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Dimensions of Repetition and Negative Affect in Dreams and Their Relation to Psychological Well-Being

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Repetition and negative affect in dreams and well-being.

This thesis is dedicated,
with love, to my parents.

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Abstract

Six studies are presented whose combined goals were to investigate the relationship between the dimensions of repetition and negative affect in dreams, dream content measures, and measures of well-being. Study 1 presents the results of a content analysis of childhood and adult recurrent dreams. Study 2 showed that recurrent dreamers score lower on measures of well-being and report more negative dream content than both past-recurrent dreamers and non-recurrent dreamers. Study 3 showed that people who experience recurrent dream themes report low levels of well-being and negative dream content, but not to the extent shown by people with recurrent dreams. Underlying assumptions of commonly proposed definitions for nightmares were tested in Study 4. Study 5 showed that people with frequent nightmares score lower on indices of well-being than people with frequent bad dreams, who score lower than control subjects. Study 6 presents five cases of recurrent nightmare sufferers who were treated successfully with lucid dreaming.

Résumé

Les six études présentées avaient pour but d'étudier la relation entre des dimensions de répetition et d'affect négatif dans les rêves, des mesures du contenu des rêves, et des indices de bien-être. La première étude se penche sur l'analyse du contenu de rêves récurrents de l'enfance et de l'âge adulte. La troisième étude révèle que les gens ayant des rêves aux thèmes récurrents rapportent des niveaux de bien-être bas et du contenu négatif dans leurs rêves, mais pas autant que des gens ayant des rêves récurrents. Les présupposés de définitions communes de cauchemars ont été vérifiés dans la quatrième étude. La cinquième étude démontre que les gens ayant des cauchemars fréquents rapportent des niveaux de bien-être plus bas que des gens ayant de mauvais rêves fréquents, et ces derniers rapportent des niveaux plus bas qu'un groupe témoin. La sixième étude présente cinq cas souffrant de cauchemars récurrents et qui ont été traités avec succès à l'aide de rêves lucides.

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General Introduction

Dreams have always been a source of fascination. Written accounts about dreams, their source and significance date from the dawn of civilization. Dreams are discussed on Sumerian clay tablets approximately five thousand years old. Dreams figure prominently in many ancient texts, including the Old Testament (e.g., Joseph's interpretation of the Pharaoh's dream in the Book of Genesis), the Talmud (which contains 217 references to dreams), Homer's *Illiad,* Hippocrates' *On Dreams,* and Aristotle's *On Dreams, On Sleep and Waking,* and *On Prophesy in Dreams.* The literature on dreams from Sumaria to the nineteenth century has been reviewed by several authors (e.g., Empson, 1989; Hall, 1977; MacKenzie, 1965; Webb, 1979, 1990), and most recently and thoroughly by Van de Castle (1994). These reviews, Van de Castle's in particular, indicate that throughout history, dreams have played a significant role in politics, art, religion and psychology.

Two types of dreams have been the source of particular fascination: recurrent dreams and nightmares. Some people experience the same dream -- a recurrent dream -- repeatedly over a period of months, years, or even decades. Several examples and interpretations of recurrent dreams are contained in Artemidorus's *Oneirocritica* (circa 200 A.D.), the principal source of dream interpretation and dream philosophy in antiquity (Artemidorus, 1975). Nightmares are fascinating because of the intense negative affect of these highly unpleasant dreams. Nightmares were observed by Hippocrates (Chadwick & Mann, 1950, p. 191) and are discussed in the Babylonian epic poem of Gilgamesh (2000-3000 B.C.), the most famous of all Assyro-Babylonian heroes (Mason, 1970).

Recurrent dreams and nightmares are the subject of this thesis. Five studies are presented whose combined goals were: 1) to classify the content of recurrent dreams and nightmares; and 2) to investigate the relation between these two types of dreams and measures of psychological well-being. A sixth study follows up the research studies by presenting five case histories involving the treatment of recurrent nightmares.

Approaches to Dream Research

Dream research in the twentieth century can be classified into three broad approaches: psychoanalytic, psychophysiological, and cognitive.

The psychoanalytic approach began with the publication in 1899 of Freud's *The Interpretation of Dreams*. Freud, however, wishing to distance his views from those of nineteenth century writers, requested that the publication date be given as 1900 (Van de Castle, 1994). The impact of Freud's theory of dream formation and dream interpretation on the scientific study of dreams is well captured by Haskell (1986), who writes:

> "It seems somewhat of an historical irony that the publication of *The Interpretation of Dreams*, a monumental work in the history of psychological discovery and theorizing, a veritable tour de force lifting the study of dreams and dreaming out of their ancient roots in occult, religious, and folk symbology, should, at the same time, have doomed the study of dreams and dreaming in academic psychology. Since 1899, academic psychology has consistently refused to consider dream data within its purview. It is a curious irony in the history of psychology and science, however, that psychologists concerned with scientific evidence should conclude on the basis of folklore, as well as Freud's ostensibly unscientific analysis, that dream data were not an appropriate phenomena for scientific research. It would seem at a minimum that the more scientific course would have been to conduct research before rendering a conclusion of this magnitude" (p. 133-34).

The psychophysiological approach to dream research began in earnest after 1953, when Aserinsky and Kleitman discovered quite serendipitously that dreaming was associated with regularly occurring rapid conjugate eye movements (REMs) during sleep. Together with the work of Dement and Kleitman (1957a; 1957b), this research showed that dream reports could be reliably obtained by awakening the sleeper during REM sleep. This discovery ushered in a new era in dream research. Considerable efforts were expended in specifying the psychophysiology of sleep mentation and the possible functions of REM sleep. Examples from this vast research include studies which have investigated the effects of REM sleep deprivation on waking state (reviewed by Ellman, Spielman, Luck, Steiner, & Halperin, 1991; Lewin & Singer, 1991), the effects of external stimuli applied prior to sleep and during REM sleep on dream content (reviewed by Arkin & Antrobus, 1991), and the interactions between pharmacological agents and REM sleep (reviewed by Roth, Kramer, & Salis, 1979). Though dreaming is associated with REM sleep in humans, several researchers have argued that dreaming and REM sleep are not equivalent (e.g., Foulkes, 1985, 1993; Hall, 1967; Pivik, 1991, 1994). In addition, there is considerable debate as to the nature of dreaming in other stages of sleep and how it differs from that of REM sleep (e.g., Cavallero, Cicogna, Natale, Occhionero, & Zito, 1992; Foulkes, 1985, 1993; Hartmann, 1994a; Pivik, 1994). Finally, though this research has yielded numerous findings and theories on the ontogeny, phylogeny, neurobiology, and psychophysiology of REM sleep, and has served to legitimize the study of dreaming as a physiological process, it has largely failed to shed light on the process of dream construction and on the significance of dream content for the dreamer (Foulkes, 1978, 1985).

The cognitive approach to dreams encompasses several areas of research. The development of a cognitive psychology of dreaming based on information-processing models of waking cognition is one such area. This is best exemplified by the work of Foulkes (1978, 1985) who argues that the sleeping mind is not functionally distinct from the waking mind, and that no cognitive theory can be taken seriously if it excludes or is unable to incorporate valid cognitive data from dream research. A second, more molar cognitive approach, is experimental phenomenology. This area includes the work of numerous researchers (e.g., Hall, 1953a; LaBerge, 1985; Rossi, 1985; Tholey, 1988). A third area consists of the experimental clinical paradigm — a method of study commonly used in many areas of clinical psychology research. This approach typically involves comparing the content of dream reports from different populations (e.g., depressed versus non-depressed individuals) or comparing individuals who report experiencing certain types of dreams (e.g., nightmares) with others who do not have such dreams on various personality measures (e.g., scores on the MMPI). This method of studying dreams is exemplified by the research of Cartwright and her colleagues (e.g., Cartwright, 1977; Cartwright, Lloyd, Knight, & Trenholme, 1984)and Hartmann and his associates (e.g., Hartmann, Falke, Russ, & Oldfield, 1981). Finally, a few researchers (Antrobus, 1991; Antrobus & Fookson, 1991; Fookson and Antrobus, 1990; Globus, 1989, 1993) have recently proposed connectionist models (i.e., dynamical systems conceptions of neural networks) of dreaming based in large part on the Parallel Distributed Processing (PDP) models developed by McClelland and Rumelhart (1986).

As can be seen from this brief overview, approaches to the study of dreams vary from the very concrete (e.g., investigating basic physiological

systems) to the highly abstract (e.g., role of dreams in personality). What level of analysis is most appropriate to answer questions about dreams? Generally, concrete approaches are best suited to answer questions concerning the physiological concomitants of dreaming and the processes which gives rise to the experience of dreaming. Cognitive, phenomenological, and experimental-clinical analyses are generally best suited for answering questions concerning how dream content is formed and what dream content may signify for the dreamer.

Goals

This thesis set out to answer two main questions: a) What is the content of recurrent dreams and nightmares; and b) What is the relation between recurrent dreams, nightmares and well-being? These two questions are studied using the experimental-clinical approach. The thesis is not concerned with the "interpretation" of dream content (i.e., suggesting the "meaning" of a particular dream). Instead, it describes two dimensions of dream content (i.e., repetition and negative affect) and attempts to explain the relationship between these two dimensions, objective measures of dream content, and self-reported measures of well-being.

Organization of the Thesis

An overview of the dream theories of Freud and Jung is presented to introduce the modern era of dream study. Next, the literature on the relation between dreams and measures of anxiety and depression is reviewed. Then the phenomenon of dream recurrence is discussed. The review describes the prevalence and content of recurrent dreams, theories of recurrent dreams,

Domhoff's (1993) concept of a dream repetition continuum, and the literature on the association between recurrent dreams and well-being.

Three studies of recurrent dreams are then presented. Each study contains its own introduction and discussion. Study 1 presents the results of the first-ever content analyses of childhood and adult recurrent dreams. Study 2 extends previous research on the relation between recurrent dreams and well-being to a younger population sample. Study 3 validates Domhoff's (1993) "repetition continuum" by extending the findings from studies on recurrent dreams (including those reported in Study 2) to the domain of recurrent dream themes. The results from these studies are then integrated into a general discussion on the relation between the dream repetition continuum and well-being.

Then, in the second half of the thesis, the second dimension of dream content, negative affect, is introduced. First, nightmares are differentiated from night terrors and theories of nightmares are reviewed. Inconsistencies in commonly used operational definitions of nightmares are discussed. It is argued that nightmares (i.e., disturbing dreams which awaken the sleeper) should be differentiated from bad dreams (i.e., disturbing dreams which, although being unpleasant, do not cause the dreamer to awaken). Study 4 tests the underlying assumptions of commonly proposed definitions of "nightmares," and based on the results, suggests appropriate definitions for nightmares and bad dreams. The implications of the reported findings for the area of nightmare research are covered in the discussion section of Study 4. It is then argued that the inconsistent results of studies having investigated the prevalence of nightmares and their association to psychopathology can be attributed in part to the use of inconsistent definitions of nightmares and to the

failure of researchers to evaluate nightmares and bad dreams separately. Using the definitions proposed in Study 4, Study 5 examines the prevalence of nightmares and bad dreams and their relationship to well-being. The sixth and final study of the thesis describes a technique for altering the content of recurrent nightmares and presents five case reports in which recurrent nightmares were treated successfully.

Finally, the results are summarized in the Summary and Conclusions. Suggestions for future research, the relation between dream content and life-events, and issues pertaining to the possible function of dreaming are also discussed in this section.

Dream Theories of Freud and Jung

The dream theories proposed by Freud and Jung have had an enormous influence on other twentieth-century dream theorists. A brief review of these theories is necessary to set the scene for subsequent research on dreams.

Freud's Theory of Dreams as Disguised Wishes

Freud believed that people tended to maximize instinctual gratification while minimizing punishment and guilt. He called this the reality principle. Freud's conceptualization of the psyche's structural organization included three "portions of the mind", namely the id (the unconscious repository of instinctual cathexes seeking discharge), the ego (roughly, conscious awareness), and the superego (a psychic entity that embodies society's values and taboos). His psychodynamic theory states that the ego, through various defense mechanisms, serves as a mediator between the instinctual impulses emanating from the id and the demands of conscience and society contained in the super-ego.

Freud considered *The Interpretation of Dreams* to be his most important work. This is clear from his comments in the forward to the third English edition in which he states "It contains, even according to my present-day judgment, the most valuable of all the discoveries it has been my good fortune to make. Insight such as this falls to one's lot but once in a lifetime" (p. xxxii).

Freud proposed that dreams had two interrelated functions. One function was to give expression to previously repressed wishes from the id, thereby allowing the release of psychic tension. A second function of dreams was to protect sleep from being disturbed. In essence, the dream was seen as a compromise between unacceptable unconscious wishes, often sexual in nature and dating from early childhood, and the desire to remain asleep.

Sleep was believed to be a state during which repression of unacceptable wishes was weaker than during waking. Thus, it was possible that repressed wishes would arise during sleep and threaten to enter consciousness. Because of their antimoral and antisocial characteristics, these instinctual wishes needed to be distorted in order to be "acceptable" to the dreamer, thereby allowing their partial expression (dreams as 'wish-fulfillment') while assuring the continuation of sleep (dreams as 'the guardians of sleep'). This task is accomplished by the dream censor through the defense mechanisms of condensation, displacement, symbolization, and secondary elaboration.

Freud thus makes an important distinction between the manifest content of dreams and the latent content of dreams. The former refers to the actual dream as experienced and reported, whereas the latter refers to the "true" meaning of the dream. According to his theory, dream interpretation involves retracing the various distortions that produced the manifest dream back to their sources in the latent dream thoughts (i.e., infantile wishes). Free-

association was considered by Freud to be the fundamental tool for deciphering a dream's true meaning. However, as discussed by Jones (1970), nowhere in the *Interpretation of Dreams* does Freud analyze a dream back to an infantile wish.

Twelve recent professional assessments of Freud's *The Interpretation of Dreams* (see *Dreaming, 4(1)*, pp. 43-88) show that regardless of whether Freud's ideas are viewed positively or negatively, *The Interpretation of Dreams* is a great and seminal work that had (and continues to have) a profound impact on attempts to understand the meaning and function of dreams.

Jung's Theory of Dreams

Jung's theory of the unconscious differs from that of Freud (see Frey-Rohn, 1974 for a thorough comparison) and as a result so does his conception of dreams. Jung's structural model of the psyche includes three levels: ego-consciousness; the personal unconscious; and the collective unconscious. Ego-consciousness consists of conscious perceptions, thoughts, memories, and feelings (i.e., the conscious mind). The personal unconscious consists of two types of experiences: those that were once conscious but are currently repressed and of those that are merely no longer the focus of attention. The collective unconscious reflects the accumulated experience of the human species. This is Jung's unique and controversial concept. Jung chose the term collective "because this part of the unconscious is not individual but universal; in contrast to the personal psyche it has contents and modes of behaviour that are more or less the same everywhere and in all individuals" (Jung, cited in Hadfield, 1954). Jung proposed that these universal ideas and images were not themselves transmitted but rather that their prototypes or potentialities were.

The forms taken by these universal ancestral experiences that correspond to aspects of conscious experience (e.g., dreams, fairy tales, myths, and certain

works of art) are referred to as archetypal images. Dreams in which such images emerge strongly are referred to as archetypal dreams. Jung (1960) believed that archetypes were similar to instincts in that they could regulate, modify, and motivate behavior. Jung (1960) later clarified this concept by stating that: "what we mean by 'archetype' is in itself irrepresentable, but has effects which make visualization of it possible, namely, the archetypal images and ideas. We meet with a similar situation in physics: there the smallest particles are themselves irrepresentable but have effects from the nature of which we can build up a model. The archetypal image, the motif or mythologem, is a construction of this kind" (p. 214). The major archetypes are the *shadow* (the undeveloped primitive aspects of one's personality that are inherited from our evolutionary ancestors), the *anima* (the feminine possibility in men), the *animus* (the masculine possibility in women), the *persona* (the conventional mask adopted by persons in the face of social pressures), and the *self* (a conglomerate of all the opposing forces in a person).

