire made no effort to disguise the parapsychological nature of the study, the low return rate (less than 50%) suggests that a selection process may have been occurring, rendering the final sample less representative of the general population, and more similar to a typical A.R.E. sample. Despite this weakness, Palmer's sample is the only non-A.R.E. sample to date against which an A.R.E. sample of A.R.E. research volunteers has

been compared on an item-to-item basis.

Following Palmer's study, Kohr (1980) administered Palmer's questionnaire by mail to a sample of 570 A.R.E. volunteers, and obtained a 71 percent response rate. Although Kohr's primary purpose in conducting the survey was to explore the within-subjects relationships between various psi and psi-related experiences, the use of the Palmer questionnaire afforded an opportunity to compare the A.R.E. sample with Palmer's sample.

As might be expected, the A.R.E. sample reported a significantly higher frequency of all psi and psi-related experiences, which included: waking ESP; dream ESP; ESP agency, that is, the experience of transmitting, rather than receiving ESP impressions; psychokinesis; out-of-body experiences; apparitions, communication with the dead; hauntings, past-life memories; Deja vu, and aura vision. However, Kohr found the A.R.E. sample to be quite similar in most ways to Palmer's townspeople, on the demographic and personal preference questions.

Although the A.R.E. respondents were slightly older (median age approximately 45 compared with about 41) and with somewhat more formal education (44% were college graduates compared with 40%), they were nearly identical in terms of income and occupational breakdown. Like Palmer's townspeople, the A.R.E. sample was predominantly white, female and married. The A.R.E. respondents considered themselves more

liberal (33% rated themselves as liberal or very liberal as opposed to 21%). The greatest difference between the two samples was in the area of religiosity where 40% of the A.R.E. respondents considered themselves as very religious in outlook as opposed to only 8% in Palmer's townspeople (Kohr, 1980).

Critique of the Population. In summary, one might expect a typical A.R.E. sample of research volunteers to be more liberal, religious, and sophisticated in terms of psi and psi-related experiences, than a volunteer sample from a non-A.R.E. population. Despite these differences, there was good reason to investigate such a sample, when the logistical restraints and purposes of this study were taken into consideration.

One of the purposes of this study was to ascertain whether lucid dreaming is an achievable goal for a wider range of persons than previous studies have investigated. Since most of the induction studies conducted thus far (Hearne, 1978; La Berge, 1980a, 1980b; Garfield, 1975; Dane, 1982) have investigated only a few already talented lucid dreamers, any move away from this practice constituted an improvement. However, it became a challenge to obtain enough appropriate subjects for an expanded induction study, without going to a discrete population which had its own idiosyncrasies, as well. It was decided that the benefits of employing a large sample of motivated A.R.E. subjects would more than offset their idiosyncrasies, most of which it can be

argued, actually constitute representative qualities of the target population. In support of the notion that A.R.E. research volunteers embody the qualities of the specified target population, Kohr says:

Although the A.R.E. sample is not representative of the general population...it broadly represents the population of individuals pursuing an interest in...topics related to the human potential movement. Such people often join organizations such as A.R.E. (1982).

Besides the sample's idiosyncrasies, one might criticize the present study's use of self-selected subjects. On one hand, this was admittedly a weakness; for it does restrict the generalizations that can be made from the resultant data. But once again, it is important to note that lucidity/reflectiveness induction could never be sprung on an unwitting client, as one might utilize paradoxical techniques (L'Abate and Weeks, 1982), or structural family therapy (Minuchin, 1978) which, it is claimed, do not require the clients' full comprehension and compliance in order to be effective.

From another angle, it was unlikely that lucidity could have been induced in subjects to whom the task was unimportant. In commenting on the research done thus far on controlling dream content, which is closely related to the task of inducing greater awareness in dreams, Tart (1979) argues that "...we probably should not expect very good

results from subjects who do not consider the task very important" (p. 244). Thus, while some researchers might consider self-selection a weakness, others consider it to be a necessary aspect of this kind of study.

By introducing various control conditions into the experiment, such as: a "simple try" condition to assess the ability of subjects to induce lucid dreams in the absence of a researcher-supplied cognitive strategy; pre- and post-treatment data collection; and random assignment of subjects to treatment conditions; it was believed that this study could generate valuable conclusions regarding the efficacy of the particular induction techniques, regardless of the population's idiosyncrasies.

It is important to note that several previous studies of this subject population have generated useful, publishable contributions in a variety of areas of psychological and parapsychological enquiry (Cayce, Thurston and Puryear, 1975; Reed, 1976a, 1976b, 1977, 1978; Kohr, 1976, 1977, 1978, 1980, 1982).

### The Treatments

This study tested the efficacy of two lucid dream/reflectiveness induction strategies. The primary induction technique consisted of reliving a previous dream in fantasy, and substituting new responses for the dreamer's original ones. This exercise was developed and pilot tested by Sparrow (1978). It will hereafter be referred to as the



Dream Reliving exercise (see Appendix C). The other strategy -- a "simple try" condition -- relied largely on the subjects own desire and self-determined efforts to induce such experiences, and will hereafter be referred to as the Motivational Essay exercise (see Appendix D).

During the five-day treatment period, which was positioned between two five-day baseline dream recording periods, the subjects engaged in one of the above pre-sleep induction techniques on five consecutive nights. Before using these pre-sleep techniques, all of the participants read a brief introduction to the subject of lucid dreaming (see Appendix E). This reading material served at least three purposes: 1) It helped define the phenomenon in unambiguous terms; 2) it conveyed a sense of how lucidity can be used constructively in the course of a dream; and 3) it perhaps instilled a greater desire to have such experiences. The subjects were asked to read this introduction on the first night of the treatment week, prior to engaging in any lucid dream induction strategies.

Dream Reliving. The Dream Reliving exercise consisted initially of a 30-40 minute exercise conducted on the first night of the treatment week. In this preliminary exercise, subjects were asked to:

- 1) recall one unpleasant dream out of their past, and to write the dream down on a worksheet in as much detail as possible. (If a subject could not recall such a dream, he/she was asked to recall and write down an unpleasant

waking experience, which may have been improved by the presence of greater self-reflection.)

2) relive the dream in fantasy to get back in touch with its affective qualities.

3) relive the dream again, but as though they were lucid and able to manifest a wider range of creative and fearless responses to the originally unpleasant dream content.

4) write down the new "dream" on the worksheet.

5) review the new "dream" as they fell asleep, meanwhile affirming that they would become lucid in their ensuing dreams.

On the subsequent four nights, subjects were asked to review the new dream, and to revise it if they desired. Then they were asked to repeat step five (above) before going to sleep (see Appendix C).

The Motivational Essay Exercise. Half of the treatment subjects were asked simply to try to have lucid dreams during the five-day induction period. In an introduction to the task, the experimenter informed these subjects that research had thus far failed to indicate that any induction method was better than any other, which is true. Given this state of affairs, the subjects were told that desire or willpower alone might be the most important factor. They were then asked to demonstrate just how effective desire and willpower could be in the induction of lucidity. They were asked to refrain from engaging in any

special techniques or pre-sleep behaviors which had not been a part of their pre-treatment regimen.

In order to equalize the time spent on induction tasks between the Dream Reliving and Motivational Essay groups, the latter group was asked to spend 30-40 minutes on the first night of the treatment week writing an essay on "Why I Would Like to Have Lucid Dreams." On the next four nights, these subjects were asked to spend 15 minutes, before retiring, reviewing the essay and trying to increase their desire for lucidity in their ensuing dreams.

An attempt was made to equalize the instructions for the two treatment conditions in such a way that the Motivational Essay subjects possessed the same level of expectation and enthusiasm for the task as the subjects in the Dream Reliving condition. (For a comparison, see Appendices C and D.)

#### Data Gathering Procedures

Upon receiving a letter from a prospective subject, expressing an interest in participating in the dream induction study, the researcher mailed:

- 1) an orientation letter, describing the schedule of activities.
- 2) a 30-item questionnaire designed to assess various possible predictor variables on a lucid dream induction task, as hypothesized by the anecdotal and research literature (see Appendix F and Instruments section).

3) a request for the subjects to record dreams during a five-day baseline period. Only three-fifths of the subjects participated in this baseline data collection task (Groups one, three and five).

4) a one-page set of instructions for recording dreams, and for affixing other pertinent information such as subject number, date, etc., to each dream record. Once again, only three-fifths of the subjects received this page along with their introductory packet.

5) a consent form, based on the requirements of the College of William and Mary.

6) an addressed, stamped envelope for returning the questionnaire answer sheet, the consent form, and baseline dreams (if applicable).

Baseline Dream Collection. Half of the subjects who later engaged in a lucid dream induction exercise during the treatment week (Groups one and three), and all of the control subjects (Group five) were instructed simply to record all their dreams for five consecutive weeknights, from a particular Sunday night (2/13/83) through the following Thursday night. No mention of research hypotheses, or implicit demands, were made in these instructions in order to avoid the confounding effects of reactive arrangements, or "demand effects" (Stern and Saayman, 1978).

The other two-fifths of the subjects began collecting dreams during the treatment week itself, which started five

weeks after the initial baseline collection period. This delay was incorporated into the research design to control for possible maturation effects in the baseline dream-collecting subjects.

At this early stage of the study, and throughout its duration, subjects were strongly encouraged to record all their dreams, including fragments, immediately upon awakening in the morning. They were also asked to put the dream records aside once completed, and to refrain from altering them in any way.

Once the researcher had received the subject's questionnaire answer sheet, consent form, and baseline dreams (if applicable), the subject was admitted into the second stage of the study, which was initiated through a second mailing to all participants approximately three weeks after the end of the baseline week. Out of 172 subjects who received the introductory packet, 161 returned their materials in time to participate in the induction stage.

The Treatment Period and Control Conditions. The treatment packets were mailed first-class 10 days before the first night of the lucid dream induction week. The materials in the packets were, from external appearances, exactly the same for all five groups. They were:

- 1) a brief letter introducing the participants to the second phase of the study.

- 2) instructions for recording dreams (redundant for the subjects who participated in the baseline data

collection).

3) a sealed packet, marked #1, which was dated 3/20/83; and a sealed packet, marked #2, which was dated 3/27/83.

Actually the above components varied in their content, according to the group to which a subject had been assigned. All groups (one through five) received the same one-page orientation letter. The letter essentially told the subjects to open the packets only on the dates printed on the outside. The purposes of the study were, as yet, undisclosed. This brief letter was marked "To be continued..."

On Sunday, 3/20/83, all subjects opened packet #1. Groups one through four received:

1) a detailed continuation of the orientation letter, describing the purposes of the study (i.e. to engage in efforts to induce lucid dreams on the five ensuing nights).

2) an eight-page introduction to the subject of lucid dreaming, written by the researcher (see Appendix E).

3) instructions for conducting the Dream Reliving exercise (Groups one and two) or the Motivational Essay exercise (Groups three and four).

Group five's first packet merely contained instructions for collecting dreams for five more nights, as they had done during the baseline collection period.

Post-treatment Data Collection. On 3/27/83, all subjects opened packet #2. Groups one through four found

brief instructions for recording dreams for five more consecutive weeknights. They were asked to cease their pre-sleep induction efforts, and to refrain from any pre-sleep behaviors which differed from their normal pre-treatment regimen. The instructions were merely a restatement of the original baseline collection request, with which Groups one and three were already familiar.

The control group's (Group five) second packet contained all of the materials included in the experimental subjects' first packet. Half of the control subjects were randomly assigned to the Dream Reliving exercise, and half were assigned to the Motivational Essay task. Although this segment of the study was included primarily to provide the control subjects with a possibly growth-enhancing experience, the researcher also anticipated being able to pool this data with that of the experimental subjects, in order to increase the  $n$  of the treatment groups by roughly the same proportion, for a special all-subjects analysis (see Results section).

At the completion of the third week (second week for groups two and four), all subjects mailed their dreams to the researcher in an addressed, stamped envelope. Many of the subjects included brief histories of their dream work, comments on the design of the study, and dreams that occurred during the weekends between the treatment and post-treatment weeks of the study.

Critique of the Data-Gathering Procedures. One might

argue that the instructions for the treatment and post-treatment weeks should have been mailed separately, in order to prevent the subjects from opening the instructions prematurely, and polluting the data. However, if any of the subjects had been inclined to do so, they had other more damaging ways to cheat on their results. For example, they could have lied on their responses to the Dream Study Questionnaire; or they could have embellished or even fabricated their dream reports.

Rather than trying to impose control in a context where little control was actually possible, this researcher believed that by treating the subjects as co-researchers, they would have a vested interest in the integrity of the results, and thus would be less inclined to cheat. Furthermore, by sending out one mailing for the last two weeks of the study, the researcher insured that the subjects were able to begin treatment and post-treatment phases of the study on the same two days, thus controlling for possible history effects.

### Instruments

The Dream Study Questionnaire. Each subject completed a 30-item questionnaire designed to assess several possible predictor variables, or covariates, of performance on a lucid dream induction task. Only one of the 30 questions mentioned lucid dreaming per se; thus the other



questions served to mask the specific topic of the study. The questions were taken from a longer, 221-item questionnaire, which had been tested and thoroughly analyzed by Kohr (1980,1982). Areas that were covered in the questionnaire included: dream recall, dream recording behavior, caffeine and alcohol consumption, lucid dream frequency, near-death encounters, sex and age (see Appendix F).

The Dream Lucidity Scale. As mentioned in Part I, the dream reports were first evaluated on a four-point scale (0,1,2,3) according to the criteria of non-lucid (0), incipient pre-lucid (1), pre-lucid (2), and lucid (3) dreams.

Full lucidity has been unambiguously defined in the literature (Van Eeden, 1913; Green, 1968) as the experience of becoming aware that one is dreaming during a dream. Thus the validity of this aspect of the Dream Lucidity Scale (DLS) presents no problem. If anything, the operational criteria employed in the DLS to designate a full lucid dream (3) is on the conservative side: To guard against the possibility of false positive ratings, the DLS recognizes lucidity only by the presence of explicit declarative statements such as "I'm dreaming," or "This is a dream." If a dreamer makes such a statement at any point in a dream record, the DLS awards the dream a full lucid rating, even though the dreamer may subsequently conclude that he/she was mistaken.

The incipient pre-lucid (1) and pre-lucid (2) ratings of the DLS constitute a refinement of the traditional pre-lucid designation (Green, 1968). Until now, pre-lucidity has remained a rather nebulous construct, as evidenced by the variety of dream phenomena receiving this label (Green, 1968). Some types of dreams commonly referred to as pre-lucid actually exhibit little or no critical, reflective dreamer process. For instance, two common "pre-lucid" dreams--the flying dream and the "false awakening" dream (i.e. dreaming of waking up)--have received the pre-lucid designation simply because dreamers often become lucid during such experiences. This tendency to assign pre-lucid ratings on the basis of certain dream settings or events blurs the distinction between dream imagery (or content) and dreamer process.

In recognition that flying dreams, false awakenings, and a variety of other anomalous dream happenings frequently coincide with critical dreamer process, the DLS includes incipient pre-lucid category. The higher, pre-lucid designation is then reserved for those dreams in which the dreamer explicitly questions whether the experience is real, or could be a dream. Thus, a pre-lucid dream differs from a full lucid dream on the DLS only in that the dreamer never actually concludes that he/she is dreaming. (See Appendix A for a description of the criteria for each category.)

The Dreamer Development Scale. A second rating

scale, comprised of four separate likert subscales used in this study to assess four dimensions of dreamer development, based on Rossi's work (1972). These dimensions are: reflectiveness; interaction with humans or animals; role or status change; and actualization of constructive behavior. With the exception of role change, the subscales remain entirely true to Rossi's description of the phenomenological changes in the dream which denote personality growth (see Theoretical Rationale in Part One). The Dreamer Development Scale (DDS) originally contained a subscale to measure self-image changes, as well as parallel external imagery changes which Rossi has observed to be part of the restructuring of the dreamer's self-concept (Rossi, 1972). However, because the reliability study conducted with the DDS indicated that the imagery changes he describes occur quite rarely, it was decided to broaden the criteria of this scale so that various shifts in role and identity, involving no particular imagery alterations, could also be included under this construct. Still, the mean for this subscale proved to be the lowest of the four DDS subscales (see Results section).

The construction of the DDS followed a procedure established by Kluger (1975) who developed a similar dream rating scale to measure "archetypality" as described by Jung (1961). In consulting Jung's writings on the subject, Kluger established four criteria of dream archetypality: mythological parallel; heightened affect; irrationality; and

remoteness from everyday life. Kluger's scale ranks each dream according to the degree it manifests each of these four criteria. The scale assigns a score of 0-3 for mythological parallel; 1-4 on affect; 1-7 on irrationality; and 1-7 on remoteness from everyday life. In order for a dream to be considered archetypal, it must receive high or "critical" scores on at least three of the four dimensions; that is, a score of 1 or more on mythological parallel; a 3 or 4 on affect; and a score of 5 or more on the last two categories. According to Kluger's scale, a dream may therefore be assigned to the discrete categories of archetypal (i.e. receiving three or more critical scores) or non-archetypal (i.e. receiving zero to two critical scores). However, a dream can also be assigned a graded rating (from 0-4) for the degree of archetypality (Kluger, 1975). Commenting on this rating system, Faber, et. al, point out that "this combination of criteria for discriminating archetypal dreams, as well as the concept of a quantifiable degree of archetypality, is an original contribution and is nowhere else to be found in the literature...(1978)."