Jung viewed unconscious processes as being in opposition to conscious ones. Within this context, Jungian dream theory sees the dream as playing primarily a 'compensatory' role in personality. The compensatory function of dreams represents an attempt to maintain the personality's overall homeostatic balance by allowing the ego-consciousness to recognize and at times integrate unconscious material. Jung (1956) notes that this material can include "the meanings of daily situations which we have overlooked, or conclusions we have failed to draw, or affects we have not permitted, or criticisms we have spared ourselves" (p. 87). This view is in contrast with Freud's dream theory in which dreams represent the fulfillment of infantile wishes.

A second crucial difference between the theories of Freud and Jung concerns the manifest content of dreams. Whereas Freud saw the dream as an elaborately disguised and neurotic process, Jung's theory emphasizes the transparent and creative nature of dreams. For Jung, the manifest content of dreams is not a "facade" intended to deceive and there is no need to posit a latent content as described by Freud.

Finally, Freudian and Jungian dream theories also differ on the importance and method of dream interpretation. Unlike Freud, Jung believed that dreams were best understood in series rather than individually, and he advocated keeping dream diaries. Jung proposed techniques for understanding dreams (e.g., amplification, active imagination) which he believed could lead to practical and important insights. However, he stated that he doubted if these techniques deserved the name "method" (Jung, cited in MacKenzie, 1965, p. 181) and was certainly not dogmatic about their use.

The studies presented in the thesis are not framed in terms of a specific theory of dreams. However, to the extent that these studies examine subjects' manifest dream content over a series of dreams, the working assumptions are certainly closer to Jung's theory of dreams than to Freud's.

Dream Content and Psychopathology

Over the past 25 years, a growing number studies have investigated dream content in psychopathological states. A literature search using the PsychInfo database (Ovid Search Software for Unix, v.3.0, 1994) showed that between January 1967 and August 1994, 832 studies had reported on the dream content of people with anxiety, depression, mania, schizophrenia, drug dependency, or organic brain disease. Approximately 35% of these studies are

case reports while about 30% of the remaining studies are purely descriptive in nature. Two areas of this literature are considered here: controlled and semi-controlled studies of dream content in people with anxiety or depression.

Dream Content Studies of Anxiety

Despite the fact that anxiety symptoms are ubiquitous across a wide range of psychopathological disorders, few studies in the literature on dream content and psychopathology have examined anxiety with respect to recalled dreams. Gentil and Lader (1978) compared the recalled dream content of 25 female out-patients diagnosed as suffering from chronic anxiety states with dream reports from 25 female volunteers matched for age. Subjects completed Spielberger's trait and state anxiety inventory. The control subjects were divided into a high-anxious control group or a low-anxious control group on the basis of their scores. The dream reports from the out-patients were significantly shorter and contained significantly greater proportions of anxious, dysphoric and aggressive-interactional content than the dream reports from either control group. The high-anxious control group reported the longest dreams and the levels of dysphoric content in their recalled dreams were consistently between those from the out-patients and the low-anxious controls. The low-anxious control group reported the most balanced dream content with respect to overall pleasant versus dysphoric tone. Gentil and Lader concluded that their findings are consistent with the hypothesized association between the content of recalled dreams and one's current level of psychological adaptation.

Maultsby and Gram (1974) studied the changes in dream content in high-anxious patients as a function of psychotherapy. They found that the proportion of anxiety-toned dream content declines significantly following

termination of successful psychotherapy. The authors also view their results as being consistent with the hypothesis that dreams reflect the processes both of psychological adaptation and psychological conflict resolution.

Zadra, Donderi, and Assad (1992) had fifty-two normal adults complete the McGill Sleep/Dream Questionnaire, Spielberger's trait anxiety inventory, and collect a 14-day sample of their own remembered dreams. All dreams were scored for the presence of anxiety using Gottschalk and Gleser's (1966) anxiety scale. Trait anxiety was found to be significantly correlated with the average number of anxieties reported per dream report ($r = .41$), supporting the view that people's levels of daytime anxiety are related to the amount of anxiety-toned content in their dreams.

Several studies have examined the relation between nightmare frequency and anxiety. While some studies have found a relationship between these two variables (Dunn & Barrett, 1987; Feldman & Hersen, 1967; Haynes & Mooney, 1975; Hersen, 1971) others have not (Lester, 1968, 1969; Levin, 1989; Wood & Bootzin, 1992; Zadra & Donderi, 1993). The literature on the association between nightmares and psychopathology is reviewed in detail in the introduction to Study 5.

Dream Content Studies of Depression

Many of the better designed studies in the dream content and psychopathology literature have investigated the association between dream content and depression. Beck and Ward (1961) had 287 randomly selected psychiatric patients provide a report of their most recent dream. Subjects were divided into three comparison groups based on their degree of depression: moderate to severe depression; mild to moderate depression; and no

depression. Dream reports were scored for the presence or absence of "masochistic" content (i.e., dreams in which the subject is the recipient of a distressing experience, such as being disappointed, exploited, rejected, ridiculed, or injured). A significant association was found between masochistic dream content and severity of depression, with the moderately to severely depressed group reporting significantly more masochistic dreams than the nondepressed group. The results replicated those of a previous study of 20 consecutive dreams from six depressed patents and six nondepressed patients (Beck & Hurvich, 1959). Beck and Ward (1961) noted that many patients with cyclical depression report masochistic dreams with the same degree of frequency during symptom-free periods and that in some patients, repetitive masochistic dream themes appear long before their first depressive episode. Beck and Ward concluded that masochistic dreams were not diagnostic for depression. Instead, they suggested that masochistic dream content is best viewed as being related to underlying personality traits of individuals who are prone to depression.

Langs (1966) compared the dreams reported by a group of psychotically depressed inpatients with the dreams reported by inpatients with hysterical character disorder and with the dreams reported by paranoid schizophrenic inpatients. Of the three groups, the depressive group of patients reported the shortest, fewest, and most barren dreams. In addition, they had more dreams with family members while nonfamily members were entirely absent from their dream reports. Langs concluded that the dreams of psychotic depressives centered on family members and reflected a decathexis of the external world and external objects.

Dream reports from ten inpatients with psychotic depression were collected in the sleep laboratory and compared with those from ten

nondepressed college student volunteers by Kramer, Whitman, Baldridge, and Lansky (1966). The inpatients initially slept two nights in the laboratory while on placebo medication, after which they were placed on imipramine. Dream reports were then collected in the laboratory one night per week for three additional weeks. The volunteers slept in the laboratory one night a week for four weeks. All dream reports were rated for the presence of Beck's (1963) depressive themes (low self-regard, deprivation, self-criticism and self-blame, overwhelming problems and duties, self commands and injunctions, escape and suicide), and for the presence of helplessness or hopelessness. When compared to the dream reports from the volunteer subjects, the dreams from the depressed group contained higher frequencies of each of the six depressive themes as well as higher frequencies of helplessness and hopelessness. By the fifth week of study, all of the depressed patients had shown some clinical improvements. However, no significant differences were found on the measures of dream content when the depressives' dreams from the first night were compared to those from the fifth (or last) night.

In a subsequent study, the dream reports from patients treated with imipramine contained less hostility and anxiety and more intimacy and motility when compared to baseline levels (Kramer, Whitman, Baldridge, and Ornstein, 1968). These changes in the patients' dream content were concomitant with the patients' clinical improvement.

Kramer, Baldridge, Whitman, Ornstein, and Smith (1969) collected the most recent recalled dream from 40 male paranoid schizophrenics, 40 male psychotically depressed patients, and 40 male nonpsychiatric medical patients. The dream reports were rated on several measures including dream length (i.e., number of words per dream report), hostility in (i.e., hostility directed

toward the dreamer), overt hostility out (i.e., hostility directed by the dreamer towards other dream characters), and the relationship of the dreamer to other dream characters. The depressed patients had scores on the measures of dream length and of dreamer-involved hostilities that were midway between those of the schizophrenic and medical patients. Consistent with the results of Langs (1966), the dreams from the depressed patients contained mostly family members. By contrast, the dreams from the schizophrenic patients contained mostly strangers and those from the medical patients mostly friends.

Van de Castle and Holloway (1970) compared recently recalled dreams from 97 depressed psychiatric inpatients with dream reports from 337 nondepressed psychiatric inpatients, and with dream reports from 200 college students. The dreams from the depressed group contained less color and more adjectives describing wrongness and unattractiveness than the dreams from the two other groups.

In one of the better-controlled dream content-depression studies, Hauri (1976) compared the recalled dreams of eleven remitted patients, formerly hospitalized with unipolar depression, with the recalled dreams from eleven normal control subjects. The controls were individually matched to remitted patients by sex, age, education, and occupation. Patients and controls completed the Beck Depression Inventory and the Nowles Mood Adjective Checklist . Each subject slept in the sleep laboratory for three nights, and dream reports were collected by awakening the subject from both REM and NREM sleep. For each patient and his or her control subject, awakenings were matched for time elapsed from sleep onset and for the amount of time spent in specific sleep stages prior to an awakening. The dream reports were scored by three raters on scales of dreamlike fantasy, hedonic tone, anxiety, hostility in, ambivalent

hostility, overt hostility out, covert hostility out (i.e., hostile acts in the dream environment not involving the dreamer), and masochism. The number of words per dream report was also calculated. When compared to the dream reports from the controls, the remitted depressives' dream reports were significantly shorter and contained significantly more covert hostility out and masochistic content. The dream reports from the remitted patients also dealt more extensively with past issues whereas the dream reports from controls were more concerned with the present. In most other respects, the dream reports of the remitted depressives approximated that of the normal control subjects. Hauri suggested that the first set of findings indicate that remitted patients view the world as a more threatening and hostile place than do controls. The results also support Beck and Ward's (1961) idea of an enduring depressive or depressiogenic disposition in individuals who no longer report symptoms of clinical depressions.

Cartwright, Lloyd, Knight, and Trenholme (1984) and Cartwright (1986) investigated the laboratory dreams of women undergoing divorce. Women in both studies were classified as depressed or nondepressed and were compared to a control group of nondepressed married women. The dreams of both divorcing groups had more negative affect and more threatening content than the dreams of the married control group. Twenty-eight per cent of the dreams of the married women contained references to the experimental or laboratory situation, while experimental and laboratory content was reported in only 12% of the dreams of the divorcing women. This finding led Cartwright (1986) to suggest that vital life stressors have a greater influence over dream content than any situational stress that might arise when sleeping in a laboratory.

Among the women who were undergoing divorce, both studies revealed consistent dream content differences between the dreams of the depressed and the non-depressed group. The dream reports of non-depressed women were longer, displayed a broader time perspective (i.e., referred to past, present and future situations), and included the self in the marital and in preferred roles. By comparison, the dreams of depressed divorcees were set in a narrow past-oriented time frame, contained fewer positive motives, and did not demonstrate any identification with actual or preferred self roles. The dreams of the depressed women contained more self-directed anxiety than did those of either the non-depressed or the control women. In addition, depressed women were more likely to report dreams in which they were the only character.

Some of the women in Cartwright's study were re-evaluated one to two years after the initial study. Changes in dream content were found in women who had been depressed during the initial study but whose condition had significantly improved at follow-up. The dreams of these formerly depressed women had increased in length, contained more positive moods, and displayed a wider time perspective (Cartwright et al., 1984; Cartwright, 1986).

Changes in dream content within a night (i.e., from first to last dream) occurred in the two experimental groups (Cartwright, 1986). For example, "masochistic" dream content increased across the night in the dreams of the depressed women. Increases in threat levels from the first to final dream of the night were found in the dreams of both divorcing groups. These patterns of dream content resemble the two principal patterns of thematic dream development that Kramer and his associates (e.g., Kramer, 1989, 1991a; Kramer, Whitman, Baldridge, & Lansky, 1964;) have observed across the night: a progressive-sequential type in which problems are stated, worked on and

sometimes resolved, and the other a repetitive type in which the problem is simply stated and no progress occurs from the first dream of the night to the last.

Cartwright (1991) then examined laboratory dream reports from both men and women going through divorce. Beck Depression scores and four dream reports and were collected from all subjects at the time of the initial break-up and at a one year follow-up. The follow-up also included interviews on how the subjects were coping with work, finances, dating, children, health, and former spouse. When compared to the dream reports from nondepressed subjects, the depressives' dream reports contained significantly stronger affect and a significantly greater proportion of depressed individuals viewed their own dreams as being unpleasant. The results also indicated that men and women who were depressed and who incorporated the former spouse into their dreams at the time of the break-up were significantly less depressed and significantly better adjusted to their new life at the follow-up point. These preliminary findings led Cartwright to suggest that "people who are depressed during a stressful time in their lives, who dream with strong feelings, and incorporate the stressor directly into their dreams appear to 'work through' their depression more successfully than those who do not" (p.3)

Riemann, Löw, Schredl, Wiegand, Dippel, and Berger (1990) reported three studies in which the effects of trimipramine on REM sleep, dream recall, and dream content were assessed in patients with a major depressive disorder. The third study compared the pre-treatment dream content of 1707 depressed outpatients with their dream content following four weeks of treatment with trimipramine. Whereas over 80% of the patients showed marked to severe symptoms of depression prior to treatment, only 19% did so following

the four weeks of treatment. Prior to treatment, dream content was rated as being unpleasant, a mixture of unpleasant and pleasant feelings, neutral, or pleasant by 46%, 30.3%, 19.2%, and 5.5% of the patients respectively. By contrast, after four weeks of treatment, only 15.4% of patients rated their dreams as unpleasant, 23.8% as both pleasant and unpleasant, 42.4% as pleasant, and 18.4% reported emotionally neutral dreams. The data indicate that treatment with an antidepressive led to positive changes in patient's symptoms that were paralleled by a positive change in dream mood.

In a study of female college students, Barrett and Loeffler (1992) had twenty moderately depressed subjects (assessed by scores on the Beck Depression Inventory) who were not undergoing psychopharmacological or psychotherapeutic treatment and twenty-one nondepressed control subjects keep a one-week log of their remembered dreams. The dream reports were rated using objective dream content scales measuring emotional content and the number and type of characters present. The length in words of each dream report was counted. When compared to control group's dream reports, the dream reports from the depressed group were significantly shorter, contained significantly less anger, and included significantly fewer characters, especially fewer strangers.

Cartwright and Wood (1993) had twenty-five women and twenty-one men undergoing divorce complete a battery of psychological tests and had them sleep three consecutive nights in a sleep laboratory on two occasions one year apart. Subjects' dream reports were scored for masochistic content as defined by Beck (1967). Women's dream reports had significantly higher masochistic dream scores than men while they were undergoing divorce and continued to have significantly higher scores than men at 1-year follow-up.

At both initial and final testing, depressed women had significantly higher masochistic dream scores than depressed men. When compared to men and women without masochistic dream content, women who displayed dream masochism had significantly higher scores on a scale of negative stereotyped feminine sex roles (e.g., described themselves as "cries easily," "needs approval from others," "feelings easily hurt," "submissive"). In addition, these women also had the fewest significant positive changes on self-report measures of social adjustment, personality, sex role, and depression at 1-year follow-up.

Cartwright and Wood (1993) concluded that women, whether depressed or not, are more likely than men to have masochistic content in their dreams. In addition, they suggest that masochistic dreams express a continuing detrimental interpretation of one's emotional experience and that such dream patterns may be related to the sex ratio difference in major depression.

Despite methodological problems such as the use of mixed groups of depressives (Kramer et al., 1966; Kramer et al., 1968; Langs, 1966), inadequate controls (Kramer et al., 1966), and collection of small numbers of dreams reports per subject (Beck & Ward, 1961; Cartwright, 1991; Cartwright & Wood, 1993; Kramer et al., 1969), several consistent findings have emerged. In contrast to the dream reports from various comparison groups, the dream reports from depressed individuals are shorter (Barrett & Loeffler, 1992; Cartwright, 1986; Cartwright et al, 1984; Hauri, 1976; Langs, 1966), are more past-oriented (Cartwright, 1986; Cartwright et al, 1984; Hauri, 1976), contain fewer total characters but more family members (Barrett & Loeffler, 1992; Cartwright, 1986; Kramer et al., 1969; Langs, 1966), and have greater frequencies of depressive themes (Beck & Hurvich, 1959; Beck & Ward, 1961; Cartwright,

1986; Hauri, 1976; Kramer et al., 1966; Van de Castle & Holloway, 1970). In addition, there is some evidence to suggest that changes in depressives' dream content are related to clinical improvements in their waking state (Cartwright, 1986, 1991; Cartwright et al, 1984; Kramer et al., 1968; Riemann et al., 1990) and that masochistic dream content is related to personality traits of depression prone individuals (Beck & Ward, 1961; Hauri, 1976; Cartwright & Wood, 1993).

The conclusions that can be drawn from this review are similar to those of Kramer (1982; 1994) in his review of the literature on methods of dream collection, methods of quantifying the dream report, effects of psychosocial factors on dream content, influences of various experiences on dream content, and the relation between dreams and waking thought. Specifically, Kramer concludes that dreams are a meaningful psychological product of the mind in that dreams reflect important psychological differences, show responsiveness to psychological influences, and demonstrate a systematic relationship to waking thought. Furthermore, he states that "the dream, besides being an object of fascination or disdain, may be viewed legitimately as the object of scientific inquiry" (Kramer, 1982, p. 87).

The Prevalence and Content of Recurrent Dreams

Relatively little is known about the prevalence and content of recurrent dreams. Until recently, what appeared in the clinical literature was mainly passing mention that the occurrence of recurrent dreams had been noted in some patients. For instance, Freud's (1900) only comment on the incidence of recurrent dreams was that "dreams that recur periodically have often been observed" (p. 44).

Almost all of the studies that have used questionnaires to assess the prevalence of recurrent dreams have done so by simply including a question such as "Have you ever had a recurrent dream?" Thus, these studies did not evaluate the length of time that the subjects had experienced their recurrent dreams. Moreover, with the exception of data presented by Brown and Donderi (1986) and Zadra (1994), these studies have failed to differentiate between true recurrent dreams (in which the dream content is always identical) from repetitive dream themes that occur across dreams with varying contents. Finally, the literature on the content of recurrent dreams has been largely impressionistic. Only two studies have used well-established, quantitative dream content scales to evaluate recurrent dream content (D'Andrade, 1985; Larue, 1970). Both are unpublished undergraduate research papers by students of Domhoff.

In terms of the prevalence of recurrent dreams, 60% to 75% of college students and older adults report having had one or more "recurrent dreams" at some point in their lives on questionnaire surveys (Browman & Kapell, 1982; Cartwright, 1979; Cartwright & Romanek 1978; D'Andrade, 1985; Robbins & Houshi, 1983; Robbins & Tanck, 1991-92; Webb & Fagan, 1993). Seventy to 80% of adults who take part in dream studies report having had a recurrent dream in early childhood (Brown & Donderi, 1986; Zadra, 1994). In some cases, recurrent dreams which emerge during childhood may persist into adulthood (D'Andrade, 1985; Robbins & Houshi, 1983; Zadra, 1994). There is also some evidence to indicate that recurrent dreams are more prevalent in women than they are in men (Browman & Kapell, 1982; Cartwright & Romanek, 1978; Robbins & Houshi, 1983).

In terms of dream content, 60% to 85% of recurrent dreams are described as being unpleasant by the subjects who report them (Cartwright & Romanek, 1978; D'Andrade, 1985; Zadra & Donderi, 1992). In one female sample, 46% of the recurrent dreams reported were rated as being highly unpleasant (Cartwright, 1979). Dream content is described as being pleasant in approximately 10% of recurrent dreams (Cartwright, 1979; D'Andrade, 1985), while about 8% of recurrent dreams are rated as containing a mixture of both positive and negative emotions (D'Andrade, 1985).

Cartwright (1979) and Robbins and Tanck (1993) examined retrospective accounts of childhood recurrent dreams. These studies show that between 86% and 90% of childhood recurrent dreams are unpleasant or of a threatening nature. In approximately 70% of the childhood recurrent dreams, external agents (e.g., monsters, witches) were responsible for the unpleasant content. Both studies also showed that as people grow older, fewer recurrent dreams are reported as having threatening contents. Furthermore, in recurrent dreams from people's second and third decade of life, the dreamer and not an external agent becomes increasingly responsible for the dream action (Cartwright, 1979).

Apart from this information on the general content of recurrent dreams, very little is known about their specific content. Moreover, previous research on the content of recurrent dreams has failed to distinguish between actual recurrent dreams in which the content is re-experienced in an identical fashion, and repetitive dream themes that occur across dreams with variable content. Thus, the goal of Study 1 was to obtain more detailed data on the content of recurrent dreams than had been previously reported.

Theories of Recurrent Dreams

Dream theorists generally agree that recurrent dreams are related to unresolved difficulties in the dreamer's life (Fosshage & Lowe, 1987). For example, in Gestaltist dream theory, recurrent dreams are viewed as depicting an individual's current state of psychic imbalance. Presenting this psychic state to consciousness allows for a possible restoration of self-balance (Fantz, 1978; Perls, 1969). Neo-Freudian, object-relations, and ego-psychology dream theorists believe that the dream repetition of emotionally painful events allows the ego to attempt to master or assimilate the painful event (Bibring, 1943; Renik, 1981; Silverberg, 1948; Stewart, 1967). Freud viewed recurrent (traumatic) dreams as expressions of a neurotic repetition compulsion (Freud, 1955; Cavenar & Sullivan, 1978). Jung believed that recurrent dreams not only indicated the presence of psychological conflict, but that they were also "of specific importance for the integration of the psyche" (Jung, in Adler, 1973, p. 93). Finally, culturalist dream theory (Bonime, 1962) maintains that recurrent dreams indicate a lack of positive change or development in one's personality. In recurrent dreams "people continue to reflect unresolved personality difficulties with the identical symbols" (Bonime, 1962, p. 41). Thus, many kinds of dream theories converge in their view that recurrent dreams are associated with a lack of progress in recognizing and resolving conflicts in the dreamer's life.

If recurrent dreams signal the presence of an unresolved conflict, then the cessation of a recurring dream should indicate that the conflict has been successfully dealt with. Dream theorists from many different perspectives have suggested that this is the case (Bonime, 1962; Cartwright, 1979; Delaney, 1991;

Jung, cited in Mattoon, 1978, p.84; Sharpe, 1937; Ullman & Zimmerman, 1979; Weiss, 1964).

Recurrent dreams, however, are not a unitary phenomenon. The repetition of dream symbols or themes over a series of dreams is not the same thing as a recurrent dream, in which the dream content is always identical from beginning to end. Domhoff (1993) has argued that repetitive dream themes and recurrent dreams are related experiences in that they are both part of a "repetition dimension." In the next section, a summary of the types of dreams which make up this dimension will be presented.

The Dream Repetition Continuum

Bonime (1962) distinguished between recurrent dreams in which "the patient reiterates, again and again, his symbolic statement of the core problem" (p.41) and dreams in which repetitive themes are depicted over a range of symbols. Domhoff (1993) defined a continuum of repetition. At one extreme are the traumatic dreams that repeatedly reproduce overwhelming experiences. Almost any event that is perceived as being traumatic by an individual can produce traumatic dreams, and their occurrence is recognized as a symptom of Post Traumatic Stress Disorder (APA, 1994; Blank, 1994). As trauma victims begin to deal successfully with their difficulties, there are often positive changes in the content of their traumatic dreams (e.g., Hartmann, 1984). Domhoff (1993) iterates this point by stating "to the degree that the experience gradually is assimilated, to that degree the dreams decrease in frequency and become altered in content" (p. 297).

Next on the continuum is the recurrent dream. The content of recurrent dreams, like that of many traumatic dreams, is replayed in all (or almost all) of

its entirety. As noted earlier, recurrent dreams are frequent in both children and adults, and are primarily unpleasant. Though recurrent dreams do not always seem to be directly tied to any particular experience, the evidence suggests that they occur during times of stress and that they cease to recur once the problem has been resolved (Brown & Donderi, 1986; Cartwright, 1979; D'Andrade, 1985). However, unlike many traumatic dreams, most recurrent dreams do not reflect a conflict or stressor directly, but rather depict it in a metaphorical manner.

Further along the repetition continuum are recurrent themes within a long dream series. In these dreams, the theme is always the same (e.g., being late or lost) but the content is not. Finally, the repetition of mundane characters, activities, and objects that occurs in every-day dreams consistently over decades lies at the other end of the continuum. Several examples of repetitive themes and repeated dream elements are presented by Domhoff (1993).

Domhoff (1993) maintains that the dreams which constitute the "repetition dimension" all reflect attempts at resolving emotional preoccupations. Empirical data that support both the validity of the dream repetition continuum and its proposed association with emotional preoccupations will now be reviewed.

Recurrent Dreams and Well-Being

A number of case reports have described positive changes in repetitive dream elements as a function of successful psychotherapy (e.g., Bonime, 1962; Maultsby & Gram, 1974; Rossi, 1985). Bergin (1970) presented the case of a client who lacked self-assertion skills and who was excessively intimidated by authority figures. Following an improvement in his condition, the client spontaneously reported that both the negative content and affective tone of a previously recurrent dream had changed in a positive manner. This case is especially interesting given that the therapy involved behavioral techniques, and the client's dreams had never been discussed during therapy. The changes reported above are consistent with Bonime's (1962) assertion that "to the extent that these alterations of the same symbol take place in accordance with alterations of the personality during therapy, the symbol changes become important indicators of clinical progress" (p. 45).

In addition to anecdotal and clinical case reports, research data support the theory that the repetition of negative dream content is associated with the presence of unresolved conflicts or stressors.

The research by Cartwright and her colleagues on the dreams of depressed versus nondepressed individuals undergoing divorce was reviewed on pages 17 to 19. Her research can be taken as indicating a link between repetitive dream elements and well-being. To summarize, what Cartwright et al. (1984) call "adaptive dream work" is present in the dreams of non-depressed individuals who are coping with a stressful life event. The dreams of their depressed counterparts, however, not only reflect an absence of adaptive dream work, but contain what Cartwright (1986) calls "repetitive self-destructive cognitive behavior." Once the waking mood state of these depressed

individuals began to shift in a positive direction, there was an improvement their dream content.

Robbins and Houshi (1983) found that undergraduate students who reported having a recurrent dream had moderately significantly higher scores on the Beck Depression Inventory and reported a significantly greater number of problems in their daily lives than did undergraduate students who did not have recurrent dreams.

Domhoff (1993) has argued that repetitive dream themes and recurrent dreams are related experiences in that they are both part of the "repetition dimension." As discussed in the previous section, the repetition of dream symbols or themes is not the same thing as a recurrent dream, in which the dream content is identical from beginning to end. The findings discussed thus far in this section involve the repetition of dream elements, not the entire dream (i.e., recurrent dreams).

Brown and Donderi (1986) published the only study to have specifically investigated the relation of recurrent dreams (as opposed to repetitive dream elements) to well-being. Recurrent dreamers, former recurrent dreamers, and non-recurrent dreamers were asked to complete a battery of well-being measures, and record a fourteen-day sample of their own remembered dreams. People in the recurrent dream group were currently experiencing a recurrent dream. The former recurrent dream group was composed of individuals who had experienced a recurrent dream in adulthood, but for whom the dream had not recurred for at least one year. The recurrent dreams reported by the subjects in both of these groups had persisted over at least a six month period. Subjects in the non-recurrent dream group had never experienced a recurrent dream in adult life. Recurrent dreams were differentiated from dream series that

contained repetitive themes or repeated dream elements and were defined as dreams which "are distinguished by their complete repetition as a remembered experience" (p. 612).

The recurrent dream group scored consistently lower on measures of well-being than both the past-recurrent dream group and the non-recurrent dream group. For example, recurrent dreamers had the least adaptive scores on measures of anxiety, depression, personal adjustment, and life-events stress. Moreover, content analyses of the dream reports showed that the recurrent dreamers experienced more anxious, dysphoric, and conflict-oriented dream content than either of other the two groups. Finally, past-recurrent dreamers scored consistently higher than the non-recurrent dreamers on indices of well-being and positive dream content. This latter finding is of particular interest, since it suggests that the maintained cessation of a recurrent dream is associated with a positive rebound effect on well-being.

Archetypal Dreams

As part of their study on recurrent dreams and their relation to well-being, Brown and Donderi (1986) investigated the prevalence of archetypal dream content in their three experimental groups. Archetypal dreams are characterized by bizarre imagery, irrational events and intense affect (Jung, cited in Kluger, 1975; Cann & Donderi, 1986). Half of the dreams reported by children under the age of six contain archetypal material (Kluger, 1975), and 20% of the dreams collected from adults can be classified as archetypal (Cann & Donderi, 1986; Kluger, 1975). Jung theorized that archetypal dreams arise from a theoretical personality level called the "collective unconscious," which is a store of images and experiences common to everyone, and proposed that

archetypal dream imagery brought the collective unconscious into consciousness, which promoted psychological well-being. Consistent with Jung's theory, Cann and Donderi (1986) found that people scoring low on measures of neuroticism report more archetypal imagery in their dreams. Similarly, Brown and Donderi (1986) found that recurrent dreamers reported less archetypality in their recalled dreams than the other groups and that neuroticism (or psychological distress) was negatively correlated across groups with dream report archetypality. Archetypal dreams were assessed as part of Study 2 in order to evaluate their relation to neuroticism and recurrent dreams.

Home Versus Laboratory Collection of People's Dreams

There is considerable debate concerning the merits of collecting dreams at home versus obtaining them under sleep laboratory conditions (Cartwright and Kaszniak, 1991; Cohen, 1979; Dement, Kahn, & Roffwarg, 1965; Domhoff & Kamiya, 1964a, 1964b; Okuma, Fukuma, & Kobayashi, 1975; Van de Castle, 1994). Home dream collection involves having people keep a dream diary at home, while laboratory dream collection is done by collecting dream reports immediately upon waking from each REM-period. Collecting dream reports in a sleep laboratory allows for considerable methodological uniformity and experimenter control (Cartwright, 1994; Cartwright & Kazniak, 1991; Foulkes, 1978). In addition, awakening subjects from several REM periods within a night results in the collection of dream reports that may have been otherwise forgotten by the subjects upon normal awakening in the morning. However, there are several disadvantages to collecting dreams in the sleep laboratory. For example, the cost and time required for laboratory-based studies make it difficult to collect dream reports from many subjects over long periods of time.

In studies 2 through 5, it was necessary to collect dream reports from many subjects over a two to four week period. Thus it would have been impractical if not impossible to conduct these studies in a sleep laboratory.