In a similar fashion, the DDS permits a categorical and graded analysis of the concept of dreamer development, as described by Rossi (1972). Following Kluger's procedure, a dream can be labeled as "developmental" or "non-developmental" depending upon whether or not it receives at least three critical scores (arbitrarily defined

as a score of 3, 4, or 5 on five-point continuums) on the four DDS subscales. Then a graded measure of the degree of dreamer development can be obtained by simply adding the number of critical scores, from zero to four, a dream receives.

Given the lack of previous research on Rossi's (1972) hypotheses concerning dreamer development, this researcher found it necessary to design the DDS for the purposes of this study. The only other known rating scale based on Rossi (Miskiman, 1978) was developed as a self-rating scale--or as an informal diagnostic tool for therapists--and lacks the rigor and operational criteria required for a formal research study. Furthermore, no reliability study had been conducted to evaluate Miskiman's scale.

Reliability Tests for the DLS and the DDS . As original, untested rating scales, the DLS and DDS had to be subjected to reliability tests prior to their use on the actual dream data. To assess their reliability, the researcher enlisted six judges who, it was presumed, would serve later as the raters of the experimental dreams.

In the first stage of the reliability study, the researcher compiled a set of 20 sample dreams. This set included 1) examples of incipient pre-lucid, pre-lucid and lucid dreams; and 2) dreams that exhibited high, middle and low ratings on each of the DDS subscales. Thus the sample dreams reflected a wide range of dreamer process.

Because of scheduling conflicts, the researcher found

it impossible to arrange a group meeting with the six prospective dream raters: He met with three of the judges together, and with the other three on a one-to-one basis. After introducing them to the criteria for each of the scales, and allowing the judges to practice using the scales on a few samples, the researcher gave each judge a copy of the 20 dreams, and a set of written directions for using the scales (see Appendix F). Once the judges had rated the 20 dreams, their scores were analyzed by Dr. Richard Kohr, of the Educational Assessment Division of the Pennsylvania Department of Education.

Since the researcher anticipated having to evaluate over 1500 dreams in the actual study, it was decided beforehand that only one judge would, ideally, rate each dream. This decision made it especially challenging to achieve acceptable reliability coefficients, which were set by Kohr at .80 for each of the scales.

The analysis dealt with the following comparisons: 1) the differences in mean ratings across judges; 2) the degree to which each judge correlated with the experimenter; and 3) the degree to which each judge correlated with all other raters. An analysis of variance with repeated measures (with ratings as repeated measures) assessed the mean differences across judges; and the reliability of a single rater was estimated by using Snedecor's formula (Ebel, 1951).

The results revealed no mean differences in the DLS

ratings, or in the Actualization scores on the DDS. However, one judge deviated significantly on the Reflectiveness scale, two judges deviated on the Interaction scale, and three judges deviated in the Role Change scale. The only discernible pattern in the deviant ratings appeared in the Role Change scores, where three judges clustered together around a mean of 2.0, and the other three clustered around 2.6. This was interpreted as an indication that there were two distinct judging styles on this scale, which could be reconciled through further group training.

The inter-judge correlations revealed that two judges produced consistently low correlations across most of the scales. It was, therefore, not surprising that when a single-rater coefficient was computed for each scale, the coefficients for the DDS subscales did not reach .80, with the exception of the Reflectiveness subscale. The single-rater reliability coefficients for the five scales were:

- 1) .97 for the Dream Lucidity Scale.
- 2) .80 for Reflectiveness.
- 3) .57 for Interaction.
- 4) .68 for Role Change.
- 5) .72 for Actualization.

In summary, the combination of significant mean differences and insufficient single-rater coefficients made it necessary to conduct a second reliability test.

Considering that only four judges would be needed for

the data analyses, Kohr (1983) recommended that only the top four raters participate in a second reliability study. He also emphasized the importance of a group training session, where any deviance in judging could be adjusted to a researcher-group consensus.

A group meeting was held with four judges, in which: the results of the first reliability study were reviewed; ambiguities in the rating criteria were clarified and incorporated into the written instructions; and three sample dreams were rated individually, and then discussed. Following the group meeting, the four judges rated a second representative set of 12 sample dreams, and submitted their scores for analysis.

The results of the second test revealed no mean differences between judges on any of the five scales. In addition, the single-rater reliability coefficients were as follows:

- 1) .98 for the DLS.
- 2) .85 for Reflectiveness.
- 3) .84 for Interaction.
- 4) .86 for Role Change.
- 5) .88 for Actualization.

In summary, the second stage of the reliability study established the reliability of both the Dream Lucidity Scale and the Dreamer Development Scale.



Research Design

The following diagram represents the research design that was employed in this study:

Group 1:	R	00000	X1OXOXOXOXO	00000
Group 2:	R		X1OXOXOXOXO	00000
Group 3:	R	00000	X2OXOXOXOXO	00000
Group 4:	R		X2OXOXOXOXO	00000
Group 5:	R	00000	00000	(X1orX2OXOXOXOXO)

Two lucid dream strategies (X1 and X2) were compared. Baseline observations in the form of home-recorded dreams were collected from half of the subjects in the treatment groups (Groups one and three) and all of the control subjects (Group five) prior to treatment. The other half of the treatment subjects began recording their dreams during the treatment period itself. The treatment segment of the study consisted of five nights of pre-sleep exercises (X1 or X2) followed by dream recording upon awakening the next morning.

The above design controlled for history effects by including a control group that did not engage in lucid dream induction during the treatment week. The possibility of maturation effects was partly offset by the absence of a pre-treatment data collection period for half of the treatment subjects, and by the short duration of the study itself (two or three weeks, depending on group). To minimize the effects of different-group subjects contacting

each other and discussing the project, subjects living at the same address were assigned to the same group. Instrumentation effects were controlled for by shuffling the order of the dream protocols prior to having the judges rate them.

Since participation in any of the five groups required only a minimal time commitment, it was anticipated that the attrition would be similar across all five groups. An analysis of the attrition patterns confirmed that the groups suffered no differential loss of subjects (see Results section).

Since subjects were randomly assigned to groups, and maturation was not expected to pose a problem for the aforementioned reasons, the above design also controlled for selection-maturation interaction effects.

Separate sealed instructions for the three stages of the study minimized the threat of reactive arrangements, or demand effects. However, some subjects could have guessed beforehand what the project's specific objectives would be, especially considering that the researcher had authored a booklet on lucid dreaming several years before (Sparrow, 1976). Whether or not such guessing was accurate, some subjects may have nevertheless sought to comply with a variety of anticipated objectives by trying generally to have unusual dreams during the baseline dream collection period. This compliance effect could have affected the baseline data to such an extent that the dreams were no

longer an accurate reflection of everyday dream recall.

However, if the researcher had attempted to guard against such compliance, the subjects may have complied with this demand by suppressing the tendency to have unusual dreams. To strike a neutral balance, the instructions for the baseline data collection followed the guidelines set by other researchers concerned with the effect of implicit demands on dream recall (Kaplan, Saayman, and Faber, 1982; Stern and Saayman, 1981). Despite these precautionary measures, such "baseline" data must ultimately be seen as products of the entire experimental context, rather than as an unadulterated reflection of normal dream recall.

### Statistical Analyses

Criterion Measures. Before outlining the statistical procedures employed in the data analyses, it is necessary to describe how the criterion measures were derived from the dream ratings and entered into the statistical analyses.

First, it was decided that the appropriate level of analysis for the purposes of this study would be a subject's performance over the course of a five-day dream recall segment. Thus the individual dream ratings on the DLS and the DDS had to be totaled or averaged in some way in order to produce single weekly criterion measures for each scale. Below is a list of the criterion measures (and their derivations) investigated in this study.

- 1) total dream recall for a given week (TOTD), derived

by simply totalling the number of discrete dream reports submitted by a subject.

2) total number of incipient pre-lucid dreams, total pre-lucid dreams, and total lucid dreams for the week. These three totals were used to generate three criterion measures, each with a slightly different emphasis and derivation.

a. total lucid dreams for the week (TOTLUC). This total was considered the most stringent criterion, since it only measured full lucidity. It was derived by simply totalling the number of dreams that were awarded a rating of "3"; that is, considered to be a full lucid dream.

b. total deviations from non-lucidity (TDNL). This total was derived by adding the number of incipient pre-lucid, pre-lucid and lucid dreams reported by a dreamer for a given week. This variable was considered a more sensitive measure of change, and perhaps a more realistic criterion of success, given the brevity of the induction segment of the study.

c. mean lucidity score (MLUC). This measure was derived by first weighting lucid, pre-lucid and incipient pre-lucid dreams by their DLS categorical ratings, of 3, 2, or 1, respectively. Then the top three DLS ratings for the week were averaged to produce the mean lucidity score. (The decision to take only the top three scores is discussed below.) The researcher realized that this mean was not derived from a true interval scale, and thus could not be

entered into the ANOVAS that were run on the interally measured variables. However, this ordinal variable was computed to test the strength of the relationship between lucidity and the four DDS subscales, which are also ordinal scales.

3) mean reflectiveness score (MREF), derived by averaging the top three reflectiveness scores of the week.

4) mean interaction score (MINTER), derived in the same manner.

5) mean role or status change score (MROLEX), derived in the same way.

6) mean actualization of constructive behavior score (MACTUAL), derived in the same way.

7) mean number of critical scores per dream (MCRITX), derived by averaging the three highest critical score totals. (Note: A given dream could receive from 0-4 critical scores.) In contrast to the MLUC, MREF, MINTER, MROLEX, and MACTUAL variables, the MCRITX variable is an interally based measure, and thus was included in the analyses of the other interally based variables (TOTLUC, TDNL, TOTDEV).

8) total developmental dreams (TOTDEV), derived by totalling the number of dreams that received three or four critical scores on the four subscales of the DDS. This variable, too, constituted an interval measurement.

In deriving the means listed above (MLUC, MREF, MINTER, MROLEX, MACTUAL and MCRITX), the researcher decided to use

only the top three scores from each dream/week, rather than basing the means on all of the dreams reported for the week. This resulted in generally higher weekly averages, especially for the most prolific dreamers, since low-scoring dreams were frequently omitted from the analyses altogether. This method for calculating the means seemed warranted when it became clear that some dreamers obviously reported every dream they recalled, whether it was an epic dream, or a single image. Such thoroughness was encouraged in the instructions, in order to discourage subjects from "screening" their dreams. However, most dream fragments received low scores on all five scales. The researcher realized that if the weekly means were computed on the basis of all the dreams, thoroughness in reporting would have been penalized: The low scoring dreams would have offset the impact of less common, high scoring dreams. By including only the top three scores, any dreamer who recalled four or more dreams for the week ended up receiving an equal or higher average than would have been assigned on the basis of all the scores. On the other hand, any dreamers who reported one to three dreams were assigned an average based on all of the dream ratings, and thus received no adjustment in their weekly means.

It has been mentioned previously that lucidity occurs rarely in the life of the "average" dreamer, and usually no more often than once or twice a week in the life of someone who has nurtured the ability to induce them (La Berge, 1980;

Garfield, 1979). Thus it would be unrealistic to expect all dream reports to reflect the impact of a lucid dream induction exercise.

Statistical Procedures. The following statistical analyses were conducted:

1) ANOVAS to assess whether random assignment to groups actually resulted in homogeneous groups. Specifically, the analyses investigated differences in age, current level of ongoing dreamwork, previous frequency of lucid dreaming, and current level of meditation practice. In addition, a Chi-square of sex by group was conducted to ascertain if the groups contained equivalent ratios of women to men.

2) Pearson correlations between four potential covariates (age, current dream work, previous lucid dreaming frequency, and current meditation practice) with four interally measured criterion variables (TOTLUC, TDNL, MCRITX, TOTDEV), to test the strength of the relationships before entering any variables as covariates into analyses of covariance.

3) Separate paired  $t$  tests to determine if the groups that participated in the baseline collection (Groups one, three and five) changed significantly on the criterion measures from the baseline week to the induction week, and from the baseline week to the post-treatment data collection week.

## 4) Analyses of covariance to test if:

a. baseline dream-collecting groups differed significantly on the criterion measures during the baseline week.

b. baseline dream-collecting groups differed significantly on the induction week criterion measures, when the baseline scores were entered as control variables, or covariates. This analysis represented the equivalent of a repeated-measures analysis (Kohr, 1983).

c. same-treatment groups (Groups one and two, and groups three and four) differed significantly on the criterion measures during the induction week. This was conducted to assess possible maturation effects due to the baseline dream recording, and thus to determine if same-treatment groups could be pooled.

d. expanded groups one-two, and three-four (contingent on pooling), differed significantly from each other and from group five (control group) on criterion measures during the induction week.

e. control subjects, who received different treatments during their third week of participation, differed significantly on criterion measures.

f. subjects who received X1 differed significantly on criterion measures from subjects who received X2, regardless of whether the treatment was given in the first week of dream collection (Groups two and four), the second week (Groups one and three), or the third week (Group five).



g. expanded groups one-two and three-four (contingent on the pooling of data) differed significantly on criterion measures during the post-treatment week.

5. Pearson correlations to test the strength of the relationship between dream lucidity (TOTLUC, TDNL) and dreamer development (MCRITX, TOTDEV).

6. Spearman correlations to test the strength of the relationship between dream lucidity (MLUC) and the separate dimensions of dreamer development (MREF, MINTER, MROLEX, MACTUAL).

7. Chi-square analyses of attrition rates for each group, to ascertain if the groups suffered a differential loss of subjects (i.e. mortality effects).

### Specific Hypotheses

Nine hypotheses were tested in the data analyses. Four of the hypotheses -- Hypotheses One, Five, Six and Nine -- were considered principal hypotheses, given the stated purposes of this study. The hypotheses are:

1) There will be no significant changes in the criterion measures, TOTD, TOTLUC, TDNL, MCRITX, and TOTDEV, from the baseline week to the induction week, for groups one, three or five.

2) There will be no significant changes in the criterion measures between the baseline week and the post-treatment week, for groups one and three.

3) When the baseline data-collecting groups (i.e. one, three and five) are compared on the induction week measures,

taking into account the first-week measures as control variables, there will be no significant differences between the three groups.

4) There will be no significant differences in criterion measures between groups receiving the same treatment during the induction week.

5) There will be no significant differences in the induction week criterion measures, between the pooled group (contingent on pooling) receiving the Dream Reliving treatment, the pooled group receiving the Motivational Essay treatment, and the no-treatment control group.

6) When control group induction data (from the third week) is pooled with the two expanded treatment groups (contingent on pooling), there will be no significant differences on the criterion measures between the Dream Reliving group and the Motivational Essay Group.

7) There will be no significant differences on the criterion measures between the Dream Reliving Group and the Motivational Essay group during the post-treatment data collection period (control subjects not included).

8) When sex is treated as a factor in the testing of Hypotheses Five and Six, there will be no significant independent effect due to sex; nor will there be any significant sex-by-treatment interaction effects.

9) There will no significant correlations in the induction week data (control subjects' data included) between:  
a) the interval measures of

lucidity (TOTLUC and TDNL) and measures of dreamer development (MCRITX and TOTDEV), or b) an ordinal measure of lucidity (MLUC) and the individual subscale measures of the DDS (MREF, MINTER, MROLEX, and MACTUAL).

### Ethical Considerations

Since the sample for this study was comprised of voluntary subjects, the enlistment process involved no foreseeable ethical pitfalls. However, the study was announced as a study of the "induction of certain helpful dream states," making no mention of lucid dreaming, per se. This vagueness helped to prevent reactive arrangements during the pre-treatment baseline data collection period. Actually, the description was accurate, but slightly vague.

The researcher attempted to give each participant permission to discontinue their participation at any time. Although there is no research evidence to suggest that lucid dreaming exerts a detrimental influence on an individual, it is apparently a significant psychological experience, which could in rare cases, have a destabilizing effect on emotionally vulnerable individuals. Because of this possibility, the orientation letter sought to discourage anyone with a history of psychiatric problems from participating in the study.

The subjects remained blind to the successive stages of the experiment; that is, until they opened the instructions for that segment. This precaution served to minimize the

expectations that would have been generated by full disclosure from the outset, but had no ethical drawback, since all subjects were fully informed before participating in any "intrusive" treatment procedure.

Although the subjects remained blind to the rating procedures that were to be employed in evaluating their performance on the induction task, the subjects received a comprehensive feedback letter, in which the rating procedures were described in detail. Besides educating the subjects, this feedback letter fulfilled the researcher's commitment to the ideal of participatory research, upon which this study was based.

#### Summary of Methodology

Previous dream studies have failed to ascertain whether lucidity/reflectiveness induction can succeed in producing measurable changes in the dreams of a large number of motivated dreamers. By limiting their focus to a few, already proficient lucid dreamers, these studies have merely succeeded in showing that talented subjects can increase their frequency of lucid dreams. Despite the preliminary nature of such studies, the popular literature is already heralding the arrival of effective lucid dream induction (Colligan, 1982).

The present study attempted to overcome the principal weaknesses of the induction studies conducted thus far. In regard to the sample, this study tested lucid dream

induction strategies with 161 volunteers who differed considerably in their previous frequency of lucid dreaming.

To insure that a particular cognitive strategy was the causal factor in producing an increase in the subjects' frequency of lucid dreams, two induction strategies were employed. One involved a researcher-supplied cognitive strategy (i.e. Dream Reliving) and one merely involved a request for the subjects' to try to have lucid dreams (i.e. Motivational Essay). The Motivational Essay condition assessed the subjects' ability to induce lucid dreams in the absence of a researcher-supplied cognitive strategy, and thus controlled for the independent effect of desire and motivation on a lucid dream induction task.

By including a questionnaire designed to assess a subject's sex, age, previous frequency of lucid dreams, current level of dream work, and current practice of meditation, the study helped to ascertain which, if any, of these variables co-vary with a subject's capacity to induce greater lucidity/reflectiveness in dreams.

This study also: employed instruments that had been subjected to reliability tests to confirm their legitimacy; enlisted independent judges who were blind to the objectives of the study; and collected over 1800 dreams, thus providing a data base for a variety of subsequent analyses.

Although this study could not, in itself, assess the availability of lucid dreams to the general population, it did explore the availability of lucid dreaming to a much

larger and diverse (in terms of their previous frequency of lucid dreams) sample than previous studies had investigated. As such, its findings perhaps have greater relevance to the field of counseling, and self-directed lay dreamwork, than the findings of most previous induction studies.

#### IV. Results

##### Sample Characteristics

Out of 161 subjects who were admitted into the second stage of the study, 136 completed the study. However, 14 of these subjects had no dream recall for at least one of their dream recall weeks. These subjects were, nonetheless, entered into the data analyses whenever possible, and were otherwise treated as missing data.

The sample was composed of 102 (75%) females, and 34 (25%) males, with an average age of 40, and a median age of 41. Fifty-four percent of the sample claimed to be pursuing some degree of ongoing dreamwork. As for their frequency of previous lucid dreams, the sample was well-represented at each level. Eighteen (13%) could not recall having had a lucid dream; forty-seven (35%) said that it happened only rarely, that is, less than several times a year; thirty-nine (29%) claimed to have several lucid experiences per year; twenty-one (16%) reported having lucid dreams once or twice a month; and nine (6%) claimed to have such experiences on a weekly basis. It is important to note that such self-reports of lucid dreaming frequency have been found to be somewhat inflated (Rechtschaffen, 1978), once the respondents are asked to provide examples of their own lucid dreams.

Eighty-seven (64%) of the subjects claimed to be

practicing some form of meditation, which is not surprising considering the A.R.E.'s emphasis on daily meditation and prayer.

Composition of the Five Groups. As mentioned in Chapter Three, the dream study was announced in two consecutive issues of one of A.R.E.'s membership publications. This resulted in two surges of response; and many letters were received after it was too late to admit prospective subjects into a baseline data collection group (one, three, or five). In order to include these late subjects, while maintaining the integrity of the research design, these subjects were randomly assigned to groups two or four, resulting in a greater  $n$  for these two groups.

Out of the 136 subjects who completed the study, 21 were in Group one; 36 in Group two; 22 in Group three; 32 in Group four; and 25 in Group five. Although the subjects were randomly assigned to groups, an analysis of group differences were made to assess the actual homogeneity of the groups in terms of five relevant measures: These were sex, age, current level of involvement in dream work, previous lucid dream frequency, and current practice of meditation. It was found that the groups did not differ significantly on any of these variables.

Despite the similarity in the groups' tasks, and the time required to complete them, an analysis of attrition patterns was conducted in order to assess possible mortality effects. The researcher found that there were no



significant differences in the dropout rates for the five groups (Chi-square = 1.00).

#### Analyses of the Dream Data

Raw Frequencies. The subjects collected 1851 dreams over the course of the study. Four hundred and sixty-six were collected during the baseline week, for a mean of 6.6 per subject. During the second week, which was the induction week for Groups one through four, 776 dreams were collected, for an average of 6.1 dreams per subject. And during the third week, 609 dreams were reported, for a mean of 5.0 dreams per subject.

During the baseline week, only four out of 68 subjects (six percent) recorded a lucid dream. However, 16 out of 68 of the baseline subjects (24%) had an incipient pre-lucid, pre-lucid, or lucid dream during this period.

During the treatment period -- which was the second week for Groups one through four, and the third week for Group five -- thirty of 136 subjects (22%) recorded a lucid dream, and 57 (42%) recorded an incipient pre-lucid, pre-lucid, or lucid dream. During the post-treatment data collection week (Groups one through four only), 15 of 111 subjects (14%) recorded a lucid dream, while 30 subjects (22%) deviated in some way from non-lucidity.

Considering that one of the purposes of this study was to determine whether lucid dreaming is available to a wider

range of individuals than previous studies have investigated, it is significant that many of the subjects claiming to have had lucid dreams rarely or not at all prior to the study were able to induce lucid phenomena. Indeed, 10 of these subjects were able to have at least one fully lucid dream, either during the induction period or during the post-treatment period; and 13 more were able to achieve some degree of pre-lucidity.

Covariate Analyses. Prior to testing the hypotheses described in Chapter Three, an analysis was conducted to assess the advisability of entering certain variables as covariates in the analyses of covariance. Specifically, four variables -- age, current level of dreamwork, previous frequency of lucid dreaming, and current practice of meditation -- were considered candidates by virtue of having been mentioned in previous theoretical and research publications on lucid dreaming (see Chapter II ). It was decided that if any of these four variables accounted for more than five percent of the variance of any of the criterion measures, the variable would be entered as a covariate in the analyses of the data.

Pearson correlations were computed between each of these four variables and the four principal criterion measures investigated in this study; that is, total lucid dreams (TOTLUC), total deviations from non-lucidity (TDNL), mean number of critical scores per dream (MCRITX), and total developmental dreams for a given week of dream recall

(TOTDEV). These correlations were computed for the induction data only, since the number of subjects who received more than a zero on TOTLUC and TDNL was appreciably greater during the induction week period. Hence, the correlations between the lucidity measures and the dreamer development scores were expected to be more evident during the induction period than during the pre- or post-treatment periods.

The correlations between these variables are displayed in Table 4.1. Based on the strength of the relationships between 1) previous frequency of lucidity, and 2) current meditation practice, with the criterion measures, it was decided to include these two variables as covariates in all analyses of covariance.

Within-Groups Changes Over Baseline Week Measures.

Hypotheses One and Two concern changes occurring within each of the three baseline data collecting groups (Groups one, three, and five), from week one to week two, and from week one to week three. Specifically, the hypotheses are:

Hypothesis One: There will be no significant increases in the criterion measures, TOTD, TOTLUC, TDNL, MCRITX, and TOTDEV, from the baseline week to the second week, for Groups one, three or five.

Hypothesis Two: There will be no significant differences in criterion measures, from week one to week three (post-treatment), for Groups one and three.

Table 4.1 Correlations Between Possible  
Covariates and Criterion Measures

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	TOTLUC	TDNL	MCRITX	TOTDEV
Age	.03	-.02	.04	-.02
Dreamwork	.00	.13	.16*	.15
Lucid Dreaming Frequency	.31***	.29**	.11	.14
Meditation Frequency	.12	.29***	.21*	.19*

---

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\*  $p < .05$   
 \*\*  $p < .01$   
 \*\*\*  $p < .001$

---

As for Hypothesis One (which was the principal within-groups analysis), Table 4.2 displays the results of separate paired  $t$  tests conducted with each of the three baseline collecting groups. Group One exhibited a significant increase in total lucid dreams (TOTLUC) and total deviations from non-lucidity (TDNL). Although Group one also exhibited increases in mean number of critical scores per dream (MCRITX) and total developmental dreams (TOTDEV), these increases did not reach significance.

Group three did not experience a significant increase in any of the criterion measures, and even exhibited modest declines on MCRITX and TOTDEV. Even so, Group three did undergo a near-significant increase on the TDNL measure ( $p < .10$ ).

Group five exhibited significant decreases in total dreams recorded, and in the TDNL measure. The decline in the levels of the MCRITX and TOTDEV measures approached significance ( $p < .10$ ), as well.

In summary, Hypothesis One was rejected in regards to Groups one and five. Whereas Group one exhibited significant increases on two variables, Group five exhibited significant decreases on two measures. Hypothesis One is accepted only in the case of Group three. The possible sources of Group Five's decreases will be discussed in Chapter V.

As for Hypothesis Two, both Groups one and three showed insignificant changes over their baseline performance on all

Table 4.2 Changes in Criterion Measures  
from Week One to Week Two

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	TOTD	TOTLUC	TDNL	MCRITX	TOTDEV
Group 1: (Dream Reliving) <u>n</u> =20					
Week 1:	6.45	-0-	.10	1.69	.85
Week 2:	5.53	.47*	.89**	1.95	1.11
Group 3: (Motivational Essay) <u>n</u> =20					
Week 1:	6.18	.14	.32	1.86	.82
Week 2:	6.24	.19	.62	1.85	.76
Group 5: (No-Treatment) <u>n</u> =24					
Week 1:	7.40	.16	.56	2.14	1.24
Week 2:	5.88*	.16	.20**	1.72	.76
-----					
* <u>p</u> <.05	(Paired <u>t</u> tests)				
** <u>p</u> <.01					

---

criterion measures, except for total number of dreams (Group one only). Thus Hypothesis Two was accepted, at least for the four measures pertaining to lucidity and dreamer development.

Between-Groups Analyses. Due to the random assignment of subjects to groups, and the insignificant differences in group composition -- as measured by current level of dreamwork, previous lucid dream frequency, meditation practice, sex and age -- no significant differences in baseline measures were hypothesized. However, due to the absolute differences in the groups' lucidity measures, an analysis of covariance was conducted to determine if the group differences were significant.

The analysis of the group effects indicated that the three groups differed significantly only on TDNL ( $p < .01$ ). A posteriori Scheffé tests were used to compare the individual group means with each other. It was found that Group five significantly exceeded Group one's level ( $p < .05$ ) of deviations from non-lucidity. (See Chapter V. for a discussion of unexpected sources of group differences.)

Before the same-treatment groups were compared for pooling purposes, the baseline data-collecting groups -- Groups one, three and five -- were compared on the induction week measures. An analysis of covariance by group and sex was computed to ascertain the group differences. In addition, the baseline scores were entered as covariates, which was the equivalent of performing an analysis of

variance with repeated measures (Kohr, 1983). Hypothesis Three reads:

When the baseline data-collecting groups are compared on the induction week measures, taking into account the first-week measures as control variables, there will be no significant differences between the three groups.

The only significant group difference was on the TDNL measure ( $p < .05$ ). When separate contrasts were computed, Groups one and three were found to have significantly higher levels of deviations from non-lucidity (TDNL) than the control group. As for covariate effects, the baseline levels of TOTD and TOTLUC accounted for a significant portion of the extraneous variance ( $p < .001$ ). In regard to the other two covariates, the previous frequency of lucid dreaming accounted for a significant amount of the error variance in regard to TDNL and MCRITX ( $p < .05$ ); and current meditation practice failed to be a significant predictor variable on any of the five measures.

The next preliminary induction week analysis was a comparison of same-treatment groups -- one vs. two, and three vs. four -- on the induction week measures. This comparison was made in order to assess the possible maturation effects in the baseline data collecting groups. Since the baseline dream collection had taken place five weeks prior to the induction week, any maturation effect was expected to have disappeared by the time of the induction



week. Thus, Hypothesis Four states:

Hypothesis Four: There will be no significant differences in the induction week criterion measures between groups receiving the same treatment during the induction week.

Analyses of covariance by group and sex were used to test the same-treatment group differences. No significant group effect was found between Groups one and two, and between Groups three and four. Therefore, Hypothesis Four was accepted, and the same-treatment groups were pooled for the major between-treatment analyses.

Hypotheses Five and Six were considered the principal analyses of the induction week data, since all of the subjects were included in the analyses. Hypothesis Five investigated the differences between the two expanded treatment groups, and the control group, during the second week of the study. It reads:

Hypothesis Five: There will be no significant differences in the induction week criterion measures, between the pooled group receiving the Dream Reliving treatment, the pooled group receiving the Motivational Essay treatment, and the no-treatment control group.

Table 4.3 displays the group means on each of the criterion measures, and provides a breakdown of the group, sex and covariate effects. Significant a priori group contrasts are also noted.

In regard to the differences between the two treatment

Table 4.3 Pooled Treatment Groups 1-2 vs. Pooled  
Treatment Groups 3-4 vs. Control Group

	TOTD	TOTLUC	TDNL	MCRITX	TOTDEV
Dream Reliving (Groups 1-2) $\underline{n} = 56$	5.98	.45	.96	2.15	1.29
Motivational Essay (Groups 3-4) $\underline{n} = 54$	6.15	.15	.58	1.75	0.79
Control Group (Group 5) $\underline{n} = 25$	5.88	.16	.20	1.72	0.76
-----					
Main Effects:					
Group:	n.s.	$p < .10$	$p < .01$	$p < .05$	$p < .10$
Sex:	n.s.	n.s.	n.s.	$p < .05$	n.s.
Interaction:	n.s.	n.s.	n.s.	n.s.	n.s.
Covariates:					
Lucidity:	n.s.	$p < .01$	$p < .001$	$p < .05$	$p < .01$
Meditation:	n.s.	$p < .10$	$p < .01$	$p < .01$	$p < .01$
-----					
Contrasts	n/a	1>5*	1>5*** 3>5**	1>3** 1>5*	1>3*
(* $p < .10$ * $p < .05$ ** $p < .01$ )					

groups, the Dream Reliving group significantly outperformed the Essay group on MCRITX, and exhibited near-significant higher levels of TOTDEV ( $p < .10$ ). Despite the absolute differences between these two groups on TOTLUC and TDNL, the differences did not reach significance ( $p < .15$  only). Thus the two treatment groups differed significantly on one measure; and the direction of the other differences were in the Dream Reliving group's favor. Thus, the hypothesized equivalence of the two treatment groups was not reflected in the data.

In regard to the differences between the experimental groups and the control group, the Reliving and Essay groups significantly outperformed Group five (control group) on TDNL; and the Reliving group exhibited near-significant higher levels of TOTLUC, MCRITX and TOTDEV over Group five. Thus, once again the hypothesized equivalence of the three groups was rejected.

As for covariate effects, the subjects' previous frequency of lucid dreaming accounted for a significant portion of the extraneous variance on all four major criterion measures. And meditation practice accounted for a significant portion of the error variance on all but one of the four measures (TOTLUC).

As mentioned previously, the control subjects were randomly assigned to one of the two treatments--Dream Reliving or Motivational Essay--during their third week of participation, resulting in a near-equal number of subjects

who could be added to each of the treatment groups for a special all-subjects analysis. However, before pooling the control subjects' induction data with that of the two treatment groups, an analysis of covariance by treatment and sex was performed on the control group induction data. No significant treatment effect, sex effect, or treatment-by-sex effect emerged in the analysis.

Once the analysis of the control group had been conducted, the subjects were pooled for an all-subjects between-treatments analysis. The hypothesis investigated in this analysis was:

Hypothesis Six: When control group induction data is pooled with the two expanded treatment groups, there will be no significant differences on the criterion measures between the Dream Reliving group and the Motivational Essay group.

Table 4.4 displays the results of conducting an analysis of covariance by group and sex. The trend that emerged between the two treatment groups in the testing of Hypothesis Five was again evident when the control subjects were included in the analysis: The Dream Reliving Group exhibited higher means in general, and achieved significantly higher scores only in the case of MCRITX. Therefore, Hypothesis Five was rejected in regards to one variable, MCRITX.

Interestingly, previous lucid dream frequency ceased to be a significant covariate of the subjects' performance on

Table 4.4 Comparison of Pooled Treatment Groups  
(with Control Group Absorbed) on Treatment Week Measures

	TOTD	TOTLUC	TDNL	MCRITX	TOTDEV
Dream Reliving <u>n</u> =60	6.03	.42	.92	2.17	1.32
Motivational Essay <u>n</u> =64	6.17	.20	.59	1.79	.86
-----					
Main Effects:					
Group:	n.s.	n.s.	<u>p</u> <.10	<u>p</u> <.05	<u>p</u> <.10
Sex:	n.s.	n.s.	n.s.	<u>p</u> <.05	<u>p</u> <.10
Interaction:	n.s.	n.s.	n.s.	n.s.	n.s.
Covariates:					
Lucidity:	n.s.	<u>p</u> <.01	<u>p</u> <.01	n.s.	n.s.
Meditation:	n.s.	n.s.	<u>p</u> <.01	<u>p</u> <.01	<u>p</u> <.01

the two measures of dreamer development (MCRITX and TOTDEV). Meditation practice, however, continued to be a strong predictor of performance on both measures of dreamer development, as well as on the TDNL measure.