However, there are other important reasons why a structured home dream recording method was preferred for this project. First, approximately 15% to 30% of dreams collected in sleep laboratories contain clear references to the experimental situation whereas such references occur in about 5% of home dream reports (Cohen, 1979; Domhoff & Kamiya, 1964a, 1964b; Hall, 1967; Meier & Strauch, 1990; Okuma, Fukuma, & Kobayashi, 1975; Piccione, Thomas, Roth, & Kramer, 1976; Whitman, Pierce, Mass, & Baldridge, 1962). Second, even after a number of adaptation nights, dream reports collected from the sleep laboratory contain fewer friendly, aggressive, and sexual interactions, less affect, and diminished thematic ranges than do home dreams (Cohen, 1979; Okuma, Fukuma, & Kobayashi, 1975; Weisz & Foulkes, 1970). A similar point is raised by Hartmann (1970) when he remarks that in over 3000 nights of recording normal adults in his sleep laboratory, only once did a subject spontaneously awaken from a nightmare. Finally, people are more likely to take part in home dream recording studies than in the traditional sleep laboratory studies, and home dream collecting is consistently perceived as being less intrusive and less stressful (Cohen, 1979; Domhoff, 1969; Okuma, Fukuma, & Kobayashi, 1975).

Dream Content Analysis

The principal tool of dream content researchers is content analysis (cf. Gottschalk & Gleser, 1969; Hall & Van de Castle, 1966). In 1966 Calvin Hall and Robert Van de Castle published what is still the most comprehensive system of dream content analysis available. Hall (1969) defined content analysis as "the categorizing of units of qualitative material in order to obtain frequencies which can be subjected to statistical operations and tests of significance" (p. 175). Though Hall and Van de Castle (1966) recognize dream content analysis' two main shortcomings — "it is reductionistic...and ignores the unique" in peoples' recalled dreams (p. 5) — dream researchers view content analysis to be a very reliable, empirically justifiable means with which to study dreams. Hauri (1975) states:

> "I know of no other way to study dreams scientifically than to change them from private events to public ones, thereby making them amenable to objective assessment. This is usually done by substituting the dream narrative for the experienced dream and then measuring various components of this narrative through rating scales" (p. 271).

Of the 150 extant dream rating and content analysis scales reviewed by Winget and Kramer (1979), two of the most frequently used and best validated are those by Hall and Van de Castle (1966) and Gottschalk and Gleser (1969). The Hall-Van de Castle system is probably the most used and best validated dream content analysis technique. The majority of Hall and Van de Castle's scales are empirical (i.e., abstracted from dream material itself). These include settings (indoor, outdoor, ambiguous, familiar), objects, characters (number, sex, identity, age), social interactions (friendly, aggressive, sexual), activities (verbal, physical, looking, thinking, etc.), emotions (anger, apprehension, happiness, sadness, confusion) and numerous others. Hall and Van de Castle also present

a number of theoretical scales (e.g., ego strength, regression, primary process thinking). The Gottschalk-Gleser content analysis system, originally designed for rating generic verbal material, has since been validated and employed in a variety of dream content research (cf. Winget & Kramer, 1979). Gottschalk and Gleser's scales include anxiety-toned content (ranging from mild to extreme) and different types of hostility (e.g., hostilities directed at the individual from others, hostilities by the individual against others, hostility by the individual against himself or herself). Extensive reliability and validity data for both the Hall-Van de Castle and Gottschalk-Gleser dream content analysis systems appears in Winget and Kramer (1979).

Hall and Van de Castle's empirical scales of activities, social interactions, emotions, achievement outcomes, environmental press, as well as Gottschalk and Gleser's scales of anxiety and hostility are employed in this thesis (see Appendix I)

Three studies on recurrent dreams will now be presented. Study 1 reports the results of a content analyses of childhood and adult recurrent dreams. Study 2 extends previous research on the relation between recurrent dreams and well-being to a younger population sample. Study 3 validates Domhoff's (1993) "repetition continuum" by extending the findings from studies on recurrent dreams (including those reported in Study 2) to the domain of recurrent dream themes.

Study 1:
A Content Analysis of Childhood and Adult Recurrent Dreams

Introduction

The goal of this study was to obtain more detailed data on the content of recurrent dreams than had been previously reported. In particular, the study establishes a classification of the thematic content of childhood and adult recurrent dreams.

Though the precise content of recurrent dreams is invariably idiosyncratic, themes common across individuals who report recurrent dreams have been noted (e.g., Delaney, 1991). These include recurrent dreams of flying, falling, being chased, taking an examination, loosing one's teeth, and nudity. These themes are similar to typical dreams, or non-recurrent dreams that many people report having had at least once (e.g., Griffith, Miyago, & Tago, 1958; Kramer, Winget, & Whitman, 1971; Ward, Beck, & Rascoe, 1961). Though several studies have investigated the content of typical dreams, no systematic classification of the thematic content of recurrent dreams has appeared in the literature.

Method

The data presented in this study is based on the content analyses of 163 recurrent dreams. These dreams were collected from the dream reports of 352 subjects who completed the McGill Sleep/Dream Questionnaire (Appendix II) as part of our studies on dreams between 1990 and 1992. These 163 recurrent dreams were selected from a pool of over 250 recurrent dreams and were all of the dreams which met the following inclusion criteria: the recurrent dream must have occurred over a period of at least six months; the content of the

recurrent dream had to be rated by the subject as being "always" or "almost always" identical; and the recurrent dream had to be described in sufficient detail to allow a content analyses of the dream's setting, its affective tone, and the type of characters present. The recurrent dreams were classified as being from adulthood if they first occurred after the age of 18, and from childhood if they ceased to recur before the age of 12.

Dream content was evaluated using the objective content analysis system developed by Hall and Van de Castle (1966). The measures of dream content are described below.

Dream Affect. Dream affect was scored using the Emotions scale of Hall and Van de Castle (1966). Negative affect includes classes of emotion such as anger, apprehension, sadness, and confusion. One class of emotions, called Happiness, encompasses all the adjectives that describe positive affect (e.g., pleased, relieved, relaxed, elated).

Success and Failure. Success and failure were scored according to Hall and Van de Castle's scales for Achievement Outcomes. Success consists of an expenditure of energy and perseverance in pursuit of a goal, resulting in goal attainment. Failures occur when there is expenditure of energy and perseverance in pursuit of a goal resulting in failure to attain the goal because of personal limitations and inadequacies.

Good Fortune and Misfortunes. Good fortune and misfortunes were scored according to Hall and Van de Castle's scales of Environmental Press. Misfortunes are defined as "any mishap, adversity, harm, danger, or threat which happens to a character as a result of circumstances over which he has no control" (p.103). Good fortune is scored when "there is an acquisition of goods

or something beneficial happens to a character that is completely adventitious or the result of a circumstance over which no one has control" (p.105).

Categories for the classification of the thematic content of childhood and adult recurrent dreams were not determined a priori. They were constructed following the content analysis of the recurrent dreams and were based on the most frequently reported themes contained in the childhood and adult recurrent dreams.

Results and Discussion.

Table 1 presents the percentage of recurrent dreams from adulthood and childhood which contain the dream content categories described above.

The percentage of adult and childhood recurrent dreams that were found to contain either negative affect, positive affect, or a mixture of both positive and negative emotions is consistent with the previously reviewed findings. Approximately 5% of all the recurrent dreams in this sample were described as containing no affect. Data on the absence of affect in recurrent dreams have not been previously reported.

Among recurrent dreams containing negative affect, fear or apprehension was the most frequently reported emotion, occurring in 67% and 79% of the adult and childhood recurrent dreams respectively. The rest of these recurrent dreams contained other negative emotions including sadness, anger, confusion, and guilt. This finding is of particular interest since there is evidence suggesting that approximately 20% of nightmares contain emotions other than fear and that a significant percentage of individuals cite emotions such as sadness and anger to be primary in their nightmares (Belicki, Altay, & Hill, 1985; Dunn & Barrett, 1987; Zadra & Donderi, 1993). The issue of emotional content in nightmares is reviewed in detail in Study 4.

Table 1.

Dream Content Measures For Adult and Childhood Recurrent Dreams.

RECURRENT DREAM CONTENT	% OF RD FROM ADULTHOOD (n=110)	% OF RD FROM CHILDHOOOD (n=53)	% OF TOTAL RD (n=163)
Negative Affect	77.3	81.1	78.5
Positive Affect	10.0	7.6	9.2
Mixture of Both Positive and Negative Emotions	7.3	5.7	6.7
No Affect	5.5	5.7	5.5
Total for Emotion Dream Content Scales	100.1	100.1	99.9
Failure	17.3	1.9	12.3
Success	1.8	3.8	2.5
Misfortune	41.8	43.4	42.3
Good Fortune	4.6	3.8	4.3
Total for Achievement and Environmental Press Dream Content Scales	65.5	52.9	61.4

Note: RD = recurrent dreams. Totals for emotion dream content scales do not equal 100 due to rounding. Totals for Achievement and Environmental Press Scales do not add up to 100 as several dreams did not contain one or more of these dream content categories.

In terms of Achievement Outcomes, adult recurrent dreams were nine times more likely than the childhood recurrent dreams to contain one or more failures. Success was rare in both groups, occurring in less than 3% of all recurrent dreams.

Approximately 42% of the adult and childhood recurrent dreams contained one or more misfortunes. The dreamer was the recipient of the misfortune in 70% of the adult recurrent dreams and in 74% of childhood recurrent dreams. Thus, for both groups of recurrent dreams, misfortunes were about three times more likely to happen to the dreamer than to any other character. The other Environmental Press category, good fortune, occurred in less than 5% of the adult and childhood recurrent dreams.

Table 2 presents the most frequently reported types of themes in the current sample of recurrent dreams from adulthood and childhood. For both adult and childhood recurrent dreams, the most frequently reported theme is one in which the dreamer is being chased. The nature of the threatening agent, however, differs between childhood and adulthood recurrent chase dreams. In 19 of the 22 (86%) chase dreams from childhood, the dreamer was being pursued by monsters, wild animals, witches, or ghoulish creatures. By contrast, such threatening agents appeared in only 3 of the 16 (19%) adult chase dreams. The latter contained predominantly human characters including burglars, strangers, mobs, and shadowy figures. These findings are consistent with those reported by Robbins and Tanck (1991-92).

Next to chase and pursuit dreams, the second most frequently reported theme in the adult recurrent dreams was one in which the dreamer is having difficulties with house maintenance. In these recurrent dreams, the dreamer may be overwhelmed by an inordinate number of household chores that must

Table 2.

Thematic Content of Adult and Childhood Recurrent Dreams.

THEMATIC CONTENT	% OF RD FROM ADULTHOOD (n=110)	% OF RD FROM CHILDHOOOD (n=53)	% OF TOTAL RD (n=163)
Being Chased	14.6	41.5	23.3
Problems With House Maintenance	10.9	0	7.4
Being Alone and Stuck or Trapped	6.4	3.8	5.5
Facing Natural Forces	5.5	3.8	4.9
Teeth Falling Out	4.6	0	3.1
Discovering/Exploring New Rooms in a House	4.6	1.9	3.7
Death of Family Members	4.6	9.4	6.1
Not Knowing Why or to Whom One is Getting Married	3.6	0	2.5
Unable to Use a Telephone During an Emergency	3.6	0	2.5
Unable to Find a Private Toilet	3.6	0	2.5
Being Late or Lost	2.7	1.9	2.5
Driving a Car That is Out of Control	2.7	0	1.8
Flying	2.7	3.8	3.1
Other	30.0	34.0	31.2
Total	100.1	100.1	100.1

Note: RD = recurrent dreams. Totals do not add up to 100 due to rounding.

be quickly completed, discover that the house is falling apart or in ruins, or have to choose between maintaining one or the other of two houses. Other common themes include being alone and trapped (e.g., in an elevator or container), facing natural forces such as volcanic eruptions or tidal waves, and loosing one's teeth.

In the childhood recurrent dreams, the second most frequently reported theme was one involving the death of family members. All of these recurrent dreams involved the murder or accidental death of the dreamer's parents. By comparison, the five adult recurrent dreams from the same content category were either dreams in which a distant relative had died, or about people who were already dead in actual life (e.g., mourning dreams).

Themes in which the dreamer is in danger (e.g., threatened with injury, death, or chased) have been found to characterize approximately 40% of recurrent dreams (Cartwright & Romanek, 1978; Robbins & Houshi, 1983). Using the same broad content category, 42% of the adult recurrent dreams and 65% of the childhood recurrent dreams could be classified as containing themes in which the dreamer is in danger. In most of these dreams with threatening content, the subject is either fleeing, attempting to hide, or helplessly watching.

Relatively little is known about the content of pleasant recurrent dreams, because they occur infrequently. In the present sample, 5 of the 6 dreams that involved "discovering and exploring new rooms in a house" and 4 of the 5 flying dreams were described as containing positive emotions. Other examples of pleasant recurrent dreams included excelling at a particular task (e.g., figure skating), finding oneself in a bountiful environment, and being involved in sexual activities.

These results demonstrate key differences between adult and childhood recurrent dreams. For instance, adult recurrent dreams were nine times more likely than the childhood recurrent dreams to contain one or more failures. Since failures in dreams result from a character's "personal limitations and inadequacies," these data suggests that recurrent dreams from adulthood are more likely to reflect issues of personal competence than do recurrent dreams from childhood. This hypothesis is consistent with Cartwright's (1979) suggestion that "as the subject grows, the responsibility in the repetitive dreams with an unpleasant tone is less often attributed to things beyond her control" (p.135). Though the thematic content category "being chased" was common in both the adult and childhood recurrent dreams, the threatening agents in former usually were human characters, whereas monsters, wild animals, or ghoulish creatures were predominant in the latter. Finally, several of the thematic content categories reported in adult recurrent dreams are noticeably absent from the childhood recurrent dreams. These include themes involving problems with house maintenance, teeth falling out, and being unable to find a private toilet.

These findings indicate that the content of recurrent dreams changes with age and suggest that the dream symbols or metaphors believed to depict current problems or concerns that underlie recurrent dreams also change with age.

Study 2:
Dream Content, Dream Recurrence and Well-Being: A Replication With a Younger Sample

Introduction

The subject of this study is the pattern of successive dreams and its relationship to psychological well-being. Two patterns of thematic dream development have been observed when a series of remembered dreams is recorded, either within a single night or over a succession of nights. The pattern of progressive problem resolution is correlated with greater self-reported happiness or well-being, while the pattern of repetitive dream content is correlated with psychological stasis (e.g., Brown & Donderi, 1986; Cartwright, 1986, 1991; Cartwright et al., 1984; Kramer, 1989, 1991a, 1993).

Brown and Donderi (1986) demonstrated relationships between recurrent dreams, dream content and psychological well-being in an adult sample with an average age of 34. Since data from Study 1 suggest that recurrent dream content changes with age, this study was designed to determine if these findings would extent to a younger population of university students over the very limited age range of 18 to 21.

We hypothesized that many of the findings reported by Brown and Donderi (1986) should generalize to a younger population. Brown and Donderi found that the maintained cessation of a recurrent dream in adulthood was associated with positive dream content and an elevation in psychological well-being. Our past recurrent dreamers were individuals who remembered having had a recurrent dream in early childhood but who had not had a recurrent dream since that time. It is unlikely that the cessation of a recurrent dream in early childhood would have any long-term psychological benefits. Therefore, we expected no significant difference between our past recurrent dreamers and

our non-recurrent dreamers in either dream content or psychological measures. Any changes in well-being that may have occurred during childhood are likely to be modified by the variety of experiences one has while growing into adulthood.

Hypotheses

The hypotheses were:

1. Recurrent dreamers will show a lower level of psychological well-being than non-recurrent dreamers as measured by higher neuroticism, anxiety, dysphoric affect, life stress, somatic distress, and diminished personal adjustment.

2. Recurrent dreamers will exhibit more negative dream content than nonrecurrent dreamers as measured by lower ratios of friendly/friendly + aggressive social interactions, positive/positive + negative affect, and success-good fortune/success-good fortune + failure-misfortune experiences, and higher frequencies of anxiety and hostility-toned content.

3. Recurrent dreamers will produce a smaller proportion of archetypal dreams than nonrecurrent dreamers.

4. Past-recurrent dreamers' scores on measures of psychological well-being will not differ significantly from the scores of nonrecurrent dreamers.

5. Content analysis will reveal no significant differences on any of the measures, including archetypality, between past-recurrent dreamers and nonrecurrent dreamers.

6. The proportion of archetypal dreams reported will be inversely related to neuroticism scores across all groups.

Method

Subjects

Subjects were McGill University undergraduate students who were recruited as nonpaid volunteers through class announcements in the Faculties of Arts and Science. Eighty-three students attended information meetings and 62 completed the study. Fifty-two subjects, ages 18 - 21 with an average age of 20, met inclusion criteria (described below) for one of three comparison groups. Fifteen of the subjects were men and 37 were women.

Recurrent dreamers (n=18) were defined as people who were currently experiencing a dream which they remembered having experienced before. Specifically, inclusion criteria for the recurrent dreamers group was based on responses to the McGill Sleep/Dream Questionnaire and consisted of having recurrent dreams in which the both the content and theme was rated by the subject as being "always identical." In addition, the recurrent dream must have been described as having persisted for at least six months. Two subjects who reported recurrent nightmares (i.e., highly disturbing dreams which cause the dreamer to awaken) were excluded from the study as recurrent nightmares have been shown to be related to measures of psychopathology. Past-recurrent dreamers (n=15) were people who had experienced a recurrent dream in early childhood of at least six months duration but for whom the dream had ceased to recur by the age of 12. They had not had any other recurrent dreams since then. The nonrecurrent dream group (n=19) consisted of people who reported having never experienced a recurrent dream.

Procedure

After indicating an initial interest, participants were contacted by telephone and asked to attend an information meeting. The meeting provided

a brief explanation of the research, clarified the participants' role, and permitted the distribution of the research protocols. Signed consent forms were also obtained from all participants.

The first research protocol consisted of a booklet containing a battery of tests designed to measure "psychological well-being" (Brown & Donderi, 1986; see Appendix III). The McGill Sleep/Dream Questionnaire was also included to identify a participant as a recurrent, non-recurrent or past-recurrent dreamer. The second protocol consisted of bound dream record sheets (Appendix IV). Participants were instructed to record all remembered dreams on the dream record sheets upon awakening for fourteen consecutive days. They were also asked to record the theme, feelings, and clarity of recollection associated with each remembered dream. Participants specified the date of the dream and the elapsed time between waking and recording the dream.

All the research protocols were completed at home by the participants. To assure anonymity, participants were assigned random alphanumeric codes which constituted the only identifying feature on all documents.

Unless otherwise specified, the measures and methods used were the same as those in Brown and Donderi (1986).

Measures of Psychological Well-Being

Six measures of psychological well-being used in this study and are described below.

Neuroticism. The Eysenck Personality Inventory (EPI; Eysenck and Eysenck, 1968) is a widely used clinical and research instrument that measures dimensions of extroversion-introversion (EPI-E) and neuroticism-stability (EPI-N). A lie scale (EPI-L) is included to screen out blatant attempts at falsification. The EPI consists of a 57 item inventory in forced choice format. The EPI-N

scale was used to measure subject neuroticism. Test-retest reliability coefficients for Forms A and B of the Neuroticism scale range from .84 to .97, at 9 month intervals, and split-half reliability (Spearman-Brown coefficients) range from .87 to .93 (Eysenck & Eysenck, 1968)

Trait Anxiety. The State-Trait Anxiety Inventory (STAI; Spielberger, Gorusch, & Lushene, 1970) is composed of two forms, each of which measures separate dimensions of anxiety. The STAI-S measures state anxiety (i.e., how the subject feels "right now"). The STAI-T measures anxiety as a more enduring personality trait and consists of 20 statements that pertain to how the subjects "generally feel." This instrument is considered a sound measure of anxiety with reported test-retest reliability coefficients of approximately .70 after a three month interval, and increasing with decreasing time between testings. The STAI scale correlates with other indices of general anxiety such as Taylor's Manifest Anxiety Scale (TMAS; Taylor, 1953) and the IPAT Anxiety Scale (Krug, Scheier, & Cattell, 1979). The coefficients of agreement range from .52 to .80.

Depression. The Beck Depression Inventory (BDI; Beck & Beamesderfer, 1974), was used to assess affective, behavioral, cognitive, and somatic symptoms of depression. Test-retest reliabilities for the BDI range from .60 to .90 for nonpsychiatric populations (Beck, Steer, & Garbin, 1988). Split-half reliabilities range from .53 to .93 (Beck & Ward, 1961; Weckowitz, Muir, & Cropley, 1967). Other indices of depression which correlate with the BDI include the Depression Scale of the MMPI (Dahlstrom, Welsh, & Dahlstrom, 1970), the Hamilton Rating Scale of Depression (Hamilton, 1960) and the Zung Depression Scale (Zung, 1965). The correlations range from .56 to .86 for nonpsychiatric populations (Beck, Steer, & Garbin, 1988; Mayer, 1976).

General psychopathology symptomatology. The General Symptom Index (GSI) of the Symptom Checklist (SCL 90-R; Derogatis, 1977) is a measure of general psychopathology employing all 90 items of the SCL 90-R. Test-retest reliability coefficients range from .78 to .90 after one-week intervals for the nine constituent scales which comprise the GSI. Split-half reliabilities for the nine GSI subscales range from .77 to .90. The GSI is highly correlated with the Global Health Scale of the Middlesex Hospital Questionnaire (Crown, 1974), r = .92 and by subscale correlations with counterpart measures from the MMPI, r = .40 to .75 (Boleloucky & Horvath, 1974).

Life event stress. The Life Events Inventory (LEI; Paykel & Uhlenluth, 1972) is a 61-item list of potentially experienced life events derived from Holmes and Rahe's (1967) 43-item Schedule of Recent Experiences. The LEI items range from the presumably pleasant (wanted pregnancy, promotion, becoming engaged) to the very unpleasant (death of spouse, major financial difficulties, divorce). Life events occurring within the previous six months are indicated by the respondent. The score is derived from the total number of events checked. Interscale correlations with other major life-event stress scales indicate the LEI possesses good concurrent validity (Monroe, 1982; Paykel, 1979).

Personal adjustment. The Personal Adjustment scale of the Adjective Check-List (ACL; Gough & Heilbrun, 1965) comprises 36 items from the 300-item ACL that are differentially checked by the respondent as 'self-referring'. The Personal Adjustment Scale measures an attitudinal set that includes optimism, cheerfulness, interest in others, and adaptability. The Personal Adjustment Scale has test-retest reliability coefficients of .79 for women and .76 for men (Gough & Heilbrun, 1965). Masterson (1975) reports evidence supporting both the construct and the concurrent validities of the scale.

Measures of Recalled Dream Content

Measures of dream content were based on the dream content analysis instruments of Hall and Van de Castle (1966) and Gottschalk and Gleser (1969). In addition, Kluger's (1975) Archetypality Scale, as modified by Cann and Donderi (1986) was used as a measure of dream archetypality. The dream content scales appear in Appendix I.

Three of the six dream content variables used by Brown and Donderi (1986) were expressed as a ratio of positive dream content to negative dream content. These variables were: friendly and aggressive social interactions; positive and negative affect; and success, good fortune - failure, misfortune experiences. In this study, the measure of negative dream content could not be used as the denominator for these three variables because some participants reported no negative dream content in one or the other of these variables (e.g., no aggressive interactions). Thus, these variables were expressed as the ratio of the positive dream content measure over the sum of both positive and negative measures (e.g., friendly interactions/friendly + aggressive interactions).

Friendly and aggressive interactions. This scale measures the frequency of emotionally toned interactions and utilizes five classes of friendly social interactions (Hall & Van de Castle, 1966). These range from mildly friendly (e.g., opening a door or greeting) to very friendly (e.g., expressing love or performing a major act of assistance). Interrater scoring coefficients (all 5 classes combined) are .91. Interrater agreement for frequency of friendly interactions per dream report ranges from 70% to over 85% (Brown & Donderi, 1986; Hall & Van de Castle, 1966; Van de Castle & Holloway, 1970). Eight classes of aggressive interactions are rated, ranging from mildly aggressive (e.g., casting a hostile glance) to extremely aggressive (e.g., killing). Interrater scoring

reliability is .97, and the percentage of agreement for frequency per dream report ranges from 72% to 91% (Brown & Donderi, 1986; Hall & Van de Castle, 1966). Since sexual interactions are almost always friendly or aggressive, scores from the sexual interactions scale were combined with those from the friendly and aggressive interactions scales.

Positive and negative affect. Positive and negative affect was measured using Hall and Van de Castle's Emotions scale. This scale was described in Study 1. Interrater reliabilities of .76 are reported for both happiness and the combined classes of negative affect (Hall & Van de Castle, 1966). Agreement for frequency of happiness and negative affect per dream report ranges from 90% to 95% and from 75% to 86% respectively (Brown & Donderi, 1986; Hall & Van de Castle, 1966). The variable was expressed as the ratio of positive to positive and negative dream affect.

Success, good fortune - failure, misfortune experiences. Hall and Van de Castle's scales of Environmental Press and Achievement Outcome were combined to form this variable. These scales were described in Study 1. Interrater scoring reliabilities for the four classes are: success, 75% to 94%; good fortune, 83% to 93%; failure 91% to 100%; failure, 71% to 91% (Brown & Donderi, 1986; Hall & Van de Castle, 1966). The variable of interest was the ratio of positive outcomes (success and good fortune) to positive and negative outcomes (failure and misfortune).

Anxiety-toned content. Gottschalk and Gleser's (1969) Anxiety scale was used to assess dream anxiety. The scale measures six classes of anxiety from mild worry to intense death or mutilation anxiety. Reliability is .90 for the combined six classes of anxiety with 88% agreement on frequencies per dream

report (Brown & Donderi, 1986; Gottschalk & Gleser, 1969). This variable was expressed as event frequency per 100 words.

Dreamer-involved hostility. Three of Gottschalk and Gleser's (1969) content analysis scales measuring hostility were used to assess hostility involving the dreamer. The scales measure hostility directed inward (hostility directed at the dreamer from other dream characters), hostility directed outward (hostility by the dreamer against other dream characters), and ambivalently directed hostility (hostility by the dreamer against himself or herself). Interscorer reliability coefficients are .83, .83, and .87 to .96, respectively (Gottschalk & Gleser, 1969).

The dreamer's self-directed hostilities and those originating from other characters directed at the dreamer were measured separately from hostilities directed outward from the dreamer. This was done to evaluate whether the experience of being the victim of hostility in a dream is more disturbing than the experience of inflicting emotional or physical pain on another character.

Dream Archetypality Scale. Kluger's Archetypality Scale (Kluger, 1975) was used to determine whether a dream could be considered as 'archetypal.' Archetypal dream content is more emotionally charged, bizarre, irrational, and less like everyday experience than is everyday dream content. Three of the four subscales of Kluger's Archetypality Scale ('affect', rationality', and 'everydayness') were used. A dream is considered archetypal when the ratings on each of the three subscales are above the midpoint. Interrater reliability for scales of affect, rationality and everydayness are .66 to .94, .77 to .95, and .82 to .97, respectively (Cann & Donderi, 1986; Faber, et. al., 1978; 1983; Kluger, 1975). The fourth unused constituent scale of archetypality was the Presence of Mythological Parallel. This scale has not been operationalized and validated.

Covariates

To control for potential differences between the comparison groups on all but the independent variables (presence or absence of recurrent dreams), seven covariates were used. For the purpose of replication, the covariates used in this study were the same as the ones used by Brown and Donderi (1986). Three of the covariates do not require a description: age, dream report frequency (over the 14-day dream collection period), and dream report length (mean number of words). The remaining four covariates are described below.

Social desirability. The Marlowe-Crowne Social Desirability Scale (SDS; Crown & Marlowe, 1964) is a 33-item measure of the inclination to present oneself in a 'socially desirable' light. The SDS has test-retest reliability coefficients ranging from .78 to .89, and split-half reliabilities ranging from .74 to .90 (Crowne & Marlowe, 1964).

Defensiveness. The L-scale is a 14-item subscale of the Eysenck Personality Inventory (EPI; Eysenck & Eysenck, 1968) which measures consistency in reporting undesirable behaviors. Eysenck and Eysenck report test-retest reliability coefficients ranging from .67 to .78. More recent data regarding the L-scale indicates it possesses somewhat less reliability than the overall EPI (Pryke & Harper, 1977; r= .47 to .59). These authors recommend use of the L-scale, but in concert with another 'defensiveness' or 'social desirability' measure, largely because of insufficient published reliability and concurrent validity data.

Psychological Mindedness. The Intraception (Psychological Mindedness) scale of the Adjective Check-List (Gough & Heilbrun, 1965) is a 30-item measure of inclination "to engage in attempts to understand one's own behavior" (Gough & Heilbrun, 1965, p. 19). Test-retest reliability ranges from

.37 to .71 (Gough & Heilbrun, 1965; Masterson, 1975). Concurrent validity is reported as good by the scale's authors and by Masterson (1975). Both also present evidence for the scale's construct validity.

Dream activities. Hall and Van de Castle's Activities scale was used to measure overall activity levels in subjects' dream reports. This scale measures eight classes of activities: physical activities, verbal activities, movements, location changes, nonverbal expressiveness, looking, hearing, and thinking. Hall and Van de Castle report coefficients of agreement for all activities combined per dream report as .92, with 85% perfect agreement between raters.

Subjects' years of education and Blishen and McRoberts' (1976) Socioeconomic Index were not used as covariates. In this study, there was no variation over the participants' number of years of education or occupations since they were all between the ages of 18-21 and all were enrolled in university undergraduate programs.

As discussed in Brown and Donderi (1986), the rationale for using these particular covariates is as follows: the covariates of social desirability, defensiveness, and psychological mindedness were used to insure that variation on the dependent variables was not confounded either with subjects' attempts to please the experimenter or with subjects' attempts to comprehend their own behavior. Dream report frequency, dream report length, and dream activities were employed to assure that dependent measures were not confounded with fluency of verbal dream report or with simple differences in the overall dream activity level which was reported.

Scoring

All participant data were coded before analysis. Subjects were assigned random alphanumeric codes which were classified by group on a master list. Measures of well-being were scored blind by the researcher according to standard criteria supplied in the scoring manuals for each test. Dream reports were evaluated by two raters blind to the subjects' group membership. The two raters (the author and a research assistant) independently scored 298 of the 543 dreams collected. The remaining 245 dreams were scored by the author. The research assistant was trained by the researcher in the content analysis scales over a 4-week period until criterion performance was attained on each of the scales. The dream reports used for training were obtained from an unrelated study (Zadra, Donderi, & Pihl, 1992).

Interrater reliability scores for the content analyses of dream reports, which varied from 78 to 95 percent, are shown for each content category in Table 3. The percentage of agreement measures the proportion of times the raters agreed with respect to the event frequency per content category per dream report across all 298 dreams.

Results

Group Covariates

Table 4 compares the covariate variables for each group. One-way analyses of variance showed no significant differences between groups on any of the covariate measures. The maximum $F(2, 49)$ was .77, $p = .47$.

Table 3.
Interrater Reliabilities of Dream Report Content Analyses.

Dream content category	Percent agreement[a]
Activities	78.3
Friendly interactions	81.4
Aggressive Interactions	81.8
Positive emotion	86.6
Negative emotion	83.3
Success experiences	94.6
Failure experiences	91.5
Good fortune	94.8
Misfortune	89.9
Anxiety	82.8
Hostility directed internally	90.2
Hostility directed externally	88.8
Total Hostility	90.2
Archetypality	95.6

[a] Percent agreement = agreement between Raters 1 and 2, with respect to event frequency per content category per dream report, for 298 dream reports.

Table 4.

Covariate Scores for the Recurrent Dream, Past-Recurrent Dream, and Non-Recurrent Dream Groups.