Hypothesis Seven investigated the post-treatment differences between the pooled Dream Reliving Group and the pooled Motivational Essay group. (Since the control subjects were participating in their induction mini-study during the last week of the study, and never collected post-treatment dreams, they could not be included in this analysis. Hypothesis Seven states:

Hypothesis Seven: There will be no significant differences on the criterion measures between the pooled treatment groups during the post-treatment data collection phase of the study.

As predicted, there were no significant group differences on any of the criterion measures. Thus Hypothesis Six was accepted.

Sex was treated as a factor in all between-groups statistical analyses, enabling the researcher to assess sex effects independent of the treatment effects. Hypothesis Eight concerned the independent effect of sex on the major criterion measures, specifically during the induction phase of the study. It reads:

Hypothesis Eight: When sex is treated as a factor in the principal induction week analyses of covariance, there will be no significant independent effect due to

sex on the criterion measures; nor will there be any significant sex-by-treatment interaction effects.

Tables 4.3 and 4.4 display the effects due to sex which emerged in the two major induction data analyses. In the first major induction week analysis (Hypothesis Five), female subjects achieved significantly higher scores on the degree of dreamer development (MCRITX) evidenced by their dreams ( $p < .05$ ). When the induction data from the control subjects' third-week mini-study was pooled with that of the two treatment groups (Hypothesis Six), the significant difference was sustained; and the female subjects nearly outperformed their male counterparts on total developmental dreams (TOTDEV), as well ( $p < .10$ ).

As for Hypothesis Eight, it was rejected on the basis of the sex differences on the MCRITX variable. Since there were no sex-by-treatment interaction effects in the two major between-groups analyses, the second half of Hypothesis Seven was accepted.

Hypothesis Nine concerned the relationship between dreamer lucidity and dreamer development. It states:

Hypothesis Nine: There will be no significant correlations in the induction week data between: a) the interval measures of lucidity (TOTLUC and TDNL) and interval measures of dreamer development (MCRITX and TOTDEV); and b) an ordinal measure of lucidity (MLUC) and the ordinal subscale measures of the Dreamer

Development Scale (MREF, MINTER, MROLEX, and MACTUAL).

Pearson correlations were computed between each of the interval lucidity measures and the interval dreamer development measures. The control group induction data was again pooled with that of the experimental subjects. Table 4.5 displays the results of this correlational analysis.

The Pearson correlations revealed significant relationships between each measure of lucidity and each measure of dreamer development, with especially strong correlations between TDNL and the two dreamer development measures.

Spearman rank-order correlations were then computed on the same data between MLUC and the four subscale measures of the Dreamer Development Scale. The results of this analysis are provided in Table 4.6.

The Spearman correlations indicated a significant relationship between lucidity (MLUC) and all four of the DDS subscales. An especially strong relationship was indicated between lucidity and reflectiveness (which is hardly surprising, since the two constructs are quite similar) and between lucidity and constructive behavior.

Due to the correlational results, Hypothesis Nine was confidently rejected.

### Summary of Results

In summary, the testing of nine hypotheses produced the following findings:



Table 4.5 Correlations Between Interval Measures  
of Lucidity and Dreamer Development

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	MCRITX	TOTDEV
( <u>n</u> =136)		
TOTLUC	.15*	.20**
TDNL	.30***	.35***
-----		
* <u>p</u> <.05		
** <u>p</u> <.01		
*** <u>p</u> <.001		

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Table 4.6 Correlations Between an  
Ordinal Measure of Lucidity and  
Four Ordinal Measures of Dreamer Development

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	MREF	MINTER	MROLEX	MACTUAL
Mean Lucidity Score (MLUC)	.47**	.14*	.17*	.33**

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(\*  $p < .05$

\*\*  $p < .01$  (  $n = 136$  )

---

1) Group one achieved significant increases on the two lucidity measures from week one to week two; Group three showed no significant changes on any of the measures; and Group five exhibited significant decreases on total dreams reported, and total deviations from non-lucidity (TDNL).

2) Neither Group one nor Group three exhibited significant changes in the post-treatment measures, as compared to the baseline measures, except for a decrease in TOTD for Group one.

3) The two baseline collecting treatment groups, one and three, exhibited significantly higher levels of TDNL than the control group, on the second week measures.

4) When the same-treatment groups (one-two, and three-four) were compared on the induction week measures, there were no significant maturation effects; thus the same-treatment groups were pooled.

5) The Dream Reliving group (Groups one and two pooled) significantly outperformed the Motivational Essay group (Groups three and four pooled) on the MCRITX variable during the induction phase. Both treatment groups achieved significantly higher levels of TDNL than the delayed-treatment control group. The Dream Reliving group achieved higher, albeit insignificant ( $p < .10$ ), levels of TOTLUC and TOTDEV, than the Motivational Essay and control groups.

6) When the control group induction data (produced in a special administration of the induction phase during the

third week of the study) was pooled with the two treatment groups, the Dream Reliving group achieved significantly higher scores on the degree of dreamer development (MCRITX) than the Motivational Essay group. Further, the Dream Reliving group exhibited higher, albeit insignificant, means on the three other measures of lucidity and dreamer development (TOTLUC, TDNL, TOTDEV).

7) There were no significant differences between the Dream Reliving and Motivational Essay groups on the post-treatment measures of performance.

8) Female subjects achieved significantly higher numbers of critical scores (MCRITX) per dream than their male counterparts, in both of the major induction data analyses.

9) There were significant correlations between the interval measures of lucidity (TOTLUC and TDNL) and the two measures of dreamer development (MCRITX and TOTDEV). In addition, there were significant rank-order correlations between an ordinal measure of lucidity (MLUC) and all four individual subscales of the Dreamer Development Scale (MREF, M.INTER, MROLEX and MACTUAL).

## V. Summary and Conclusions

### Summary of the Lucid Dream Induction Study

One hundred and sixty one members of the Association for Research and Enlightenment participated in a three-week lucid dream induction study. Out of these original 161 subjects, 136 completed the study, for a completion rate of 84%.

Conducted through the mail, the study involved a pre-treatment period of baseline dream collection (for some of the subjects), a treatment period, and a post-treatment period of dream recording. The study tested the efficacy of two lucid dream induction strategies. The first strategy -- the Dream Reliving technique -- was based on writing down, reliving and revising a past, unpleasant dream in fantasy prior to bedtime. The second strategy -- the Motivational Essay technique -- entailed writing and revising, if necessary, an essay on why the person wished to have lucid dreams.

The study investigated two related concepts regarding dreamer changes. First, the rating procedures assessed whether the dreamer had become aware that he/she was dreaming (i.e. lucid) or had been on the verge of this awareness (i.e. pre-lucid). Second, another rating scale assessed whether the dreamer was showing signs of personality development on the dream level (Rossi, 1972), as

measured by the amount of reflectiveness, interaction, role change, and constructive behavior exhibited in the course of the dream.

Subjects were randomly assigned to one of five groups. The first two groups received the Dream Reliving treatment; the second two groups received the Motivational Essay exercise; and the control subjects (i.e. Group five) were randomly assigned to one of the two treatments, but only after serving as the control group for the first two weeks of the study.

Prior to the induction week, Groups one, three and five collected baseline dreams for one week, so that comparisons could be made between their baseline scores and their induction week scores. It was found that only the group receiving the Dream Reliving treatment (Group one) evidenced significant increases on any of the criterion measures. Specifically, the Dream Reliving Group achieved significant increases on both measures of lucidity. The Motivational Essay group (Group three) produced non-significant increases over their baseline lucidity measures; and the control group (Group five) exhibited a significant decrease in total dreams reported and in one of the lucidity measures (TDNL).

Groups one and three also collected post-treatment dreams. However, the increases evident in the induction week data (for Group one) had disappeared in the post-treatment data. Neither group exhibited significant

changes in their scores, except that Group one submitted significantly fewer dreams during this third-week dream collection phase.

After the three baseline data-collecting groups had been analyzed for within-group changes, they were compared on the induction week data. Group one had used the Dream Reliving exercise; Group three had carried out the Motivational Essay exercise; and Group five had simply repeated the first-week task of recording dreams. The only significant difference between the three groups, after their first-week measures had been entered as control variables, was on total deviations from non-lucidity (TDNL): Both treatment groups significantly outperformed the control group on this measure of lucidity.

Groups one and two, and groups three and four, were then combined to form two larger groups. This was possible because these same-treatment groups did not differ significantly on the induction week measures, even though Groups one and three had already spent a week recording baseline dreams.

When the two expanded treatment groups and the control group were analyzed for between-group differences, the groups differed significantly on TDNL and MCRITX. When separate a priori contrasts were computed between each pair of groups, the Dream Reliving group and the Motivational Essay group significantly outperformed the control group on TDNL. The Dream Reliving group also achieved significantly

higher numbers of critical scores per dream (MCRITX) on the Dreamer Development Scale than the Motivational Essay group.

When the control subjects' dreams from their third-week induction study were pooled with the two treatment groups, the Dream Reliving group exhibited higher levels of all four measures of lucidity and dreamer development. However, the differences were significant on the MCRITX variable, only.

It was also found that the female subjects tended to outscore the males on the two measures of dreamer development. This difference reached significance on the MCRITX measure in both major induction week between-groups analyses.

#### Discussion

Discussion of Unexpected Baseline Differences. As for the performance of the individual groups, it was not expected that Groups one and five would differ significantly on one of the lucidity measures during the baseline data collection. Neither the analysis of group composition, nor the analysis of differential attrition patterns, predicted any pre-treatment group differences. These differences may have been spurious. However, there could have been pre-study differences between the groups that the researcher simply did not assess. For example, the groups may have differed in the degree to which their constituents were familiar with the researcher's previous writings, or with the subject of lucid dreaming in general, and were thus able



to anticipate the objectives of the study to a differing extent. This could have been easily assessed in the Dream Study Questionnaire. However, this question may have also alerted the subjects prematurely to the purposes of the study.

Discussion of Within-Groups Changes. The performance of Group one indicated an overall enhancement of dreamer process, especially in regards to the lucidity measures, over their baseline levels. Given Group one's performance, it was somewhat surprising that Group three (Motivational Essay) failed to exhibit any significant increases over their baseline measures, and even declined modestly on the measures of dreamer development.

Group five performed in an unexpected manner. Instead of maintaining constant levels of the criterion measures from week one to week two, Group five exhibited significant decreases on total deviations from non-lucidity (TDNL), as well as on total dreams reported. Although Group five was expected to maintain a constant baseline performance, it appears that the second week of baseline dream collecting may have been a fatiguing experience for the subjects, who had already been informed that some form of dream induction task was ahead. It could have been that when they opened the sealed instructions for the second week, hoping to find instructions for inducing "certain types of helpful dream states," they grew somewhat frustrated, realizing that reinforcement would, once again, be postponed.

This apparent frustration or fatigue effect suggests that Group five's performance should not be seen as an objective reflection of ordinary dream recall during the second week of a dream collection task. Instead, it needs to be seen in the context of Group five's expectations. The control subjects had been assured of participation in a meaningful experiment. Thus, they were looking forward to something different than simply collecting their dreams for two consecutive weeks. Although the orientation letter clearly explained that some of the subjects would be collecting dreams for two consecutive weeks, apparently this knowledge did not offset some degree of frustration or fatigue in the control group.

If a true no-treatment control group had been included in the design, the second week's performance would have possibly remained stable, or even would have risen somewhat due to maturation, over the baseline levels. But ethical restraints compelled the researcher to eventually include all subjects in an induction phase, and to inform the group beforehand that they would be included in the treatment. This policy essentially converted a no-treatment control group to a delayed-treatment control group, whose behavior then had to be seen as meaningfully related to the anticipated treatment. Despite the frustration or fatigue effect evident in Group five's second-week scores, the significant fall-off at least dispels the possible contention that dream collection alone could have accounted

for the observed significant increases in Group one's induction week scores over their baseline measures.

The insignificant within-group changes in the criterion measures from week one to week three, for Groups one and three, suggest that the treatments exerted little residual impact on the subjects' everyday dream recall. On one hand, the disappearance of treatment effects is understandable, given the brevity of the induction phase. However, this finding suggests that whereas a brief period of lucid dream induction (at least the Dream Reliving exercise) may have immediate significant effects, the benefits quickly disappear when the induction efforts cease. Although this return to the status quo might be undesirable for some dream students and counseling clients, it may also serve constructive purposes when, for example, a client has achieved a breakthrough on the dream level and needs to work on integrating the dream behaviors into daily life. In this case, the temporary cessation of lucid dream induction efforts -- and the concomitant cessation of lucid dream phenomena -- could allow the client to devote his/her attention to the practical task of applying the dream-derived insights.

Discussion of Between-Groups Analyses. In regard to the induction week data, the analyses of the three baseline data-collecting groups revealed predictable differences between the two treatment groups (i.e. one and three) and the control group. However, since the difference extended

to the TDNL measure only, one can infer that the two treatment groups experienced a greater number of pre-lucid and incipiently pre-lucid dreams without also achieving a significant higher number of full lucid dreams, which is measured by the TOTLUC variable.

The use of the baseline measures as covariates in this analysis resulted in a significant reduction of the error variance only for two variables -- TOTD and TOTLUC. This can be interpreted as an indication that "resting levels" of dream recall and lucid dream frequency serve as significant predictors of total dream recall and frequency of lucid dreams in a task-oriented lucid dream induction experiment. However, the baseline or "resting" levels of the other lucidity measure failed to predict a subject's induction week performance, suggesting that pre-lucid experiences are relatively available to dreamers, despite their rarity in baseline dreaming. This appears to be true for "developmental" dream experiences, as well; for the baseline levels of MCRITX and TOTDEV failed to predict a significant portion of the extraneous variance.

It was not surprising that there were no significant maturation effects in the groups that had collected baseline dreams. After all, the baseline period had been a full five weeks prior to the induction phase; and further, 54% of the sample reported being currently involved in ongoing dream work. Among such dream-wise subjects, it would have been surprising if one week of dream reporting had exerted a

carryover effect on the induction week performance.

The two major between-treatments analyses, conducted with the pooled treatment groups (with and without the control group induction data) indicated that the Dream Reliving exercise was a somewhat more effective induction strategy than the Motivational Essay exercise. Although the differences on the lucidity scores did not quite achieve significance, the significant MCRITX difference persisted through both analyses; and the trends on the other three major variables (TOTLUC, TDNL and TOTDEV) consistently favored the Dream Reliving group.

There are several possible explanations for the superiority of the Dream Reliving exercise. Although the two exercises entailed a roughly equivalent time commitment on the first night of the induction week, the Dream Reliving subjects were given fairly structured subsequent bedtime activities; that is, to relive the new "dream" in fantasy, and to revise it if they so desired. The Motivational Essay subjects, in contrast, were merely told to review their essay, and to revise it if they so desired. If a Dream Reliving subject had been satisfied with his/her original revised dream, he/she was still required to relive the experience each night prior to going to sleep. In contrast, Essay subjects were not required to conduct an equivalent recapitulation of their first-night assignment. Therefore, it is quite possible that the Essay subjects actually spent less time in their pre-sleep efforts after the first night

than the Dream Reliving subjects. Thus, time commitment alone may have accounted for some of the differences in the two treatment groups.

It is notable that a recent study conducted by Faber, Saayman, and Papadopoulous (1983) found that unstructured fantasy, or "active imagination" (Jung, 1961), significantly increased the "archetypality" (Jung, 1961; Kluger, 1975) of nocturnal dreams. The researchers based their hypotheses on Jung's notion that waking fantasy and dreams are virtually interchangeable processes, and that active imagination will stimulate the production of deep, archetypal imagery in a person's ensuing dreams.

Although the present study focused exclusively on evaluating dreamer process changes, rather than dream imagery or content changes, it is possible that the Dream Reliving exercise may have stimulated higher levels of the criterion measures -- and perhaps even a higher incidence of archetypal imagery -- by virtue of merely having included a fantasy component. Although it is probable that the thrust of the fantasy (i.e. to respond lucidly) had as much to do with the observed changes in dreamer process, the fantasy component alone could have made the difference between the Dream Reliving exercise, and the Motivational Essay exercise.

In regard to the testing of Hypothesis Five, which compared the two expanded treatment groups and the control group, it is perhaps surprising that the Motivational Essay

group's means were almost identical to the control group's means. Except for the significant difference on total deviations from non-lucidity, the Essay group's performance during the induction week was virtually indistinguishable from that of the control group.