Covariate	RD (n = 18)	PRD (n = 15)	NRD (n = 19)	*F(2,49)*	*p*
Age: years					
M	19.7	19.7	20.1	.05	ns
SD	0.8	1.4	1.7		
Defensiveness: EPI[a]					
M	59.5	59.0	58.8	.003	ns
SD	24.7	28.1	30.3		
Social Desirability: SDS[b]					
M	14.1	14.0	13.3	.15	ns
SD	4.9	4.6	4.9		
Psychological Mindedness: ACL[c]					
M	48.3	46.3	48.1	.22	ns
SD	8.0	12.6	8.2		
Dream report frequency: 14 days					
M	10.4	10.8	10.2	.09	ns
SD	3.7	3.8	4.7		
Dream report length: No. words					
M	129.3	112.9	116.2	.49	ns
SD	57.8	35.3	54.7		
Dream report activities: Freq					
M	5.1	5.7	5.3	.77	ns
SD	1.4	1.6	1.4		

Note. RD = recurrent dreamers, PRD = past-recurrent dreamers, NRD = nonrecurrent dreamers, Freq = frequency/100 words.

[a]Percentile Score. [b]Raw Score. [c]Standard Score.

Dream Content and Measures of Well-Being

The mean scores for the three comparison groups on each of the psychological well-being measures appear in Table 5. Table 6 contains the mean scores for the three comparison groups on the measures of dream content.

Multivariate analysis of covariance (MANCOVAs) followed by univariate analyses of covariance (ANCOVAs) were used to assess group differences on the psychological well-being, recalled dream content, and combined dependent measures. The Pillais-Bartlett statistic was used because it is robust with respect to possible violations of normality and homogeneity of variance (Olson, 1976, p. 579). A discriminant analysis was then performed on the combined (n=52) subject data to determine whether the three groups differed across the entire set of variables on one or more psychological dimensions.

Three multivariate comparisons were made: (a) the recurrent dream group versus the past-recurrent dream group; (b) the recurrent dream group versus the nonrecurrent dream group; and (c) the past-recurrent dream group versus the nonrecurrent dream group. The results of these comparisons are summarized in Table 7.

There were statistically significant differences between recurrent and past-recurrent dreamers on each of the psychological well-being, recalled dream content, and combined multivariate comparisons. There were statistically significant univariate differences on all of the well-being measures. The minimum univariate $F(1, 24)$, over all six of the well-being measures was 4.57, $p < .05$ (see Appendix V). There were statistically significant univariate differences on all of the dream content measures

Table 5.
Psychological Well-Being Scores for the Recurrent Dream, Past-Recurrent Dream, and Non-Recurrent Dream Groups.

Well-being measure	RD (n = 18)	PRD (n = 15)	NRD (n = 19)
Neuroticism: EPI[a]			
M	76.2	42.1	49.5
SD	20.6	20.8	28.5
Trait Anxiety: STAI[b]			
M	57.4	50.2	50.2
SD	7.8	8.6	8.8
Depression: BDI[c]			
M	10.3	5.4	5.3
SD	5.1	4.4	3.1
General Symptom Index: SCL[b]			
M	70.3	63.2	60.4
SD	10.3	7.7	7.9
Life-Event Stress: PLEI[c]			
M	8.9	3.3	4.0
SD	3.8	1.5	2.4
Personal Adjustment: ACL[b]			
M	40.7	49.2	45.6
SD	8.5	8.4	6.3

Note. RD = recurrent dreamers, PRD = past-recurrent dreamers, NRD = nonrecurrent dreamers.

[a]Percentile. [b]Standard Score. [c]Raw Score

Table 6.

Dream Content Measures for the Recurrent Dream, Past-Recurrent Dream, and Non-Recurrent Dream Groups.

Dream content measure	RD (n = 18)	PRD (n = 15)	NRD (n = 19)
Anxiety: Freq			
M	.71	.42	.38
SD	.34	.33	.31
Archetypality: Pr			
M	.07	.13	.12
SD	.09	.14	.13
Fr /Fr + Aggressive interactions[a]			
M	.36	.60	.54
SD	.19	.18	.25
Positive/Positive + Negative affect[a]			
M	.24	.39	.42
SD	.19	.20	.18
Success, GF/Success, GF + Failure, MF experiences[a]			
M	.31	.59	.45
SD	.20	.29	.24
Hostility inwards: Freq			
M	.42	.17	.22
SD	.37	.11	.24
Hostility outwards: Freq			
M	.21	.08	.09
SD	.23	.13	.17
Hostility total: Freq			
M	.63	.25	.31
SD	.39	.22	.38

Note. RD = recurrent dreamers, PRD = past-recurrent dreamers, NRD = nonrecurrent dreamers; Freq = frequency/100 words; pr = proportion of reports so rated; Fr = friendly; GF = good fortune; MF = misfortune. [a]Ratio Score.

Table 7.
Multivariate Analysis of Covariance: Paired Comparisons Among Dream Groups.

Comparison variables	*n*	*F*	*p*
RD versus PRD			
Well-being measures	6	6.30	< .001
Dream content measures	8	4.41	<. 005
Combined measures	14	5.06	< .006
RD versus NRD			
Well-being measures	6	3.86	<. 01
Dream content measures	8	2.71	<. 05
Combined measures	14	2.39	.052
PRD versus NRD			
Well-being measures	6	1.36	>.05
Dream content measures	8	1.10	>.05
Combined measures	14	1.94	>.05

Note. RD = recurrent dream group; PRD = past-recurrent dream group; NRD = nonrecurrent dream group. Covariates: Age, Defensiveness, Social Desirability, Psychological Mindedness, Dream Report Frequency, Length, Activities.

with the exception of anxiety ($F(1, 24) = 4.09$, $p = .054$) and outward directed hostility ($F(1, 24) = 3.71$, $p = .066$). The minimum univariate F for the remaining six dream content measures was 4.98, $p<.05$ (see Appendix V). All of the differences were in the direction predicted by the hypotheses.

Recurrent and nonrecurrent dreamers were significantly different on the separate multivariate measures of well-being and dream content, but not on the combined measures. There were statistically significant univariate differences on all of the measures of well-being. The minimum univariate, $F(1, 28)$, over all six well-being measures was 4.82, $p< .05$ (see Appendix V). The two groups also differed significantly on the following dream content measures: ratio of positive/negative affect ($F(1, 28) = 18.95$, $p< .001$); ratio of successes and good fortune/success, good fortune, failure and misfortune ($F(1, 28) = 5.33$, $p< .05$); anxiety ($F(1, 28) = 6.90$, $p< .05$); hostility directed inwards ($F(1, 28) = 5.21$, $p< .05$); and total hostility ($F(1, 28) = 9.16$, $p< .01$). All of the differences were in the directions predicted by the hypotheses.

Past-recurrent and nonrecurrent dreamers did not differ significantly on the multivariate measures of well-being, of dream content, or on the combined measures. The univariate $F(1, 25)$ for personal adjustment was 4.67, $p< .05$. This was the only statistically significant univariate difference among the 14 variables (Appendix V).

The results of the discriminant analysis are summarized in Table 8. Only one discriminant function was statistically significant. It accounted for 88.4 % of the variance. Ten of the 14 dependent variables were significantly correlated with the single dimension defined by the single significant canonical discriminant function. Five of these variables were dream content variables, and five were measures of psychological well-being. Following Brown and

Donderi (1986), this single dimension which discriminates among the three groups is called *psychological well-being.*

The relationship between neuroticism and dream archetypality was assessed using the Pearson product-moment correlation coefficient. Neuroticism and dream archetypality were negatively correlated across all three experimental groups ($r = -.306$, $p < .05$).

Table 8.
Discriminant Analysis: Correlations Between All Variables and Canonical Discrimination Function 1.

Variables	Pearson r
Psychological Well-Being	
Neuroticism	-.451**
General symptom index	-.329*
Anxiety	-.299
Depression	-.405*
Life-events stress	-.651***
Personal adjustment	.313*
Recalled Dream Content	
Anxiety	-.325*
Archetypality	.165
Friendly/Aggressive interactions	.357*
Positive/Negative affect	.307*
Success, Good Fortune/ Failure, Misfortune	.309*
Hostility Inwards	-.298
Hostility Outwards	-.233
Hostility Total	-.359*

Note. Canonical Discriminant Function 1 accounted for 88.4% of total variance in the discriminant analysis.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Discussion

Five of the six hypotheses were supported. With respect to hypothesis 1, recurrent dreamers scored higher than nonrecurrent dreamers on neuroticism, trait anxiety, depression and general symptomatology. Recurrent dreamers also reported more stressful life events and lower levels of personal adjustment than nonrecurrent dreamers.

As predicted by hypothesis 2, recurrent dreamers had more anxiety and hostility in their remembered dreams that did nonrecurrent dreamers. Nonrecurrent dreamers had significantly higher ratios of friendly/friendly + aggressive social interactions, positive/positive + negative affect, and success-good fortune/success-good fortune + failure-misfortune experiences. This finding cannot be attributed to the presence of unpleasant recurrent dreams in the recurrent dream group's two week dream log reports. Only 2 of the 187 dreams reported by the recurrent dream group were recurrent dreams.

Hypothesis 3 was not supported. There was not a significant difference in proportion of archetypal dreams between recurrent and nonrecurrent dreamers, although nonrecurrent dreamers had a higher proportion of archetypal dreams, a result in the predicted direction.

Hypothesis 4 was that past recurrent dreamers and nonrecurrent dreamers would not differ on well-being, and hypothesis five was that they would not differ in dream content. Past-recurrent dreamers did not differ significantly from nonrecurrent dreamers on any of the measures of well being, nor on measures of dream content. There was no consistency in the direction of the non-significant differences.

Finally, as predicted by hypothesis 6, people who self-reported higher neuroticism reported significantly fewer archetypal dreams.

The mean age of this sample was 20 years, 14 years younger than Brown and Donderi's (1986) adult recurrent dreamers (mean age = 34). These results show that by the end of adolescence dreams may already reflect an attempt at resolving emotional preoccupations as proposed by many modern dream theorists (e.g., Baylor & Deslauriers, 1986-87; Breger, 1967; Cartwright, 1977; Delaney, 1988, 1991; Fiss, 1986; French & Fromm, 1964; Greenberg & Pearlman, 1975, 1993; Hall, 1953b), and the results replicate many of the findings of Brown and Donderi (1986). From these results we suggest that the nature of the recurrent dream is similar in late teenagers and older adults. It occurs in times of stress, is accompanied by negative dream content, and is associated with a deficit in psychological well-being.

Brown and Donderi (1986) examined past recurrent dreamers who had (as adults) a recurrent dream of at least six months duration, but which had not recurred for at least one year. They found that these past-recurrent dreamers obtained higher scores on tests of psychological well-being and positive dream content than both nonrecurrent and recurrent dreamers. In this study's younger sample, past-recurrent and nonrecurrent dreamers were not significantly different on any measures, nor were the non-significant differences consistent. The cessation of a recurrent dream in this younger sample was not correlated with feeling even better than "normal" nonrecurrent dreamers, as in Brown and Donderi's older sample. This suggests that the cessation of a previously recurrent dream in adulthood, but not in childhood, is associated with increased psychological well-being. Furthermore, the data from Brown and Donderi (1986) suggest that when the recurrent dreams of our 18-21 year-olds stop, they will experience elevated well-

being and more positive dream content. Whether this idea is true remains to be tested.

Archetypality

Dream archetypality was negatively correlated with neuroticism in the adult samples of both Cann and Donderi (1986) and Brown and Donderi (1986), as well as in this younger sample. However, a smaller proportion of archetypal dreams was reported by this sample than in the previous studies. Adult populations report proportions of archetypal dreams near 20% (Brown & Donderi; 1986; Cann & Donderi, 1986; Kluger, 1985). Less than ten percent of our sample of dreams – 50 dreams out of 554 -- met the criteria for archetypality.

Cartwright (1979) suggested that conflict resulting from developmental stressors continues until the roughly the age of thirty, which corresponds roughly to the average age of the previous samples of recurrent dreamers. Developmental stressors plus the unique stresses of university studies may have reduced the number of archetypal dreams in our younger sample. Perhaps archetypal imagery, which peaks during early childhood, decreases over the whole population as the stresses of adolescence increase. It reaches a low during late adolescence, after which it increases again. Dream archetypality may then stabilize in the third decade, increasing or decreasing in response to individual differences in life stress. A clearer understanding of the possible influences of age and stress on archetypal content in everyday dreams will require further study.

The data from this study, together with those reported by Brown and Donderi (1986), provide support for the following conclusions. In both late

teenagers and older adults, recurrent dreams: 1) occur in times of stress, 2) are accompanied by more negative dream content in everyday dreams, and 3) are associated with a relative deficit in psychological well-being. Furthermore, the cessation of a recurrent dream in adulthood is associated with increased psychological well-being. The cessation of a recurrent dream in early childhood, however, does not appear to have any long-term psychological benefits. These conclusions are consistent with the clinical dream theories reviewed earlier in the section "Theories of Recurrent Dreams" (pp. 25-26).

Study 3, presented below, investigates whether these findings can be extended to people with recurrent dream themes. Do people whose dreams contain recurrent themes also have more negative dream content in their everyday dreams and lower levels of well-being than do people without recurrent dream themes?

Study 3:
Repetitive Dream Themes and Their Relation to Self-Reported Well-Being.

Introduction

Domhoff (1993) proposed a continuum of repetition in dreams. One extreme is the repetition of traumatic nightmares. The recurrent dreams studied by Brown and Donderi (1986) and in Studies 1 and 2 reported in the thesis occupy a middle place in the continuum. Those studies show that people with recurrent dreams show a marked deficit on measures of psychological well-being. A less extreme form of recurrency is found in the repetition of themes within a series of dreams which are not themselves strict duplicates of each another.

The goal of this study was to extend previous findings on recurrent dreams to dreams with recurrent themes. Specifically, the empirical relationships among measures of dream content and psychological well-being in individuals who experience recurrent dream and people who do not experience recurrent dreams were investigated. Because recurrent themes are less extreme on Domhoff's (1993) continuum of repetition than recurrent dreams, we did not expect people experiencing recurrent themes to score lower than non-recurrent controls on every measure of dream content and psychological well-being, as was the case in the Brown and Donderi (1986) study of recurrent dreams and in Study 2. Given the lack of prior research on the relation between recurrent dream themes and well-being, we could not predict which specific measures would differentiate people with recurrent themes from people who do not report recurrent themes in their remembered dreams.

Hypotheses

The principle experimental hypotheses were:

1. Subjects who report recurrent themes in their dreams will score lower than non-recurrent controls on tests of psychological well-being as evidenced by elevations in one or more of the following measures: neuroticism, anxiety, dysphoric affect, life stress, somatic distress, or diminished personal adjustment.

2. Content analysis of the dreams of subjects who report recurrent themes will yield more negative dream content when compared to dreams from subjects from the non-recurrent theme group. Negative dream content is characterized by lower ratios on one or more of the following variables: friendly/friendly + aggressive social interactions; positive/positive + negative affect; and success-good fortune/success-good fortune + failure-misfortune experiences; as well as by higher frequencies of anxiety and/or hostility-toned content.

Method

Subjects

Participants were recruited through various French and English media announcements in the Montreal region. Over 300 people responded to the announcements, 217 took part in the study, and 179 completed all phases of the experiment as instructed. Inclusion criteria for the recurrent theme group was based on responses to the McGill Sleep/Dream Questionnaire and consisted of having "recurrent dreams" in which the content was rated as being 'rarely' or 'never' identical but in which the theme was described as 'always' or 'often' identical. Furthermore, the recurrent themes had to be current and had to have persisted for at least 12 months. Subjects reporting recurrent dreams (as

defined in Study 2) were excluded from the study. Twenty-eight subjects met the criteria for inclusion in the recurrent theme group. The non-recurrent theme group included 24 subjects who had never experienced recurrent dreams or recurrent dream themes in their adult life. Past recurrent dreamers were excluded from this study because they have been shown to have higher levels of positive dream content and psychological well-being when compared to either recurrent dreamers or controls (Brown & Donderi, 1986).

Procedure

Recruited subjects were asked to attend information meetings with the researcher. The meetings consisted of a brief explanation concerning the nature of the research, the general conditions of participation, and the distribution of the research protocols.

The subjects were made aware that the confidentiality of their participation would be maintained, and signed consent forms were obtained from all participants. Two sets of protocols were completed throughout the duration of the study: self-report questionnaires and dream logs. The first protocol consisted of a booklet containing a battery of tests designed to measure psychological well-being (Brown & Donderi, 1986). In addition, the McGill Sleep/Dream Questionnaire was included to permit us to identify a subject as a recurrent theme dreamer or a non-recurrent theme dreamer. The second protocol consisted of dream record cards (Appendix VI). Subjects were instructed to record any remembered dreams on the dream record cards for fourteen consecutive days. In addition, subjects were asked to specify the feelings and clarity of recollection associated with their remembered dreams. Subjects specified the date on which the dream took place and the time elapsed

between waking and the recording of their dreams. All the research protocols were completed at home by the subjects.

Measures of Psychological well-being

These measures were the same as those used in Study 2. Reliability and validity data for these measures were reviewed earlier. The measures were *Neuroticism, Trait anxiety, Depression, General psychopathology symptomatology, Life-events stress,* and *Personal adjustment.* These variables were measured by the Neuroticism Scale of the Eysenck Personality Inventory (EPI; Eysenck & Eysenck, 1968), the State-Trait Anxiety Inventory Scale (STAI; Spielberger, Gorsuch, & Lushene, 1970), the Beck Depression Inventory (BDI; Beck & Beamesderfer, 1974), the General Symptom Index (GSI; Derogatis, 1977), the Life Events Inventory (LEI; Paykel and Uhlenluth, 1972), and the Adjective Checklist (ACL; Gough and Heilbrun, 1965), respectively.

Official French versions of the Social Desirability Scale, the State-Trait Anxiety Inventory Scale, the Eysenck Personality Inventory, the Adjective Checklist, and the Beck Depression Inventory were obtained from the Université de Montréal's Testatèque. The remaining test materials (i.e., the Symptom Check-List 90-R, the Paykel Life-Events Inventory, the McGill Sleep/ Dream Questionnaire, the dream record forms, and participants' instruction sheets) were translated into French by one translator, and then translated back to English by a second translator until both versions were judged to be identical. All French test materials appear in Appendix VII.

Measures of Recalled Dream Content

Dream content reports were scored using the content analysis instruments of Hall and Van de Castle (1966) and Gottschalk and Gleser (1969).

The variables were the same as those used in Study 2, namely, ratios of friendly/friendly ÷ aggressive social interactions, positive/positive + negative affect, and success-good fortune/success-good fortune + failure-misfortune experiences, and frequencies of anxiety and hostility-toned content. In Study 2, the two sub-scales of hostility (i.e., hostility inwards and hostility outwards) did not yield any significant information beyond what was obtained with Brown and Donderi's original measure. Thus only total dreamer-involved hostilities was calculated in this study. Finally, dream archetypality was included as a dream content measure in Study 2 in order to replicate and extend all the findings reported by Brown and Donderi (1986), but because Jung's theory of archetypes is not a focus of the thesis, it was not evaluated in this study.

Covariates

Data were collected on the same seven covariates as employed in Study 2, where they are described in detail. They were age, dream report frequency, dream report length, dream report activities, defensiveness, social desirability, and psychological mindedness.

Scoring

All participant data were coded before analysis of each of the dreaming questionnaires, well-being measures and the home dream reports. Subjects were assigned random alphanumeric codes which were classified by group on a master list. Measures of well-being were scored blind by the researcher according to standard criteria supplied in the scoring manuals for each test. Dream reports were evaluated by two independent raters blind to the subjects' group membership. The two raters (the author and a new research assistant) independently scored 248 of the 746 dreams collected. Of the remaining 498

dreams, 161 were scored by the research assistant and 337 by the author. The research assistant was trained by the researcher in the content analysis scales over a 6-week period until criterion performance was attained on each of the scales. As in Study 2, the dream reports used for training were obtained from an unrelated study (Zadra, Donderi, & Pihl, 1992).

Interrater reliability scores for the content analyses of dream reports, which varied from 79% to 99%, are shown for each content category in Table 9. The percentage of agreement measures the proportion of times the raters agreed with respect to the event frequency per content category per dream report across all 248 dreams.

Table 9.
Interrater Reliabilities of Dream Report Content Analysis

Dream content category	Percent agreement[a]
Activities	83.7
Friendly interactions	80.7
Aggressive Interactions	91.1
Positive emotions	92.6
Negative emotions	87.4
Success experiences	97.0
Failure experiences	96.3
Good fortune	98.6
Misfortune	87.4
Anxiety	79.3
Hostilities	90.2

[a] Percent agreement = agreement between Raters 1 and 3, with respect to event frequency per content category per dream report, for 258 dream reports.

Results

Group Covariate Comparisons

One-way ANOVAs were performed on the seven covariates. There were no significant differences between the two experimental groups (see Table 10). A correlation matrix of the covariates and the dependent variables revealed that the former were not significantly correlated with the latter beyond what would be expected by chance. Because the two experimental groups did not differ significantly on any of the covariate measures, and the covariate measures were not significantly correlated with the dependent variables, the covariates were not used in subsequent multivariate and univariate analyses (Tabachnick & Fidell, 1989)

Measures of Well-Being and Dream Content

Multivariate analyses of variance (MANOVAs), followed by univariate analyses of variance (ANOVAs) was used to assess group differences on the measures of psychological well-being and recalled dream content.

The mean scores for the two comparison groups on each of the psychological well-being measures as well as the results of the univariate analyses appear in Table 11. The mean scores of Brown and Donderi's (1986) recurrent dream group are also included for comparative purposes.

A one-way MANOVA showed that the recurrent theme group had a significantly lower overall level of well-being than the non-recurrent theme group, ($F(6,44) = 2.61$, $p < .05$). As can be seen in Table 11, statistically significant univariate differences exist on the well-being measures of neuroticism, trait anxiety, depression and general symptomatology.

Table 10.

Covariate Scores for the Recurrent Theme Group and the Non-Recurrent Theme Group.

Covariate	RT (n = 27)	NRT (n = 24)	$F(1, 49)$	p
Age: years				
M	38.2	36.0	.42	ns
SD	10.8	12.6		
Defensiveness: EPI[a]				
M	3.4	3.4	.01	ns
SD	1.7	1.7		
Social Desirability: SDS[a]				
M	13.8	14.8	.36	ns
SD	6.0	6.0		
Psychological Mindedness: ACL[b]				
M	46.7	48.8	.61	ns
SD	9.8	9.2		
Dream report frequency: 14 days				
M	14.1	15.2	.22	ns
SD	8.0	7.6		
Dream report length: No. words				
M	109.0	113.9	.11	ns
SD	52.2	55.7		
Dream report activities: Freq				
M	5.6	5.2	.59	ns
SD	1.5	1.7		

Note. RT = recurrent theme group, NRT = non-recurrent theme group, Freq = frequency/100 words.

[a]Raw Score. [b]Standard Score.

Table 11.

Psychological Well-Being Scores for the Recurrent Theme Group and the Non-Recurrent Theme Group.

Well-being measure	RT (n = 27)	NRT (n = 24)	*F*(1, 49)	*p*	RD
Neuroticism: EPI[a]					
M	12.0	7.9	7.83	<.008	13.0*
SD	5.1	5.4			5.0
Trait Anxiety: STAI[b]					
M	43.4	33.4	11.84	<.002	58.7
SD	9.9	11.0			10.8
Depression: BDI[a]					
M	8.5	3.6	15.02	<.001	11.3
SD	5.5	3.0			7.8
General Symptom Index: SCL[b]					
M	62.2	54.2	10.32	<.005	65.7
SD	8.7	9.2			11.0
Life-Event Stress: PLEI[a]					
M	4.4	3.5	.98	ns	6.6
SD	3.2	3.6			4.1
Personal Adjustment: ACL[b]					
M	40.9	45.5	2.11	ns	42.6
SD	11.9	10.7			9.9

Note. RT = recurrent theme group; NRT = non-recurrent theme group; RD = recurrent dream group from Brown and Donderi (1986).

*Percentile score converted to raw score.

[a]Raw Score. [b]Standard Score.

Table 12 contains the mean scores for the two comparison groups on the measures of dream content. A one-way MANOVA on the dream content measures showed that the recurrent theme group had significantly more negative dream content than the non-recurrent dream group, ($F(5, 45) = 3.16$, $p < .05$). As shown in Table 12, univariate analyses of variance indicate that individuals who experienced recurrent themes in their dreams had a significantly greater proportion of negative dream affect and more dream anxiety.

Table 12.
Dream Content Measures for the Recurrent Theme Group and the Non-Recurrent Theme Group.

Dream content measure	RT (n = 27)	NRT (n = 24)	$F(1, 49)$	p
Anxiety: Freq				
M	.77	.46	9.87	<.005
SD	.42	.24		
Fr /Fr + Aggressive interactions[a]				
M	.57	.66	1.52	ns
SD	.25	.28		
Positive/Positive + Negative affect[a]				
M	.31	.46	6.89	<.02
SD	.20	.20		
Success, GF/Success, GF + Failure, MF experiences[a]				
M	.24	.30	.54	ns
SD	.23	.36		
Hostilities: Freq				
M	.40	.34	.81	ns
SD	.31	.21		

Note. RT = recurrent theme group, NRT = non-recurrent theme group; Freq = frequency/100 words; Fr = friendly; GF = good fortune; MF = misfortune. [a]Ratio Score.

Discussion

As predicted by hypothesis 1, the recurrent theme group had a significantly lower overall level of well-being than the non-recurrent theme group. There were statistically significant results on four of the six measures (more neuroticism, anxiety, depression and general symptomatology in the recurrent theme group). These results extend the previously reported findings on the relation between recurrent dreams and well-being. The data indicate that a relative deficit in psychological well-being is also associated with the presence of recurrent dream themes.

The second hypothesis was also supported. Significant univariate differences were found on two of the five dream content measures. Statistically non-significant group differences for the remaining three dream content measures (i.e., ratios of friendly/friendly + aggressive social interactions, success-good fortune/success-good fortune + failure-misfortune experiences, and hostility-toned content) were all in the predicted direction.

Several noteworthy trends appear when the scores on the measures of well-being for this study's adult recurrent theme group are compared to those reported in Study 2 for young adult recurrent dreamers (see table 5) and to Brown and Donderi's (1986) older recurrent dream group (see Table 11). The scores of our recurrent theme group were lower (i.e., more adaptive) on five of the six measures of well-being (neuroticism, trait anxiety, depression, general symptomatology, and life-events stress) than the scores obtained by the two recurrent dream groups. On the measure of personal adjustment, where a higher score indicates greater personal adjustment, the recurrent theme group had a score that was similar to the recurrent dream group in Study 2 (40.9 vs.

40.7 respectively) and slightly lower than Brown and Donderi's sample of recurrent dreamers (40.9 vs. 42.6)

A similar comparison on the measures of dream content is limited by the fact that three of the five measures were calculated differently in studies 2 and 3 than in Brown and Donderi's study (see p. 50). When compared to the recurrent dreamers in Study 2 (see Table 6), people with repetitive dream themes had higner ratios of friendly/friendly + aggressive interactions, positive/positive + negative affect, and fewer dreamer-involved hostilities. However, our repetitive theme group had a lower ratio of success, good-fortune/success, good-fortune + failure, misfortune experiences and a higher frequency of anxiety per 100 words. On the two dream content measures that were comparable to Brown and Donderi's data, our recurrent theme group had fewer dreamer-involved hostilities but a higher frequency of anxiety per 100 words.

The Dream Repetition Dimension And its Relation to Well-Being

The results from Study 3, together with those reported in Study 2 and by Brown and Donderi (1986), support both the validity and heuristic value of Domhoff's (1993) repetition continuum. The data indicate that people who experience recurrent themes show a deficit on measures of well-being, but not to the extent shown by those with recurrent dreams. These results form a pattern which suggests that scores on measures of psychological well-being are inversely related to the position of a dreaming experience on the repetition continuum. If this is correct, we would expect that people with recurrent traumatic dreams would score lower on measures of well-being than people with either recurrent dreams or repetitive dream themes. Similarly, the data from the dream content analyses suggest that, as one moves towards the traumatic dream end of the continuum, people's everyday dreams should contain greater proportions of negative dream elements (e.g., aggressive, anxious and dysphoric dream content).

Domhoff (1993) argues that the dreams which make up his repetition dimension (i.e., traumatic dreams, recurrent dreams, repeated themes, and frequent dream elements) all reflect attempts at resolving emotional preoccupations. If this hypothesis is correct, then the cessation of any of these types of "recurrent dreams" should indicate that the emotional issue has been resolved. Consistent with this view, Brown and Donderi (1986) presented evidence that the cessation of recurrent dreams in adulthood was correlated with an elevation in well-being. The results from Study 2 indicate that the cessation of a recurrent dream in early childhood, however, does not appear to have any long-term psychological benefits. Whether or not the cessation of

previously recurring themes or dream elements in adulthood is also associated with increases in well-being remains to be determined.

A possible exception to the aforementioned conclusions concerns positive recurrent dreams. As was described in Study 1, approximately 10% of recurrent dreams are described as being pleasant. Because positive recurrent dreams occur infrequently, their association to measures of well-being has not been investigated. Thus, we do not know if people who report positive recurrent dreams also show a relative deficit on measures of well-being. Similarly, we do not know whether the maintained cessation of pleasant recurrent dreams is correlated with positive, negative, or no changes in well-being.

The theories and data on recurrent dreams presented in the thesis are consistent with a broader view of the dream as an attempt to resolve current emotional concerns, one of the possible function of dreams as proposed by contemporary dream theory (e.g., Baylor & Deslauriers, 1986-87; Breger, 1967; Cartwright, 1977; Delaney, 1988, 1991; Fiss, 1986; French & Fromm, 1964; Greenberg & Pearlman, 1975, 1993, Hall, 1953b). However, the data do not show that emotional concerns *are* resolved by incorporating them in dreams. Given the correlational nature of the data, the direction of causality between dream content and waking emotional states cannot be inferred. In other words, dream content could either reflect, or influence, waking adjustment. At the present time, no firm conclusions as to which of these possibilities is correct can be drawn. The nature of the association between dream content and waking state personality may also vary with the individual and the life circumstances. Thus, it may turn out that dreams can both influence and reflect waking state personality, albeit at different points in one's life.

The causality issue cannot be resolved until dream content is manipulated as an independent variable. As will be shown in Study 6, one way to alter recurrent dream content is through lucid dream induction techniques. Lucid dreams are dreams during which the sleeper becomes aware that he or she is dreaming. In a controlled treatment study, it may be possible to demonstrate a causal relationship between the experimental manipulation of dream content and pre- to post-manipulation changes in objective personality measures, including measures of psychological well-being.

The three studies reported thus far investigated the dimension of repetition in dreams. The following section explores a second dimension of dreams: negative affect. First, nightmares are differentiated from night terrors, and theories of nightmares are then reviewed. Next, inconsistencies in commonly used operational definitions of nightmares are discussed. It is argued that nightmares (i.e., disturbing dreams during which the sleeper awakens) should be differentiated from bad dreams (i.e., disturbing dreams which, though being unpleasant, do not cause the dreamer to awaken). Study 4 tests the assumptions behind frequently proposed definitions of "nightmares" by assessing the emotional content and intensity of nightmares and bad dreams. In Study 5, the prevalence of nightmares and bad dreams and their relation to psychological well-being is investigated. Study 6 presents five case reports of people with frequent recurrent nightmares whose successful treatment was based on lucid dreaming.