The distinction between the Essay group and the control group is further weakened when one examines the derivation of the TDNL measure: This variable is simply the sum of lucid, pre-lucid, and incipient pre-lucid dreams occurring in a given week. Therefore, this measure includes the total number of lucid dreams, or TOTLUC. So, by looking at a group's TOTLUC mean, one can see the extent to which the TDNL mean was affected by full lucid dreams. Since the Motivational Essay group achieved virtually the same TOTLUC rating as the control group, then it can be inferred that the TDNL differences are due to incipient pre-lucid and pre-lucid dreams only. One can conclude, therefore, that while the Motivational Essay effects an increase of pre-lucid dreams, it is a poor strategy for inducing full lucidity -- as good as no strategy, it appears.

The poor performance of the Motivational Essay subjects suggests that desire alone may be an insufficient induction strategy. Since one can infer from the respectable completion rate for all groups that the subjects were motivated participants, then it appears that lucid dream induction is much more effective when motivation is coupled with an appropriate cognitive strategy.

As a strategy for inducing lucidity, the Motivational Essay could have even provoked a counterproductive reaction on the part of some subjects. For example, the request to write an essay on "Why I Want to Have Lucid Dreams," could have been construed as a request to justify one's desire to participate in the study. If the request was perceived this way, subjects may have either been unable to convince themselves, or felt indignant that they were expected to provide reasons for wanting something of obvious benefit to them. Such a reaction would have surely undermined their enthusiasm for the subsequent tasks.

If the Essay subjects had reacted to the essay task, one would expect to have seen some evidence of this reaction in the number of dreams submitted for the week. However, the Essay group submitted slightly more dreams than the Dream Reliving group during the induction week. Further, the attrition patterns across groups did not reflect a differential reaction to the Motivational Essay treatment.

The differences due to sex on the degree of dreamer development (MCRITX) were not anticipated; nor are there any clues in the lucid dream literature as to why this came about. However, one can infer that the females responded to the lucid dream task in a more generalized and integrated fashion than the male subjects. This finding is more understandable, perhaps, when theory and research outside the field of lucid dreaming is considered.

Castillejo (1978) uses the terms "diffused" and



"focused" to differentiate between typically feminine and masculine forms of awareness and conceptualization. Basing her notions on Jung's model of the psyche (1961), she says that these perceptual styles are available to both sexes, but have become associated with the sexes due to social and biological constraints.

In a similar, supportive vein, the research on hemispheric specialization has revealed that males tend to have dominant left-hemispheres, denoting an emphasis on analytical and verbal processes. In contrast, women tend to exhibit less specialized cerebral organization, and apparently rely to a greater extent on the intuitive and spatial processing capabilities of the right hemisphere. Given the strong link between dreaming and the activation of the right hemisphere (Bakan, 1978), one might expect individuals with dominant right hemispheres, or with integrated hemispheric functioning, to excel on dream recall or induction tasks.

Although this research and theory has no direct bearing on lucid dreaming per se, it does provide models through which one might predict and investigate sex differences in future lucid dream induction studies.

#### Discussion of the Phenomenology of the Induction Study

For a counselor who intends to use lucid dream induction as a therapeutic intervention, it is simply not enough to know that a technique works, or that it produces

statistically significant results. One must also be able to anticipate a client's subjective response to the intervention. For this reason, some of the qualitative or phenomenological aspects of the lucid dream induction study are summarized. It is hoped that this brief discussion will better enable researchers and therapists to approach lucid dream induction more knowledgeably and strategically.

Forms of Resistance and Non-Compliance. A number of subjects enclosed letters and brief notes along with their dreams, explaining why they had found the experiment helpful or not. Some of the most valuable letters, from the standpoint of planning future induction studies, presented various forms of resistance and non-compliance.

One of the earliest "complaints" concerned the lack of full disclosure in the notices and orientation letters. Interestingly, a professional psychotherapist made the only overt objection to the vagueness in the project's objectives, saying "I was real surprised you didn't give any info for this study regarding...what you're trying to do. Would that have maybe biased it? If I wasn't familiar with you and your work, I don't think I would have participated with the sketchy background provided. I look forward to seeing your hypotheses."

This objection provides a glimpse into the unusual contract between the researcher and the subjects. In choosing to work with such a population, where the subjects were treated as co-researchers, the researcher increased the

likelihood of provoking the subjects' reactance by withholding information from them. Although this potentially problematic researcher-subject relationship may be atypical, it arguably comes closer to approximating a counselor-client relationship than most traditional research settings allow. Further, it allowed the researcher to obtain valuable feedback that college freshmen, for instance, may have been loathe to provide.

Several subjects alluded to some resistance to the wording of the induction materials, or to the induction exercises themselves. One man said he found the Dream Reliving exercise pointless and refused to do it. He then proceeded to submit over 20 dreams for each of his three weeks of participation, making it difficult for the researcher to know how to treat his data. (Note: Such data was included in the analyses under the assumption that there had been other non-compliant subjects who had simply not confessed their deviance.) Several other subjects indicated that the exercises had not seemed effective; and they usually blamed the failure of the exercises on themselves.

Three subjects expressed some fear toward lucid dreaming per se, or toward the particular induction tasks. One person wrote, "I realize I'm a little apprehensive about lucid dreaming and scared of it. It means getting in touch with other energies and dealing with them directly -- something I've always been nervous about..." Another subject wrote "I think I'm a bit scared to experience the

'bright light'...at this time," referring to the phenomenon of light which sometimes accompanies the arousal of lucidity. A third person found the Dream Reliving exercise disturbing; for it got her back in touch with a frightening nightmare, which she had difficulty re-living. She wrote, "I didn't remember any dreams during the week of the dream induction exercise. I had great difficulty re-living the nightmare each night. I encountered a wall of resistance I couldn't get around, and my conscious efforts to break through it seemed to have the reverse effect on my dream recall."

Performance Expectations Affect Outcome. Not surprisingly, the subjects employed in this study tended to expect a lot of themselves. After all, over half of them regularly worked with their dreams. Although the researcher assured them that their performance on the induction task would remain confidential, and that every dream was an important contribution regardless of its quality, most of the subjects apparently regarded the induction task as a test of their ability as a dreamer, and proceeded to invest a great deal in the outcome. It also became clear from the letters that the subjects expected the researcher to interpret their experiences along traditional lines, and ultimately tell them what their dreams "meant".

Given this context of high performance expectations, it was not surprising that many subjects enclosed apologies for the quality of their dreams. One person wrote, "I have

never had such straightforward dreams. Not only that, but most of them suggest a thirst for power and control." Another subject said that she had "never had, or bothered to recall maybe, such 'unpoetic' dreams. They all seemed very base and not like my usual dream recall."

Several subjects enclosed notes explaining why the induction week had been a "bad week" for them to participate. Travel obligations, visitors, special work responsibilities and fatigue seemed to figure prominently in these explanations. Such notes frequently included examples of their dreams from previous times, as a testimony to their capacity for deep, meaningful dream experiences.

Concerted effort may have, paradoxically, worked against some of the subjects' performance during the induction phase. One woman, who enclosed two "apocryphal" lucid dreams, said plaintively, "It seems that when I tried, it didn't work. But when I didn't need to have a lucid dream, I did...Before the project, I had been having them right along." Another subject complained of failure, despite her diligent efforts: "I'm so disappointed that I have been able to offer so little! I can't understand the lack of dreams or, at least, my remembrance of them, since it is most unusual. Could I have been trying too hard?"

The spontaneous occurrence of lucid dreams just before or after the induction phase lends further support that the induction efforts may have actually impeded some of the subjects' performance. One man reported that he had

experienced two lucid dreams just prior to the induction phase; but had been unable to produce them during the study.

The desire to succeed probably induced some subjects to embellish their dream reports. In anticipation of this, the researcher asked the four dream judges to note any dreams which seemed suspect in any way. The dream raters seemed to agree that most of the subjects who "edited" their dreams did so by making interpolated comments which could easily be separated from the actual dream report. The dream raters were told simply to ignore these clarifying statements. However, the dream raters encountered two dreamers whose purported lucidity seemed to have no impact whatsoever on the dream drama -- as though the statement had simply been inserted in the middle of a non-lucid dream. Considering that over 1800 dreams were rated, however, these possible embellishments probably had little impact on the results.

### Conclusions

In conclusion, this study tentatively demonstrated the superiority of the Dream Reliving exercise over the Motivational Essay technique -- as a tool not only for inducing greater lucidity in dreams, but also for encouraging healthy personality functioning on the dream level (Rossi, 1972).

Regardless of which technique a subject used, 25% of

the participants were able to experience a full lucid dream during the induction period; and 42% of the subjects reported achieving lucidity or some degree of pre-lucidity. Moreover, the less experienced subjects also demonstrated an ability to induce lucid dreaming, suggesting that the induction procedures accomplished more than merely increasing the lucid dream frequency of already-adept lucid dreamers. In fact, 10 of the subjects who reported having lucid dreams rarely or not at all prior to the study were able to experience full lucidity at some point in the treatment or post-treatment phases of the study. Thirteen more of these inexperienced dreamers were able to experience some degree of pre-lucidity during the study. This level of success within a two-week period indicates that lucid dream phenomena might be practically accessible to motivated, consenting counseling clients, as well as individuals pursuing a self-directed program of dream work.

One may also tentatively conclude that lucid dreaming is accessible through relatively simple and brief pre-sleep exercises conducted at home. From the standpoint of the professional counselor or psychotherapist, the advantage of using home-study induction techniques is obvious: Instead of taking up valuable counseling time with induction procedures, the therapist can assign the induction efforts as homework, and reserve the counseling time for the processing of dreams and relevant here-and-now material.

Until now, the therapeutic value of lucid dreaming has

been based almost entirely on anecdotal claims, and brief clinical observations (Halliday, 1982). However, this study has indicated that lucid dream induction efforts do not merely facilitate an increase of dreamer lucidity, but indirectly catalyze an increase in constructive participation in the dream drama. Specifically, the significantly higher levels of MCRITX in the Dream Reliving Group over the Motivational Essay group (Hypotheses Five and Six), indicates that the Dream Reliving exercise effected an enhancement of personality functioning on the dream level (Rossi, 1972). This finding helps to dispel the possible argument that lucid dreaming represents an unhealthy, disassociated state -- a criticism that has been leveled by traditional psychiatry at the phenomenologically similar "out-of-body" experience (Gabbard, Twemlow and Fowler, 1982). If there had been any doubt about the therapeutic impact of lucid dreaming in the past, its association with such constructive dreamer process should confirm its place in the repertory of desirable therapeutic experience.

#### Implications for Future Research

The results of this study indicate that lucid dreaming can be more effectively induced by coupling a subject's desire and motivation with an appropriate cognitive exercise, than by relying on the subject's motivation alone to produce the desired effect. In light of this, researchers should perhaps investigate a variety of



induction exercises, which involve fantasy, pre-sleep suggestion and other cognitive strategies, in order to determine the most effective combination of components.

This study also suggests that lucid dream studies need not be conducted in a laboratory. Although home-based studies allow less control over extraneous variables, they are relatively inexpensive. In addition, home-based studies permit a researcher to assess the capacity of subjects' to induce lucid dreams in a real-life setting. For a counselor, who has little control over his client's sleep and dream habits, such studies would be especially valuable in determining the practicality of introducing lucid dream induction as homework.

Knowing that induction efforts can actually inhibit the occurrence of lucidity in some subjects (see above Discussion of Phenomenology), should, perhaps, affect the design of future experiments. For instance, a researcher could design a study as a four-week induction study, during which each subject spent the first and third weeks trying to have lucid dreams, and then "rested" in the second and fourth weeks. During these off-periods, one could then "capture" the phenomenon as it occurred under less stressful, less performance-oriented conditions.

Future studies should eventually evolve standardized instruments for assessing lucidity. Although this study has demonstrated that a highly reliable lucid dream rating scale can be easily formulated, problems still remain in

operationally defining such concepts as pre-lucidity. It is the opinion of this researcher that the lack of clear, unambiguous definitions for the various phenomena associated with lucidity is a form of intentional neglect; for a host of philosophical problems lie in wait. An example of one of these problems has been the difficulty in distinguishing lucid dreams from out-of-body experiences (Green, 1968).

One of the most significant contributions of the present study has been its exploration of the relationship between lucidity per se, and other aspects of constructive dreamer process. Previous studies have examined lucidity in isolation from other aspects of dreamer behavior. If lucid dream induction ever gains wide acceptance as a therapeutic intervention, it will probably be because researchers have shown that lucidity is inextricably bound to a process of personality growth. To continue along these lines, researchers might consider, for example, subjecting lucid dream induction data to Kluger's archetypality scale (Kluger, 1975) in order to assess the relationship between lucidity and Jungian principles of psychological maturation. Another approach would be to introduce pre- and post-testing to assess personality changes which accompany lucid dream induction.

Future studies would do well to explore the apparent sex differences which have emerged in the present study. Although these differences did not extend to the lucidity criterion measures, they nevertheless suggest that males and

females may have distinctive ways of responding to dream induction tasks, and may require different induction strategies for optimal results.

Above all, future studies should continue to explore the inducibility of lucid dreaming and constructive dreamer process with samples even more representative of the general population. The present study represented a move in that direction; but it is still not clear if lucidity is a latent capacity within most individuals. If this can be demonstrated through the evolution of effective induction exercises -- and lucid dreaming moves beyond the status of an anomaly which can be easily dismissed -- then lucid dream induction will doubtless serve as an important therapeutic and growth tool in the future.

Appendix A:  
The Dream Lucidity Scale

## DREAM LUCIDITY SCALE

Instructions:

You will be giving each dream a rating of 0, 1, 2, or 3. To determine which rating to give, first read the dream report carefully. Then, using the criteria outlines below, decide whether the dream is non-lucid (0), implicitly pre-lucid (1), pre-lucid (2), or lucid (3). A dream cannot be more than one type. If you think a dream fits more than one category, re-read the dream and then assign it one numerical rating. If you can't decide which of two ratings to assign, chose the lower of the two.

Criteria:

- 0----Non-lucid dream----The dreamer never questions the reality of the dream, nor makes statements which imply he's aware that the experience is a dream. Most "ordinary" dreams fit this description.
- 1----Implicitly pre-lucid dream----In this type of dream, the dreamer may be startled by some oddity, and wonder what's going on; but the dreamer does not actually ask, "Is this a dream?" The dreamer may talk about previous dreams, realize that he/she has dreamt this before, etc. But the crucial question, "Am I dreaming?" is never asked. For example, the dreamer may say to another person, "You were in my dreams last night," or "There's something not right about this." But unless the dreamer actually questions whether the experience could be a dream, the dream should receive this rating, not the higher pre-lucid rating.
- 2----Pre-lucid dream----The dreamer actually asks himself, "Am I dreaming," or "Is this a dream." Such a question must be in the dream for a dream to receive this rating. However, the dreamer never concludes that it is a dream; that is, the dreamer never becomes lucid.
- 3----Lucid dream----Not only does the dreamer question the reality of the experience, but he actually concludes that he is, in fact, dreaming. This realization may be only momentary before the dreamer lapses back into non-lucid dreaming. Even so, the dream should receive a rating of "3".

Appendix B:  
The Dreamer Development Scale

## THE DREAMER DEVELOPMENT SCALE

You will now be giving each dream four more ratings. The Dreamer Development Scale (DDS) is comprised of four separate subscales, each of which is described below. Each subscale measures a particular quality pertaining to the dreamer's style of responding to the dream content. As such, each scale measures something about what the dreamer is thinking or doing, rather than some quality of the dream content or symbols.

Your task will be to give each dream a rating from 1-5 on each of the four DDS subscales, depending upon how much the dreamer exhibits the particular quality measured by the subscale. A rating of "1" means that the dreamer exhibited very little of the quality. A rating of "5" means that the dreamer exhibited very much of the quality. The four subscales and the dreamer qualities they measure are described below:

Subscale One: Reflectiveness

This dreamer quality can be defined as the extent to which the dreamer questions, ponders, and/or thinks critically about the situations and characters he encounters in the dream. Words like "realize", "aware", "thought about...", etc. should clue you to the presence of reflectiveness. Resistance to the flow of things can also be seen as a sign of reflectiveness. For example, the dreamer may find himself/herself in a classroom taking an exam, and start wondering whether or not he/she is actually enrolled in the course.

Subscale Two: Interaction

This dreamer quality can be defined as the extent to which the dreamer interacts or dialogues with the characters or objects in the dream. Please note that the dreamer must be actually participating in the interaction, and not just watching others interact. A low score on this scale should be given when there is virtually no interaction between the dreamer and other characters in the dream. For example, "I saw John, but we said nothing to each other." should receive a "1". An escapee from prison, however, is interacting (although unwillingly) with some pursuer, and should receive a slightly higher rating. Conversation, fighting, lovemaking, etc. should receive higher scores on this scale.

Subscale Three: Self-concept, Role or Status Changes

This dreamer quality is probably the hardest to grasp at first. The easiest way to rate the dream on this scale is to ask yourself, "Does the dreamer's role or status shift in any way during the course of the dream?" For example, an inmate may be released from prison. In so doing, his/her role changes from "prisoner" to "free person". If he/she simply escapes from prison and continues to flee incarceration, the role change would deserve a lower score because the shift is not as dramatic as in the first example. Using this same theme, one might imagine that an inmate could suddenly be elected president, or given the warden's job. These role changes deserve even higher ratings on this scale.

Subscale Four: Actualization of Constructive Behavior

This dreamer quality can be defined as the extent to which the dreamer is engaging in constructive behaviors characterized by confidence, competence or boldness. For example, a dreamer may be attracted to the ocean water, and decide to go swimming despite his/her previous image of himself/herself as clumsy or uncoordinated. Or, he may pray or meditate, build a new building, fix a car, kiss a partner, or any number of basically constructive activities. Note that speaking is a behavior as well. Please remember that the dreamer has to be doing, not just thinking about doing.

To familiarize you with the process of scoring a dream, I've written out three dreams, and rated them according to the criteria I've listed above. By examining my ratings, I hope to convey to you as precisely as possible how I think about these scales. It is important for us to have the same notions about the qualities being measured; and since my scores will serve as a test of sorts for the accuracy of yours, please try to get into my frame of mind as you read over the following dreams and their ratings. After you read over these examples and ask me questions regarding them, you should be ready to begin rating dreams yourself.

Dream Example One:

"I'm with an older man and a guy about my age. We're fishing together for redbfish. I catch a nice one, and decide to release it. I have a good feeling about this, and I realize that I rarely release my catches. However, the older man seems annoyed. He says that I could have asked them if they wanted the fish before letting it go. I say to him that since I caught it, it was my decision and that I really wanted this fish to go free. He is still upset."



Dream Lucidity Score: 0 --- Reflectiveness Score: 4 --- Interaction  
Score: 4 --- Role Change Score: 1 --- Actualization Score: 3

Discussion: It should be clear that the dream is non-lucid, since there is no awareness that the experience is a dream (lucidity) no questioning of the reality of the experience (pre-lucidity), and no awareness of oddness or dreamlike happenings (implicit pre-lucidity). The dreamer is, however, highly reflective, and deserves a rather high rating. Note the statement, "I realize that I rarely release my catches". Also, the dreamer's conversation with the older man reveals a reflective process. So I would give it a 4 or even a 5. As for interaction, the dreamer has to deal with the older man's upset. The conversation is pretty heated, so the interaction is pretty intense. Once again, I would give it a 4, but a 3 would seem okay too. As for role change, I do not see much happening here, unless one might construe the release of the fish as a change from the role of "fisherman" to "emancipator". Even so, I wouldn't give it more than a 2. As for the actualization of behavior score, I would give it a moderately high rating because the dreamer released the fish; however, because he could have possibly done better by taking into consideration the feelings of those around him, I'm not willing to give the dreamer more than a 3.

Dream Example Two:

"I'm running from a man who wants to kill me. As I dodge in and out of hiding places, I start thinking that this might be a dream. I conclude that it must be. With a feeling of exhilaration and fearlessness, I turn around and go in search of my pursuer. I run into M., and tell him that I'm dreaming. He wishes me well in my decision to confront the man...Later, I find his whereabouts. I open a door, and see the man sitting with his back away from me. I walk up to him, and tap him on the shoulder. He wheels around, picks up a gun and fires twice. As the bullets pass through me, I affirm that they cannot hurt me. I then reach up and touch the

man's face. He looks alarmed and suspicious; but then, he gradually softens. Finally, he reaches up and touches my face, too."

Dream Lucidity Score: 3 --- Reflectiveness Score: 5 --- Interaction  
Score: 5 --- Role Change Score: 5 --- Actualization of behavior Score: 5

Discussion: This dream clearly is a lucid experience, and rates a 3 on the DLS. As for reflectiveness, the dreamer is highly reflective as he questions the reality of the experience. In this dream, the process of reflectiveness leads to lucidity, which is certainly not always the case in dreams. But in this dream, the lucidity scale and the reflectiveness scale are zeroing in on the same thinking process at the beginning of the dream. As for interaction, one could hardly ask for more in the way of intense interaction. Although the dreamer starts off interacting with the man only as a pursuer, he finally confronts the man directly, thus deserving a high score on this subscale. And as for the actualization of constructive behavior, what could be better than reconciling their differences in a bold, creative manner? This dream represents the upper end of the five scales.

Dream Example Three:

"I'm out in the garden planting seeds. My neighbor yells at me over her fence, saying that my manure is driving her crazy. I get mad, make an obscene gesture at her and stomp off into the house. J. comes up and asks what's wrong. I say, 'It's her again!'"

Dream Lucidity Score: 0 --- Reflectiveness: 1 --- Interaction: 4 ---  
Role Change: 1 --- Actualization: 1

Discussion: This dream clearly rates a zero on the lucidity scale. As for reflectiveness, he doesn't stop to question, ponder, think about, etc. what's happening: He simply reacts unhesitatingly. As for interaction, he is engaged in a pretty heated encounter, but quickly leaves the scene. So I would give it a 4, but not a 5. His brief conversation with J. also

represents interaction. As for role change, there wasn't much of a shift here. One might say that he went from "gardener" to "angry neighbor", but I think this is stretching the intention of this scale. It might warrant a 2, but certainly no more than that. As for constructive behavior, the dreamer struck out entirely.

Appendix C:  
The Dream Reliving Exercise

## DREAM INDUCTION EXERCISE:

## The Dream Reliving Technique

Very few studies have been conducted thus far on the subject of inducing lucid dreaming. Interestingly, the studies that have compared two or more techniques have tended to show that all methods result in moderate success and that as yet no single method stands out as clearly superior to the others.

Your task for today is to engage in a simple exercise called the "Dream Reliving Technique", which I believe could be a highly effective lucid dream induction exercise for you.

Follow the simple steps outlined below. Space has been provided for the writing tasks.

Step One:

Think back over your dreams and try to recall the most recent dream that was unpleasant to you. If you cannot remember one that fits this description, then try to recall a dream in which lucidity could have improved your responses to the dream, and helped to bring about a more desirable outcome. If you can't think of a dream that fits even this description, then I want you to recall a recent (or not so recent) unpleasant encounter with someone that happened while you were awake. Write this dream (or waking event) down in the space below. Write it in the present tense, as though it were happening right now.

Step Two:

Now I want you to get in a comfortable position and relive the dream in your fantasy. But as you do so, affirm to yourself that this time you will remain fully aware that the fantasy/dream experience is a dream and you are entirely free to respond to the events in any way you like. Try to be as creative and reconciling to the otherwise unpleasant characters and situations. Without actually trying to change the dream images, simply observe how the dream characters and events change in response to your lucidity. Once you have relived the original experience and experienced a new "lucid" version of it, write the new version down in the space provided on the back of this page.

Step Three:

Now you have a mental tool which can aid you in your lucid dream induction efforts this week. Place the new "lucid" dream beside your bed and before going to sleep each night, spend 5-15 minutes reliving the experience once again to remind yourself of the promise of lucid dreaming. The fantasy may change slightly with each re-enactment. That's fine. You may wish to note the changes for your own future reference. Then, when you finally get ready to go to sleep, repeat over and over as you fall asleep, "I will become lucid in my dreams".

Now -- Go to the page entitled "Instructions For Recording Your Dreams", and record your dreams for the next five nights according to these directions.

Appendix D:  
The Motivational Essay Exercise

## DREAM INDUCTION EXERCISE:

## The Motivational Essay Technique

Very few studies have been conducted thus far on the subject of inducing lucid dreaming. Interestingly, the studies that have compared two or more techniques have tended to show that all methods result in moderate success, and that as yet no single method stands out as clearly superior to the others.

I have often thought that desire or willpower alone is the most important ingredient in any technique. Your task for today is very simple: to write a brief 150 - 300 word essay on "Why I Want to Have Lucid Dreams". The purpose of this exercise is two-fold: 1) to increase your motivation to have such experiences, and thus to increase the likelihood you'll succeed in having one or more lucid dreams this week, and 2) to create a written document -- a mental focus if you will -- that you can refer to every night before going to sleep for the next five nights.

Now I want you briefly to summarize why you would like to have lucid dreams. You might find it helpful to look back over The Pre-Induction Text to help you clarify your thoughts on the matter. (Write this essay on your own paper.)

Once you have completed this essay, place it beside your bed and review it for 5-15 minutes each night before going to sleep for the next five nights. Feel free to make changes in the essay as you feel moved to do so. Then, when you finally get ready to go to sleep, repeat over and over as you fall asleep, "I will become lucid in my dreams".

Now -- Go to the sheet entitled "Instructions for Recording Your Dreams," and record your dreams for the next five nights according to these directions.



Appendix E:

An Introduction to the Principles of Lucid Dreaming

## PRE-INDUCTION TEXT:

## INTRODUCTION TO THE PRINCIPLES OF LUCID DREAMING

THIS BRIEF INTRODUCTION TO THE PRINCIPLES OF LUCID DREAMING IS DESIGNED TO PREPARE YOU INFORMATIONALLY AND ATTITUDINALLY FOR THE NEXT FIVE DAYS OF LUCID DREAM INDUCTION. IN MY OPINION, IF YOU CAN EMBRACE THESE PRINCIPLES, AND ANSWER THE QUESTIONS I'VE INTERSPERSED THROUGH THE TEXT TO YOUR OWN SATISFACTION, YOU'LL FIND YOURSELF IN AN OPTIMUM STATE OF READINESS FOR LUCID DREAMING.

I OWE THE INSPIRATION FOR THE PERSON-TO-PERSON STYLE OF THIS INTRODUCTION TO A FRIEND WHO RECENTLY MADE ME AWARE OF HOW MUCH OF AN IMPACT A MERE DISCUSSION OF LUCID DREAMING CAN HAVE ON A PERSON WHO IS TRYING TO HAVE LUCID DREAMS. HE SAID THAT A CONVERSATION WE'D HAD SEVERAL YEARS AGO HAD TRIGGERED SOMETHING INSIDE HIM AT THE TIME AND HE FOUND HIMSELF HAVING SEVERAL LUCID DREAMS SOON AFTERWARD. I, TOO, CAN REMEMBER OCCASIONS WHEN THE PROFOUNDTEST LUCID DREAMS FOLLOWED A DISCUSSION OF LUCIDITY WITH A CLOSE FRIEND.

SINCE YOU AND I CAN'T SIT DOWN TOGETHER AND HAVE SUCH A CONVERSATION, I HOPE THE FOLLOWING PERSON-TO-PERSON TEXT WILL SERVE AS AN APPROPRIATE SUBSTITUTE. WHENEVER I ASK YOU A QUESTION, PLEASE TRY TO STILL YOURSELF BEFORE ANSWERING. REMEMBER, THESE ANSWERS ARE FOR YOU ALONE; YOU WILL BE KEEPING THEM FOR YOUR OWN FUTURE REFERENCE.

DEFINITION OF LUCID DREAMING

BEFORE YOU TRY TO HAVE A LUCID DREAM YOU NEED TO KNOW PRECISELY WHAT THE TERM MEANS. IT'S VERY SIMPLE REALLY. LUCID DREAMING IS SIMPLY THE EXPERIENCE OF BECOMING AWARE DURING A DREAM THAT YOU ARE, IN FACT, DREAMING! WHEN WE TALK ABOUT YOU HAVING A LUCID DREAM, THEN, WE'RE REALLY TALKING ABOUT YOU BECOMING A LUCID DREAMER. LUCIDITY REFERS TO A STATE OF AWARENESS, NOT TO SOME CHARACTERISTIC OF THE DREAM CONTENT.

SAMPLES OF NON-LUCID, PRE-LUCID AND LUCID DREAMS

READ OVER THE FOLLOWING DREAMS, AND TRY TO PUT YOURSELF IN THE ROLE OF THE DREAMER. THE FIRST DREAM IS A NON-LUCID DREAM; THAT IS, THE DREAMER NEVER ASKS HIMSELF, "AM I DREAMING?" OR "IS THIS A DREAM?" MOST OF OUR DREAMS ARE NON-LUCID.

"I'M ON ONE SIDE OF A SHORT FENCE WITH A VERY SMALL DOG. ON THE OTHER SIDE IS A LARGER, MORE AGGRESSIVE DOG. SOMEHOW, MY DOG LURES THE OTHER (BLACK) DOG THROUGH THE FENCE. IT GROWLS AT ME; I TRY TO BE COOL. BUT THEN HE BITES MY HAND AND WILL NOT LET GO."

"I GRAB HIM BY THE NECK AND BEGIN TO STRANGLE HIM. I DO ENOUGH DAMAGE TO GET HIM TO LET GO. BUT HE CONTINUES TO WEAKEN. I FEEL SORRY FOR THE DOG..." (G.S.S. 1975)

THE NEXT DREAM IS A "PRE-LUCID" DREAM. THE DREAMER GETS TO THE POINT OF ASKING HIMSELF, "IS THIS A DREAM?" BUT ULTIMATELY DECIDES THAT IT IS NOT."

I AM THINKING OR READING SOMETHING ABOUT EARTHQUAKES. A FEMALE FRIEND CALLS ME TO A WINDOW (IN AN UNFAMILIAR HOUSE) AND EXCITEDLY TELLS THAT "THE SUN HAS A BLUE FLAKE ON IT!"

I LOOK OUT THE WINDOW. A WHITE SUN IS ABOUT 30° ABOVE THE NORTHERN HORIZON. I NOTICE THAT IT HAS A BLUISH TINT TO IT, BUT THINK THAT'S PROBABLY DUE TO A RETINAL AFTER-IMAGE. I THINK, "IF I AM DREAMING, THEN THAT IS THE LIGHT, NOT THE SUN!" IN ORDER TO TEST THIS, I TRY TO ENTER INTO A MEDITATIVE STATE. BUT THEN I DECIDE THAT I'M NOT DREAMING, THOUGH THE SUN HAS INCREASED IN SIZE.

(G.S.S. 1974)

AND FINALLY, THE FOLLOWING DREAM IS A LUCID DREAM. NOT ONLY DOES THE DREAMER STOP TO THINK WHETHER THE EXPERIENCE MIGHT BE A DREAM, BUT HE QUICKLY CONCLUDES THAT IT CERTAINLY IS.

"AFTER RUNNING FOR A LONG TIME FROM A MAN WHO INTENDS TO KILL ME, I WONDER IF I MIGHT BE DREAMING. I DECIDE THAT I MUST BE. KNOWING THAT I HAVE NOTHING TO FEAR, I TURN AROUND AND GO LOOKING FOR HIM... I OPEN AN OFFICE DOOR AND SEE HIM SITTING AT A DESK, FACING AWAY FROM ME. I WALK UP AND TAP HIM ON THE SHOULDER. HE WHEELS AROUND, RAISES A GUN AND FIRES TWICE. I AFFIRM TO MYSELF THAT NOTHING CAN HURT ME BECAUSE IT'S ONLY A DREAM. I REACH UP AND GENTLY TOUCH THE SIDE OF THE MAN'S FACE. AT FIRST HE LOOKS SUSPICIOUS, BUT THEN HIS FACE SOFTENS, AND HE REACHES OUT AND TOUCHES MY FACE." (G.S.S. 1982)

QUESTION: CAN YOU THINK OF A RECENT, OR NOT-SO-RECENT DREAM, IN WHICH LUCIDITY COULD HAVE IMPROVED YOUR RESPONSES IN THE DREAM, AND THUS LED TO A MORE DESIRABLE OUTCOME? HOW OFTEN DO YOU HAVE DREAMS THAT IN RETROSPECT, SEEM TO SUFFER FOR LACK OF DREAMER "WAKEFULNESS"? (YOU DO NOT NEED TO WRITE DOWN YOUR RESPONSE TO THIS QUESTION.)

### HOW LUCIDITY TYPICALLY EMERGES

LUCIDITY SOMETIMES JUST EMERGES SPONTANEOUSLY WITHOUT ANY LEAD-UP EVENTS OR QUESTIONING PROCESS. BUT THIS IS RARE. USUALLY A LUCID DREAM STARTS OUT AS A NON-LUCID DREAM, AND THEN SOMETHING HAPPENS THAT PROMPTS THE DREAMER TO ASK HIMSELF "COULD THIS BE A DREAM?" TWO BASIC TYPES OF DREAM EVENTS TYPICALLY PRECEDE THE AROUSAL OF LUCIDITY: 1) A FRIGHTENING OR STRESSFUL EVENT, AND 2) A NOVEL, INCONGRUOUS OR "IMPOSSIBLE" HAPPENING. IF YOU THINK ABOUT IT, BOTH TYPES OF DREAM EVENTS SHARE A STARTLING, OUT-OF-THE-ORDINARY QUALITY.

MANY PROFICIENT LUCID DREAMERS HAVE SAID THAT THEY WERE ABLE TO BECOME LUCID BY FIRST NOTICING THAT CERTAIN "OUT-OF-THE-ORDINARY" EVENTS REPEATED THEMSELVES OVER AND OVER AGAIN IN THEIR DREAMS. BY ZEROING IN ON THESE REPETITIOUS EVENTS, AND AFFIRMING TO THEMSELVES THAT THE NEXT SUCH HAPPENING WOULD JOLT THEM INTO LUCIDITY, THESE DREAMERS ESSENTIALLY HARNESSSED THE REGULAR (AND SOMETIMES UNPLEASANT!) CUES IN THEIR DREAMS TO THEIR ADVANTAGE.

THE FOLLOWING LUCID DREAMS OCCURRED AFTER THE DREAM EVENT HAD REPEATED ITSELF NUMEROUS TIMES AND HAD BEEN CONSCIOUSLY SELECTED AS A "CUE". AS YOU READ THEM, IMAGINE YOURSELF IN THE ROLE OF THE DREAMER.

"I'M IN A DARK, POOR SECTION OF A CITY. A YOUNG MAN STARTS CHASING ME DOWN AN ALLEY. I'M RUNNING FOR WHAT SEEMS TO BE A LONG TIME IN THE DREAM. THEN I BECOME AWARE THAT I AM DREAMING AND THAT MUCH OF MY DREAM LIFE IS SPENT RUNNING FROM MALE PURSUERS. I SAY TO MYSELF, 'I'M TIRED OF THIS NEVER-ENDING CHASE.' I STOP RUNNING, TURN AROUND AND WALK UP TO THE MAN. I TOUCH HIM AND SAY, 'IS THERE ANYTHING I CAN DO TO HELP YOU?' HE BECOMES VERY GENTLE AND OPEN TO ME AND REPLIES, 'YES. MY FRIEND AND I NEED HELP.' I GO TO THE APARTMENT THEY SHARE AND TALK WITH THEM BOTH ABOUT THEIR PROBLEM, FEELING COMPASSIONATE LOVE FOR THEM BOTH." (C.D.Y., 1975)

"I AM FOLLOWING A WOMAN WHO IS TAKING ME TO ANOTHER WOMAN WHO NEEDS SOME KIND OF HELP. AS I WALK BEHIND HER, I BEGIN TO NOTICE COINS LYING ON THE GROUND. I PICK THEM UP, ONLY TO FIND MANY MORE BEFORE ME. ALL OF THEM ARE SILVER, AND HAVE JOHN KENNEDY ON THEM. I FIND A HUGE ONE, WHICH IS LITERALLY A SAUCER-SIZED MEDALLION. I RECALL THAT THIS HAPPENS A LOT IN MY DREAMS. I THEN CONCLUDE THAT I MUST BE DREAMING! I CLOSE MY EYES TO PRAY, AND AWAKEN SOON AFTERWARD." (G.S.S., 1983)

QUESTION: CAN YOU THINK OF A RECENT DREAM EVENT THAT WAS SO OUT-OF-THE-ORDINARY IT WOULD HAVE LET YOU KNOW YOU WERE DREAMING IF YOU'D STOPPED TO THINK ABOUT IT? FOR EXAMPLE, HAVE YOU SEEN A DECEASED RELATIVE OR FRIEND IN A RECENT DREAM? FLOWN EFFORTLESSLY ABOVE THE EARTH? SAW A FRIEND WITH THE WRONG-COLORED HAIR?

IS THERE ANY SUCH OUT-OF-THE-ORDINARY EVENT THAT HAS OCCURRED MORE THAN ONCE OR TWICE? DECIDE NOW THAT THE NEXT TIME IT HAPPENS YOU'LL STOP TO ASK "IS THIS A DREAM?"

#### WHAT TO DO IN YOUR LUCID DREAM

HUGH LYNN CAYCE WAS ONCE ASKED WHAT ONE SHOULD DO IN A LUCID DREAM. HE SAID "DO SOMETHING CREATIVE FAST, BECAUSE YOU DON'T HAVE MUCH TIME TO DO IT."

I CAN TELL YOU WITH CONFIDENCE THAT IF YOU DON'T DECIDE NOW WHAT YOU'D LIKE TO DO (OR THINK) DURING YOUR NEXT LUCID DREAM, YOU'LL PROBABLY GET SO EXCITED ABOUT THE MERE FACT THAT YOU'RE LUCID, IT WILL BE OVER BEFORE YOU CAN DO ANYTHING. AT THE MOMENT YOU BECOME LUCID, YOU'LL BE SO IMPRESSED WITH THE VIVID, ABSOLUTELY REAL QUALITY OF WHAT YOU SEE AROUND YOU, THAT YOU'LL LIKELY THINK IT'S GOING TO LAST FOR A GOOD WHILE. I'VE MADE THE MISTAKE OF PUTTING OFF MY "PLANNED BEHAVIOR" DOZENS OF TIMES BECAUSE I THOUGHT I COULD ALWAYS DO IT LATER. THE NEXT THING I KNEW I WAS AWAKE IN MY BED, OR BACK IN A "NON-LUCID" DREAM.

READ OVER THE FOLLOWING DREAMS AND IMAGINE YOURSELF IN THE ROLE OF THE DREAMER. NOTICE THAT THE DREAMERS BOTH REALIZE THAT OVER-EXCITEMENT CAN IMPEDE THE OPPORTUNITIES FOR CREATIVITY AND EVEN PREVENT AN ENCOUNTER WITH A DEEPER REALITY.

"I AM DREAMING NORMALLY, AND I FIND MYSELF IN A LARGE BARN. SUDDENLY I REALIZE THAT I AM DREAMING AND HAVE FULL DAYTIME CONSCIOUSNESS. THE FEELING OF FREEDOM AND EUPHORIA IS HIGH. THE BARN IS COMPOSED OF FOUR 30-FOOT WALLS OF LARGE STONES AND IS OPEN TO THE STAR-FILLED NIGHT SKY. IT IS COVERED WITH GREEN MOSS WHICH IS UNUSUALLY VIBRANT AND ALIVE. I WALK ON THE MOSS-COVERED FLOOR, MAKING ONE OR TWO COMPLETE CIRCLES AROUND THE AREA. I AM VERY EMOTIONAL BUT I TRY TO BE CAREFUL NOT TO CREATE VERY MUCH. I KNOW THAT AN EXCESS OF EMOTION WILL CAUSE ME TO AWAKEN. I DO AWAKEN WITH THE DREAM STILL VIVID ON MY MIND." (A.S., 1976)

"I AM FLYING AROUND, ENJOYING MYSELF IN A LUCID DREAM. AT ONE POINT, I BEGIN TO DOUBT MY WEIGHTLESSNESS. AS I DO, I PLUMMET TO THE GROUND. BUT I GET UP IN GOOD SPIRITS AND MAKE READY TO TAKE OFF AGAIN."

"THEN, HUGH LYNN COMES OUT OF THE HOUSE, SO I WALK UP TO TALK WITH HIM. I AM ELATED AND WANT TO SHARE MY EXPERIENCE WITH HIM. HE SMILES PATIENTLY AND SAYS, 'I HAD HOPED YOU WOULD GET OVER YOUR BENT FOR THESE KINDS OF EXPERIENCES. HE (THE MASTER) HAS BEEN HERE TWICE ALREADY.' I AM SO SHOCKED THAT I 'AWAKEN' IMMEDIATELY." (G.S.S., 1974)

QUESTION: WHAT WOULD YOU LIKE TO DO IN YOUR NEXT LUCID DREAM? BE CONCRETE. THINK ABOUT YOUR HIGHEST IDEALS AND ASPIRATIONS BEFORE ANSWERING THIS QUESTION. REMEMBER, VIRTUALLY ANYTHING IS POSSIBLE IN THE LUCID STATE; BUT YOU HAVE A LIMITED AMOUNT OF TIME, SO THE SIMPLER YOU CAN BE, THE BETTER. (FOR EXAMPLE, I SIMPLY TRY TO PRAY AND MEDITATE.)

WRITE THIS DECISION DOWN IN THE SPACE BELOW.

### ESTABLISHING A MENTAL FOCUS TO SUSTAIN LUCIDITY

SOMETIMES IT IS HELPFUL TO ADOPT A SIMPLE PHRASE OR AFFIRMATION THAT YOU CAN REPEAT TO YOURSELF DURING A LUCID DREAM. THE DREAM EVENTS ARE SO DISTRACTING, AND YOUR AWARENESS SO FEEBLE, THAT YOU'LL RETURN TO A NON-LUCID STATE OF MIND QUITE EASILY. SO, IN ADDITION TO WHAT YOU PLAN TO DO IN YOUR NEXT LUCID DREAM, YOU WOULD DO WELL TO DEVISE A SIMPLE MENTAL FOCUS TO GO ALONG WITH THIS PLANNED ACTIVITY.

READ OVER THE FOLLOWING DREAMS, IMAGINING YOURSELF IN THE ROLE OF THE DREAMER.

"A LONG DREAM IN WHICH I BECOME LUCID AT THE END. I AM ON MY WAY IN TO SEE A DOCTOR WITH SOME OTHER PEOPLE. I REALIZE THAT I AM DREAMING AS I APPROACH THE DOCTOR FROM THE REAR; I

CANNOT YET SEE HIS FACE. I REMEMBER THAT BEFORE I WENT TO SLEEP I WOULD USE THE AFFIRMATION 'EVERYTHING THAT I SEE IS THE PAST; ALL THAT MATTERS IS THE WAY THAT I RESPOND' IF I SHOULD BECOME LUCID—I HAD MADE THIS SUGGESTION TO MYSELF. I MOVE MY AWARENESS TO THAT AFFIRMATION. I HAVE TO LOOK AT ONE SPOT TO KEEP MY ATTENTION UPON IT. I AM AFRAID THAT ONE OF THE CHARACTERS IN THE DREAM (ESPECIALLY THE DOCTOR) WILL SEE ME STARING THIS WAY AND WILL GET ANGRY AT ME, THUS DIVERTING MY ATTENTION FROM THE AFFIRMATION AND CAUSING ME TO LOSE MY LUCIDITY." (M.A.T., 1974)

"I SEE MY FRIEND BENNY, WHO DIED FIVE YEARS AGO. HE SAYS 'I WANT TO SHOW YOU MY NEW KNIFE.' I REALIZE THAT I MUST BE DREAMING, AND TO REMIND MYSELF THAT I HAVE NOTHING TO FEAR, I REPEAT OVER AND OVER 'YOU'RE ONLY A DREAM. THE LIGHT OF THE CHRIST SURROUND YOU...'"

QUESTION: WHAT WOULD BE AN APPROPRIATE MENTAL FOCUS FOR YOU TO HOLD ONTO DURING YOUR NEXT LUCID DREAM? TRY TO MAKE IT CONSISTENT WITH YOUR PLANNED ACTIVITY.

WRITE THIS PHRASE DOWN IN THE SPACE BELOW.

### THE FRUITS OF LUCIDITY: THE HEALING OF PERSONAL PROBLEMS AND INTERPERSONAL RELATIONSHIPS

DREAMS REMIND US OF OUR "UNFINISHED BUSINESS" — PERSONAL PROBLEMS AND RELATIONSHIP DIFFICULTIES THAT CRY OUT TO US, "WAKE UP AND DEAL WITH ME!" BUT BECAUSE WE REMAIN NON-LUCID IN OUR DREAMS, WE RARELY DO ANYTHING NEW OR CREATIVE IN RELATION TO THESE SMOLDERING AFFAIRS. LUCIDITY -- EVEN JUST A MOMENTARY "AWAKENING" -- CAN HELP YOU HEAL DEEP AND ENDURING HURTS, SOME OF WHICH HAVE EXISTED JUST BELOW YOUR CONSCIOUS AWARENESS.

READ OVER THE FOLLOWING DREAMS, AND IMAGINE THAT YOU ARE THE DREAMER.

"B. HAS ME PINNED DOWN AND IS BEATING ME WITH HIS FISTS. I THINK THAT HE MUST MEAN TO KILL ME. VAGUELY AWARE THAT I MIGHT BE DREAMING, I REACH UP WITH MY ONLY FREE ARM AND RUB HIS SHOULDER GENTLY. HE ABRUPTLY STOPS HITTING ME. HE BEGINS TO CRY, SAYING OVER AND OVER AGAIN, "I ONLY WANT TO BE LOVED, I ONLY WANT TO BE LOVED." (G.S.S., 1976)

"I'M CLEANING OFF THE TOP OF MY DESK. I PICK UP A HANDFUL OF KLEENEX. THERE SEEMS TO BE SOMETHING HEAVY WRAPPED UP IN IT. I SHAKE IT OUT AND SEE THAT IT COULD BE A SPIDER. I DROP IT AND STEP BACK. I REALIZE THAT I'M DREAMING, AND EVERYTHING STARTS

TO FADE OUT. I SIT DOWN ON MY BED AND TRY TO STABILIZE THE IMAGE, WHICH HAPPENS RIGHT AWAY. GOING BACK TO MY DESK, I DROP DOWN ON MY KNEES AND PRAY THAT FRANCIS OF ASSISI MIGHT COME AND HELP ME. THEN HE'S RIGHT THERE WITH HIS HANDS ON MY SHOULDERS. HE PICKS UP THE KLEENEX AND THE SPIDER IS GONE." (D.G., 1976)

QUESTION: CAN YOU THINK OF A PERSONAL PROBLEM, OR A TROUBLED RELATIONSHIP, THAT MIGHT SHOW UP IN YOUR DREAMS AND WHICH MIGHT BE ALLEVIATED BY THE AROUSAL OF LUCID DREAMING?

LIST ANY SUCH PROBLEMS ON RELATIONSHIPS BELOW:

#### THE FRUITS OF LUCIDITY: EXPERIENCING THE LIGHT

I HAVE DISCOVERED NO PROFOUNDER TRUTH THAN THE "SECRET" OF DREAMS. THIS SECRET IS SO SIMPLE; BUT MY PRECONCEIVED IDEAS ABOUT DREAMS PREVENTED ME AT FIRST FROM SEEING THIS TRUTH. THE TIBETAN BUDDHISTS DISCOVERED THIS SECRET, AND CREATED A COMPLETE SYSTEM OF YOGA AROUND THE DREAM EXPERIENCE.

WHAT IS THIS SECRET? THAT A GREAT LIGHT -- A BEING OF LIGHT, IF YOU WILL -- AWAITS US IN THE DREAM STATE. A DREAM IS LIKE TRYING TO SEE A BEACON THROUGH THE FOG: THE IMAGES AND CHARACTERS WE SEE REPRESENT A REALITY OF OUR OWN CREATION WHICH STANDS BETWEEN US AND THE MOST LOVING TRANSCENDENT REALITY IMAGINABLE -- THE LIGHT, THE MASTER, OUR OWN HIGHER SELF.

LUCIDITY IS CRUCIAL IN HELPING US FINALLY GLIMPSE THIS LIGHT; FOR IT HELPS US SEE THE "FOG" AS OUR OWN CREATION, AND TO TAKE RESPONSIBILITY FOR IT. AS A RESULT, THE DREAM NO LONGER STANDS BEFORE US AS A REAL THING: WE HAVE MET THE DREAM AND IT IS US! THE FOLLOWING LUCID DREAM SEGMENTS REVEAL WHAT HAPPENS ONCE WE'VE TAKEN RESPONSIBILITY FOR THE DREAM AND ARE FINALLY READY TO MEET THE LIGHT WHICH HAS AWAITED US.

READ THESE DREAMS AS THOUGH YOU ARE THE DREAMER. CELEBRATE THEM AS A PROMISE TO YOU.

"AFTER READING THE ARTICLE ('LUCID DREAMING AS AN EVOLUTIONARY PROCESS,' THE A.R.E. JOURNAL, MAY, 1975) I WENT TO BED WITH A STRONG DESIRE TO TEST IT. I SLEPT RESTLESSLY UNTIL DAWN WITH NO RECALL. THEN THE MOST BEAUTIFUL EXPERIENCE FOLLOWED."

"I SEEMED TO BE RESPONSIBLE FOR A BABY WHICH WAS VERY MESSY AND SITTING ON A POT. MY CONCERN WAS TO FIND A BATHROOM AND CLEAN IT UP WITHOUT OTHERS NOTICING IT. AS I HELD THE BABY, I

DISTINCTLY FELT THAT IT SHOULD BE OLDER AND BETTER TRAINED. I LOOKED CLOSELY INTO ITS FACE WHICH WAS FULL OF WISDOM AND SUDDENLY I KNEW I WAS DREAMING."

"EXCITEDLY, I TRIED TO REMEMBER THE ADVICE IN THE ARTICLE AND THE ONLY THOUGHT I HAD WAS 'ULTIMATE EXPERIENCE.' A BLISSFUL SENSATION TOOK OVER--OF BLENDING AND MELTING WITH COLORS AND LIGHT--OPENING UP INTO TOTAL ECSTASY. I GENTLY FLOATED INTO WAKING CONSCIOUSNESS. A FEELING OF BUBBLING JOY HAS STAYED WITH ME NOW FOR SIX DAYS." (P.L., 1975)

"I AM SEATED WITH A GROUP OF PEOPLE. WE ARE TALKING ABOUT DIFFERENT WAYS THAT WE CAN GO TO VIRGINIA BEACH. THE MAN WHO IS LEADING THE DISCUSSION SAYS THAT WE MUST FIRST GO TO 'GHETTO,' WHICH IS A TOWN. I FEEL THAT IT HAS A REFERENCE TO ME. EVERYONE IS GIGGLING AND SAYING THE WORD OVER AND OVER. THE MAN ASKS MARK, WHO IS BESIDE ME, 'WHAT IS GHETTO?' MARK SAYS, 'GHETTO IS NO MORE. THERE IS ONLY A HILL COVERED WITH GRASS WHERE IT WAS BEFORE."

"AT THIS POINT, I LOOK UP IN THE WESTERN SKY, WHICH IS FILLED WITH STARS. A 'STAR' IS MOVING, AND HAS A LINE OF LIGHT LEADING OUTWARD FROM IT. I GET EXCITED, TAP MARK ON THE SHOULDER, AND POINT. THE STAR BECOMES A POINT OF LIGHT WITH MANY THREADS GOING OUT FROM IT. THEN THEY ALL BLEND TOGETHER AND SHOOT OUT IN AN EXPANDING BURST OF WHITE LIGHT. THE WHOLE SKY BECOMES BRILLIANTLY GLOWING. ALTHOUGH I AM VAGUELY AWARE THAT I AM DREAMING, I AM AFRAID, NOT KNOWING WHAT IT IS. I RAISE MY ARM TO SHIELD MYSELF, BUT IT OVERWHELMS ME. I AWAKEN, AND I'M UNABLE TO SEE BECAUSE OF THE LIGHT WHICH IS VIBRATING WITHIN ME. AT FIRST, I THINK THAT THE CABIN IS ON FIRE, BUT IT GRADUALLY SUBSIDES." (G.S.S., 1971)

THE LIGHT IS A PAINFULLY BEAUTIFUL PRESENCE WITH A VERY PERSONAL QUALITY TO IT. IT INVITES US TO SURRENDER, TO MERGE WITH OUR TRUE IDENTITY. BUT IT'S A HARD THING TO DO -- PROBABLY MUCH LIKE DYING! I'VE FOUND IT EXTREMELY IMPORTANT TO "KNOW TO WHOM OR WHAT" I'M SURRENDERING, JUST AS EDGAR CAYCE ADVISED MANY PEOPLE TO CAREFULLY CONSIDER. SO I WOULD ENCOURAGE YOU TO DECIDE WHO OR WHAT IT IS THAT YOU WORSHIP AS THE HIGHEST IDEAL OR PERSONAGE. FOR THIS DEEP DEVOTION WILL PERMIT THE LIGHT TO COME TO YOU AS A FAMILIAR, DEEPLY COMFORTING PRESENCE, AS IT DOES IN THE FOLLOWING LUCID DREAM.

"I AM WITH...(CLOSE FRIEND) AND WE ARE BOTH AWARE THAT WE ARE DREAMING. WE BEGIN FLYING CRISSCROSS PATTERNS THROUGH A LARGE NEW AUDITORIUM AS IF WE ARE PREPARING IT, AND CONSECRATING IT. WE ACTUALLY INTERPENETRATE EACH OTHER AS WE SIMULTANEOUSLY PASS THROUGH THE CENTER OF THE ROOM."

"AT ONE POINT I SEE HIM STANDING IN A DOORWAY AT THE BACK OF THE AUDITORIUM, TALKING TO SOMEONE STANDING BEHIND THE DOOR. I KNOW THAT IT IS JESUS! ANXIOUSLY, I WALK THROUGH THE DOOR AND LOOK TOWARD HIM. AT FIRST I AM ONLY ABLE TO SEE A BRIGHT WHITE LIGHT. BUT THEN THE LIGHT ABRUPTLY CHANGES INTO THE CLEAR FORM OF THE MASTER..." (G.S.S., 1975)

FINAL QUESTION: TO WHOM OR WHAT ARE YOU WILLING TO GIVE YOURSELF FULLY? WRITE THIS DOWN BELOW.



SUMMARY

NOW YOU'RE READY TO HAVE LUCID DREAMS! I KNOW IT MAY BE EXPECTING TOO MUCH FOR EVERYONE TO HAVE A LUCID DREAM OVER THE NEXT FIVE DAYS. BUT IF IT DOESN'T HAPPEN THEN, I'M CONVINCED THAT YOU'LL EVENTUALLY SUCCEED IF YOU WANT TO.

YOU MIGHT ALSO BE ON THE LOOKOUT FOR MODEST BUT CLEAR SIGNS THAT "THE DREAMER" IS STARTING TO CHANGE. YOU MAY NOTICE THAT YOU START BEING A LITTLE MORE CREATIVE OR CRITICAL AS THE DREAM UNFOLDS, EVEN THOUGH YOU MAY NOT ACTUALLY BECOME AWARE THAT YOU'RE DREAMING. THE JUDGES, TOO, WILL BE LOOKING FOR THESE SUBTLE CHANGES AS THEY EVALUATE YOUR DREAMS.

NOW -- GO TO THE SHEET LABELED DREAM INDUCTION EXERCISE.

Appendix F:  
The Dream Study Questionnaire

## DREAM STUDY QUESTIONNAIRE

Please answer the following 30 questions as accurately as possible. Do not return the Questionnaire itself, but transfer your answers to the one-page answer sheet enclosed in this packet. Return only the answer sheet! Keep this Questionnaire to refer back to as you read the final report, which will be sent after the study has been completed.

1. My sex is:
 

1 Male	2 Female
--------	----------
  
2. My age is \_\_\_\_\_ years.
  
3. How often do you remember your dreams?
 

1 Almost every night	4 Once or twice a month
2 About three times a week	5 Rarely or never
3 About once a week	
  
4. How often do you have dreams you would call vivid?
 

1 Almost every night	4 Once or twice a month
2 About three times a week	5 Rarely or never
3 About once a week	
  
5. Are you currently working on a regular basis with your dreams?
 

1. Yes	2 No
--------	------
  
6. If your answer to question five was "yes", how long have you been working with your dreams?
 

1 Less than six months	4 Three to five years
2 Six months to a year	5 Over five years
3 One to two years	
  
7. Do you presently write down your dreams?
 

1 Yes	2 No
-------	------
  
8. In general, how helpful have you found your dreams to be?
 

1 Extremely helpful	4 Of little help
2 Very helpful	5 Somewhat harmful
3 Somewhat helpful	
  
9. How often have you had a special type of dream during which you had the thought or said to yourself "I'm dreaming," or "This must be a dream?"
 

1 Once a week or more	4 Rarely
2 Once or twice a month	5 Never
3 Several times a year	
  
10. About how many cups of coffee do you drink each day?
 

1 None	4 5-6 cups
2 1-2 cups	5 7 or more cups
3 3-4 cups	

11. About how many hours of sleep do you generally get each night?  
 1 None 4 8 hours  
 2 5-6 hours 5 9 or more hours  
 3 7 hours
12. How do you generally feel upon awakening in the morning?  
 1 Very well rested 3 Somewhat tired  
 2 Fairly well rested 4 Very tired
13. Which of the following best characterized your smoking behavior during the past year?  
 1 I do not smoke at all  
 2 I'm a light smoker (equivalent to about ½ pack per day)  
 3 I'm a moderate smoker (equivalent to about 1 pack per day)  
 4 I'm a heavy smoker (equivalent to about 2 packs or more per day)
14. How would you characterize your drinking of alcoholic beverages during the past year?  
 1 I do not drink at all  
 2 I am a light drinker (less than one beer or drink per day)  
 3 I am a moderate drinker (one to two beers or drinks per day)  
 4 I am a heavy drinker (more than two beers or drinks per day)
15. During the past year, how frequently have you exercised?  
 1 I exercised daily 3 I exercised about once a week  
 2 I exercised about 3 times a week 4 I exercised rarely
16. Are you currently meditating?  
 1 Yes 2 No

If your answer to 16 was "Yes," then answer 17 - 19. If you answered "No," the go on to 20.

17. How long have you been meditating?  
 1 Up to 3 months 5 3 to 4 years  
 2 4 to 6 months 6 5 to 6 years  
 3 7 months to 1 year 7 7 to 10 years  
 4 1 to 2 years 8 More than 10 years
18. What is your current schedule of meditation?  
 1 Irregular 5 Between 5 p.m. and midnight  
 2 Between midnight and 7 a.m. 6 Twice a day (both times between  
 7 a.m. - noon)  
 3 Between 7 a.m. and noon 7 Twice a day (one session between  
 midnight - 7 a.m.)  
 4 Between noon and 5 p.m.
19. How many days do you typically meditate each week?  
 1 Every day 4 1 or 2 days  
 2 5 or 6 days 5 Less than once a week  
 3 3 or 4 days
20. Have you ever come so close to death that you probably would have died if you hadn't received prompt medical attention?  
 1 Yes 2 No
21. If so, did you have a deep, moving personal experience during your close brush with death?  
 1 Yes 2 No

22. Do you believe that reincarnation (the concept that an individual "soul" lives more than one lifetime as a human being) is:
- |                 |                 |
|-----------------|-----------------|
| 1 Untrue        | 4 A probability |
| 2 Unlikely      | 5 A certainty   |
| 3 A possibility |                 |
23. Have you ever had what seems to be a "memory" of a previous lifetime?
- |       |      |
|-------|------|
| 1 Yes | 2 No |
|-------|------|

If your answer to 23 was Yes, answer 24 and 25 below: if No, go to 26.

24. How many of these memory experiences have you had?
- |                |                 |
|----------------|-----------------|
| 1 One to three | 3 Seven to nine |
| 2 Four to six  | 4 Ten or more   |
25. How many of these "memory" experiences were dreams?
- |                 |                |
|-----------------|----------------|
| 1 None          | 4 Five to nine |
| 2 One or two    | 5 Ten or more  |
| 3 Three or four |                |
26. How many times have you had a profound and deeply moving sense of communication, unity and oneness with all of nature, creation or God?
- |                       |                       |
|-----------------------|-----------------------|
| 1 Never               | 4 Five or six times   |
| 2 One or two times    | 5 Seven to ten times  |
| 3 Three or four times | 6 More than ten times |
27. How many times have you experienced a dream in which you saw and interacted with someone who reported to you later a very similar or identical dream with you in it?
- |                       |                       |
|-----------------------|-----------------------|
| 1 Never               | 4 Five or six times   |
| 2 One or two times    | 5 Seven to ten times  |
| 3 Three or four times | 6 More than ten times |
28. How many times have you had an experience in which you felt that "you" were located "outside" or "away from" your physical body; that is, the feeling that your consciousness, mind or center of awareness was at a different place than your physical body?
- |                       |                       |
|-----------------------|-----------------------|
| 1 Never               | 4 Five or six times   |
| 2 One or two times    | 5 Seven to ten times  |
| 3 Three or four times | 6 More than ten times |
29. How many times have you had a dream which matched in detail an event that occurred before, during, or after your dream, and which you did not know about or did not expect at the time of the dream?
- |                       |                       |
|-----------------------|-----------------------|
| 1 Never               | 4 Five or six times   |
| 2 One or two times    | 5 Seven to ten times  |
| 3 Three or four times | 6 More than ten times |
30. To what extent do you feel that you have volitional control over the people, objects or situations in your dreams, while you are experiencing the dream? That is, to what extent can you sometimes manipulate the dream so that you experience a more desirable outcome?
- |                                |                               |
|--------------------------------|-------------------------------|
| 1 A high amount of control     | 3 A slight amount of control  |
| 2 A moderate amount of control | 4 Virtually no control at all |

Appendix G:  
Instructions for Recording Dreams

## INSTRUCTIONS FOR RECORDING YOUR DREAMS

Read these instructions only after you read and re-read the Second Stage Orientation Letter, The Pre-Induction Text, and The Lucid Dream Induction Task.

(If you were one of the participants who collected some preliminary dreams in February, the instructions are the same, except for the clarification that you should record each dream on a separate page.

Step One: Prepare Dream Sheets

To prepare the pages on which you'll be recording your dreams, first obtain several sheets of white typing or photocopy paper, which is 8½" x 11". Fold it in half from the top to the bottom, making pages the size of 8½" x 5½". Cut the pages along the fold, and you'll have pages the size you'll need for your dreams. Make as many of these half-page sheets as you think you'll need for 10 nights of dream recall.

Step Two: Recording Dreams

As soon as you awaken in the morning, record any and all dreams that you can recall, including the most brief fragments and images. If you're not sure where one dream ends and another begins, treat them as separate dreams. Record each dream on a separate page.

Write each dream out in your own handwriting, as long as the writing is legible. Print if necessary. Use the back of the sheet if necessary. And if the dream is an especially long one, use another sheet; but staple them together.

Write the dream as though it were occurring right now; that is, use the present tense, not the past tense. This will help the dream raters experience the dream more fully. See sample dream on the back of this page if it's not clear what I mean about writing the dream as though it were happening right now.

Step Three: Coding the Dream Record

After you write the dream down, you'll need to affix certain basic information to the back of the sheet. Along the very bottom of the back side of the page, insert the following information on an imaginary horizontal line, as shown in the sample (See next page). Answer the following questions:

- 1) What is your participant number? This three-digit number is on your mailing label. Enter this number on the far left side of the bottom of the page, and then put a dash before you answer the next question.
- 2) Enter the date of the morning after the dream; that is if the dream occurred during the night of March 23, and if you record it on the following morning of March 24, then put "3/24" on the dream record. Then put another dash.
- 3) Enter the estimated number of hours you slept during the night. (Do not use fractions smaller than ½.) Put another dash.

- 4) Enter a "yes" if you meditated on the previous day, and a "no" if you didn't meditate the previous day. Put another dash.
- 5) Finally, enter the estimated hour of the night at which the dream occurred. This may be hard to estimate; but make a guess anyway.

The above information will go on every dream that you record for this study, so it is advisable to memorize this simple sequence of questions.

Pre-Sleep Activities

During this dream collection period, please feel free to do whatever you ordinarily do to get ready for bed; but please refrain from altering your normal pre-study schedule as much as possible, except when it comes to carrying out the specific tasks described in the sealed packets. For example, if you regularly meditate before going to bed, then please do so. But if you don't, then please don't start now unless you had planned to begin regardless of the study.

Step Five: Mail Dreams in the Addressed, Stamped Envelope

On the morning of April 1st, or shortly thereafter, enclose all of your dreams for the 10 nights in the addressed, stamped envelope and mail the dreams to me. Once you've sent these materials, you will have completed the study.

Please review the following dream sample. The size of the dream recording sheet is, of course, reduced in this illustration. The important thing is to write legibly, and to code the record with the five bits of information, as shown on the bottom right.

<p>Front</p> <div style="border: 1px solid black; padding: 10px; min-height: 150px;"> <p><i>I'm in a classroom taking an exam. I realize that I've never attended class, because I forgot I was enrolled. I'm very anxious, wondering if there's some way out of this. The</i></p> </div>	<p>Back</p> <div style="border: 1px solid black; padding: 10px; min-height: 150px;"> <p><i>professor comes up I ask him if I can drop the course at this late date. He says, "why not study for a week and take the exam next week?" I agree to this.</i></p> <p>156 - 2/14 - 7½ - No - 4:00</p> </div>
<p>Participant number</p>	<p>Date dream recorded</p>
<p>Approx. # of hours slept</p>	<p>Meditation on previous day?</p>
<p>Approx. time of dream</p>	



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## Abstract

### AN EXPLORATION INTO THE INDUCTION OF GREATER REFLECTIVENESS AND 'LUCIDITY' IN NOCTURNAL DREAM REPORTS

Gregory Scott Sparrow, Ed.D.

The College of William and Mary, September, 1983

Chairman: Charles O. Matthews, Ph.D.

The purpose of this study was to determine the availability of "lucid dreaming" to a sample comprised of individuals with a wide variety of previous dream work experience. Defined as the experience of becoming aware that one is dreaming during the dream itself, lucid dreaming has been regarded as a potentially therapeutic experience which, if inducible in counseling clients and self-directed dream students, could serve as a valuable therapeutic and growth tool.

A sample of voluntary subjects was obtained from the membership of the Association for Research and Enlightenment, in Virginia Beach, Virginia. This population was chosen because of their interest in dream work and personal development -- qualities that would characterize a counseling client who might be ready for such in-depth dream work.

Two induction strategies were tested, one based on reliving and revising a past, unpleasant dream, as though the subject were lucid; and the other based on writing an essay titled, "Why I want to Have Lucid Dreams." A delayed-treatment control group was also employed.

The resultant dreams were rated on an original scale to assess the level of lucidity, and an original scale designed to assess aspects constructive dreamer process, including interaction, role changes, constructive behavior, and critical self-reflectiveness.

It was concluded that lucid dreams were available through induction strategies to a large proportion of the subjects, regardless of their previous experience. When the individual treatments were compared, the dream reliving subjects produced higher, albeit non-significant levels of all criterion measures, and achieved significantly higher levels of non-lucid constructive dreamer process.