Nightmares Versus Night Terrors

Traditionally, the term "nightmare" has been used to refer to two distinct types of sleep phenomena, actual nightmares and what are known as night terrors. However, as discussed by Hartmann (1984), nightmares and night terrors can be differentiated both biologically and psychologically. For example, nightmares are characterized by the presence of vivid visual imagery (frequently situations in which the dreamer is in danger) and strong negative affect (e.g., intense fear, anxiety, or guilt). These dreams are usually remembered in detail, typically end with the subject's waking up (in a non-confused state), and occur largely in REM sleep during the second half of the night (e.g., Erman, 1987; Fisher, Byrne, Adele, & Kahn, 1970; Hartmann, 1984). By contrast, night terrors (sometimes called pavor nucturnus in children and incubus attack in adults) are marked by a sense of confusion upon awakening, the absence of recall of dream imagery, and the presence of intense autonomic activation. They typically occur in slow-wave sleep (stage 3-4 sleep) during the first hours of sleep, and amnesia for the entire episode is typical upon awakening in the morning (Broughton, 1968; Fisher, Kahn, Edwards, & Davis, 1973; Hartmann, 1984; Kales & Kales, 1974; Thorpy & Glovinsky, 1987).

Theories of Nightmares

Early views on nightmares centered around the idea that nightmares involved the visitations of monsters, demons, ghosts, or other evil spirits. In his work *On the Nightmare*, Ernest Jones (1931) examined the extent to which dreams influenced the development of various beliefs about the soul. He argued that nightmares contributed to the rise of superstitious beliefs in incubi, vampires, werewolves, devils and witchcraft. Jones also cites mythologists

who suggested that the belief in all kinds of spirits could be traced to the experiences of the nightmare. For instance, he quotes from Golther (1895) who writes that "The belief in the soul rests in great part on the conception of torturing and oppressing spirits. Only as a gradual extension of this did the belief arise in spirits that displayed other activities than torturing and oppressing. In the first place, however, the belief in spirits took its origin in the Nightmare" (Jones, 1931, p. 74).

Though Freud was a certainly a prolific writer (his collected publications amount to twenty-four volumes and he wrote extensively about dreams in twenty-six different articles or books) he had surprisingly little to say about nightmares. Nightmares, which awaken the dreamer, are counterexamples to Freud's theory which emphasizes that dreams are 'the guardians of sleep.' Freud (1920) included nightmares in his wish-fulfillment theory of dreams by suggesting that nightmares represented wishes for punishment emanating from the superego. By 1925, Freud had included aggression as a primary drive in his drive theory, and posited that nightmares were "an expression of immoral, incestuous and perverse impulses or of murderous and sadistic lusts" (Freud, 1925, p. 132). Freud apparently became dissatisfied with this initial explanation of nightmares and recognized that his theory did not adequately explain recurrent (traumatic) nightmares. He later tried to account for recurrent nightmares by suggesting that they represented a "repetition compulsion" — a primitive and regressive tendency to recreate unpleasant experiences (Freud, 1955). However, several psychoanalysts have continued to argue that recurrent nightmares, no matter how disturbing the dream content, represent the fulfillment of disguised unconscious wishes (e.g., Adams-Silvan & Silvan, 1990; Renik, 1981).

Jones (1931) also viewed nightmares from a psychoanalytic perspective, but unlike Freud, wrote extensively about their history and relation to pathology. Jones postulated that nightmares and all other fear dreams express conflicts over repressed sexual desire, but the source of intense dread found in nightmares lies in the most repressed of all sexual desires, namely, incest. By suggesting that only unconscious incestual wishes could be so anxiety provoking as to disrupt the sleep-protective function of dreams, Jones was able to account for nightmares within a Freudian view of dreams.

Hadfield (1954), while focusing on the possible biological roles of dreams in general, proposed a broader view than Jones on the etiology of nightmares. Hadfield suggested that though some nightmares may be related to unresolved childhood sexual conflicts, other types of childhood and adult conflicts could also give rise to nightmares. Hadfield proposed that dreams can reflect any unsolved problem or worry of daily life. As part of ascribing a problem-solving function to dreams, Hadfield suggested that awakening from dreams was the result of the dream reviving a problem without progressing towards its solution. Hadfield also viewed nightmares as depicting problems that could not be solved during the dream. Thus, Hadfield states that "just as we sleep to escape from the problems of the day, so in a nightmare we waken to escape the unsolved problems and horrors of the night" (p.179).

Jung believed that nightmares, like most other types of dreams, serve a compensatory function. If people became too flippant or perfunctory in their conscious attitude, then a dream could enhance the situation and compensate for that waking state in a way that produced a nightmare (Jung, 1930, p. 205). Similarly, nightmares could "shock" a dreamer in order to impart messages difficult for that person to accept. Traumatic nightmares, however, are not

viewed in Jungian dream theory as being compensatory because they are largely unrelated to the dreamer's conscious attitude and "conscious assimilation of the fragment [of the psyche] reproduced by the dream does not . . . put an end to the disturbance which determined the dreams" (Jung, cited in Mattoon, 1978, p.142).

In his work *Nightmares and Human Conflict* , Mack (1970) argues that ego functioning in dreams is regressive, so that an adult's thinking in dreams is similar to that of early childhood. Mack believes that Freud's wish-fulfillment theory does not adequately account for anxiety dreams and argues that the central conflicts in nightmares concern profound and inescapable anxieties that all humans first experience in childhood. These anxieties include destructive aggression, castration, and separation and abandonment. In addition, Mack suggested that repetitive traumatic nightmares could serve the function of repeatedly expiating the unconscious guilt of the dreamer.

Kramer (1991a, 1991b, 1993) proposed a theory postulating that one function of the physiological and psychological processes that occur during sleep is to alter or regulate mood. His theory is based on research findings of pre- to post-sleep changes in subjects' affective states (e.g., Kramer, Roehrs, & Roth, 1976; Lysaght, Kramer, & Roth, 1979; Rosa, Kramer, Bonnet, & Thomas, 1981; Roth, Kramer, & Roehrs, 1976) which suggest that mood level and mood variability decrease from night to morning. Kramer posits that dreaming has a mood regulatory function in that it contains an "emotional surge" which accompanies REM sleep and serves to adjust the level and range of one's mood. Kramer suggests that the effectiveness of "emotional problem-solving" that occurs in dreams within a night may be related to "progressive-sequential" versus "repetitive traumatic" patterns of thematic dream development.

Kramer (1991a, 1993) views nightmares (which awaken the dreamer) as a failure in dream function since the psychological experience of dreaming is unable to contain the emotional surge which accompanies REM sleep. Though his theory is similar to that of Freud's in that both view the dream as 'the guardian of sleep,' the theories differ as to why nightmares occur. Kramer believes that people awaken from nightmares, not because of the dream's content, but because: a) they are currently or persistently experiencing emotional difficulties in the their waking state; and b) they are emotionally hyperresponsive to the dream experience.

In studies of people with a life long history of nightmares, Hartmann and his colleagues (e.g., Hartmann, 1984; Hartmann, Russ, van de Kolk. Falke, & Oldfield, 1981) found that no one measure of psychopathology could adequately describe these individuals. Hartmann (1984) proposed that the psychological characteristics of people with life-long nightmares could be best described in terms of a broad personality dimension of "boundary permeability." Boundary permeability refers to overlap ("thin-ness") or separation ("thick-ness") between mental states, and the dimension covers many aspects of a person's functioning (e.g., degree of structure the person imposes on time and environment, organization of early and recent memories, rigidity of emotional defenses). This broad personality dimension overlaps with a number of other personality or cognitive styles including fantasy-proneness, tendency to experience synesthesia, hypnotizability, openness, and aspects of creativity (Hartmann, Elkin, & Garg, 1991). According to Hartmann (1984), people with frequent nightmares manifest "thin boundaries" in a variety of ways. For example, they are more open, trusting, sensitive, and vulnerable to internal and external intrusions than others and are more likely

to report experiences such as dreams within dreams (i.e., to dream that they wake up) and déjà vu. Many of these characteristics render individuals with "thin boundaries" unusually susceptible to events not usually seen as traumatic (Hartmann, 1984). Some evidence suggests that nightmare frequency is related to a dimension of boundary permeability as described by Hartmann (1984, 1991). Nightmare frequency is associated with hypnotic ability, the tendency to become absorbed in fantasy and aesthetic experiences, and creativity (Belicki & Belicki, 1986). In addition, nightmare frequency is related to scores in the permeable or thin direction on Hartmann's (1989) Boundary Questionnaire (Hartmann, 1989; Levin, Galin, & Zywiak, 1991). Belicki (1992a), however, found that only nightmare distress, but not nightmare frequency, was significantly correlated with scores on the Boundary Questionnaire.

This review indicates that though most theories of nightmares posit an association between nightmares and some form of psychopathology, there is no consensus as to the significance of this type of disturbing dream. In addition, some of these theories predate the distinction between nightmares and night terrors which was first made 25 years ago, making it likely that the earlier theories of nightmares may have been based on observations of both nightmares and night terrors. For example, Jones (1931) notes three cardinal features of nightmares: (a) agonizing dread; (b) a sense of oppression or weight at the chest which alarmingly interferes with respiration; and (c) conviction of helpless paralysis, together with other subsidiary symptoms such as palpitation. These three characteristics more accurately describe the experience of a night terror than that of a nightmare, as currently understood.

The next study (Study 4) tests the underlying assumptions of commonly proposed operational definitions of nightmares and supports the contention

that nightmares should be differentiated from bad dreams. Study 5 goes on to investigate the prevalence of nightmares and bad dreams, and their relation well-being.

Study 4:
Variety and Intensity of Emotions in Nightmares and Bad Dreams

Introduction

Though researchers now recognize that nightmares and night terrors are biologically and psychologically distinct events, current research on nightmares has been hampered by inconsistent definitions of nightmares. Two principal areas of discrepancies are waking and fear as nightmare criteria.

Waking Criteria

Hartmann (1984) defines a nightmare as a long, frightening dream that awakens the sleeper. Awakening from a frightening dream has also been used as an operational definition of nightmares by others (e.g., Belicki, 1992a, 1992b; Feldman & Hersen 1967; Hersen, 1971, 1972; Levin, 1989, 1994; Miller & DiPilato, 1983). However, other researchers do not include the waking criterion (e.g., Kales, Constantin, Soldatos, et al., 1980; Klink & Quan, 1987; Salvio, Wood, Schwartz, & Eichling, 1992; Wood & Bootzin, 1990). Furthermore, some investigators have not defined nightmares or have left nightmares to be defined by subjects themselves (Belicki & Belicki, 1986; Cernovsky, 1983; Dunn & Barrett, 1988; Haynes & Mooney, 1975; Hearne, 1991). A failure to agree upon a given nightmare definition is further exemplified in diagnostic texts. For example, the DSM-IV (APA, 1994) defines nightmare disorder in terms of a frightening dream that awakens the sleeper. In contrast, the Sleep Disorder

Handbook (Thorpy, 1990) defines a nightmare as a frightening dream that is disturbing to the dreamer, but does not include the waking criterion.

The assumption underlying the use of the waking criterion in defining nightmares is that sleepers awaken from a nightmare because of the extreme intensity of the emotions experienced within it. If the magnitude of negative emotions in a dream is not great enough to awaken the sleeper, then the dream is not sufficiently disturbing to be classified as a nightmare. Although a causal link between emotional intensity and awakening from a dream is a plausible hypothesis, there is no empirical evidence to support this view. On the contrary, evidence exists to support the idea that even the most unpleasant of dreams do not necessarily awaken the sleeper (Levitan, 1976/77, 1978, 1980, 1981; Van Bork, 1982). Levitan (1976/77, 1978, 1980, 1981) documented the cases of several individuals who experienced their own violent deaths in their dreams, including the total destruction of the dreamer's body image, an exceptionably intense emotional occurrence, that nonetheless failed to awaken these subjects. For example, a 20 year old married woman had the following dream during a period of extreme marital unrest:

> I am climbing the side of a mountain in the company of my husband and mother. I call out: "Be careful because the rocks are slippery!" Then I lose my footing and fall into space. I am horrified and screaming all the way down. I see the bottom and hit it with a thud and *my body splatters in several directions.* I feel foggy and light-headed as if walking on air but I do not awaken (Levitan, 1976/77, p. 3)

In order to compare various studies of nightmares, it is important that the term nightmare be consistently defined across studies. Halliday (1987, 1991) suggests that disturbing dreams which awaken the sleeper should be called

"nightmares" whereas disturbing dreams which do not awaken the sleeper should be called "bad dreams." Donderi, Zadra, and Nielsen (1992) have also argued for such a distinction and suggest that differentiating between nightmares and bad dreams may have important implications for both studies of nightmare prevalence and studies investigating links between nightmare frequency and general psychopathology.

Consistent with these suggestions, this study distinguishes "nightmares" from "bad dreams." A nightmare is defined as a disturbing dream in which the unpleasant visual imagery and/or emotions awaken the sleeper. A bad dream is a disturbing dream which, though being unpleasant, does not cause the dreamer to wake up. These definitions are also included in the McGill Sleep/Dream Questionnaire.

By examining the ratings of emotional intensities in people who report both nightmares and bad dreams, we can compare the emotional intensities of bad dreams and nightmares. Using the waking criterion to separate nightmares from bad dreams, pilot data from Zadra and Donderi (1993) showed that 43% of bad dreams reported by people with both bad dreams and nightmares had emotional intensities equal to or greater than the average emotional intensities of their nightmares. This demonstrates that a large portion of bad dreams seem to be as emotionally intense as nightmares, even though bad dreams do not awaken the sleeper.

The goals of Study 4 were to investigate the intensity of emotions reported in bad dreams and nightmares and to confirm that nightmares are generally more emotionally intense than bad dreams.

Fear Criteria

Irrespective of the waking criterion, nightmares have almost always been defined as *frightening dreams* (Brimacombe & Macfie, 1993; Feldman & Hersen, 1967; Hartmann, 1984; Hersen, 1971; Lee, Bliwise, Lebret-Bories, Guilleminault, & Dement, 1993; Levin, 1994; Miller & DiPilato, 1983; Salvio, Wood, Schwartz, & Eichling, 1992; Wood & Bootzin, 1990). While this fear component is widely accepted in nightmare research, data from three studies challenge this assumption. Zadra and Donderi (1993) and Dunn and Barrett (1987) found 17% to 23% of the nightmares reported by their subjects contained emotions other than fear, such as sadness and grief. Similarly, Belicki, Altay and Hill (1985) reported that a significant proportion of individuals cite emotions other than fear to be primary in their nightmares.

The second goal of this study was to collect and classify data on the emotional content of nightmares and bad dreams. Specifically, we wanted to determine what percentage of nightmares and bad dreams contain emotions other than fear. In addition, the distribution of emotions in bad dreams and nightmares was compared.

Hypotheses

The experimental hypotheses were:

1. Nightmares will have, on average, higher emotional intensities than bad dreams. This will be true within individuals who report both nightmares and bad dreams, as well as for group comparisons between people with both nightmares and bad dreams and those with bad dreams only.

2. Among people who report both nightmares and bad dreams, some bad dreams will be rated as being as emotionally intense as their nightmares.

3. Fear will be the predominant but not the only emotion reported in both bad dreams and nightmares.

In addition, differences between the emotional content of nightmares and bad dreams were investigated. Due to the lack of previous data in this area, this part of the study was exploratory.

Method

Participants

Participants were McGill University students who were recruited as nonpaid volunteers through class announcements in the Faculties of Arts, Science, and Engineering. Interested students were contacted by phone, and group orientation meetings were arranged. Participants were told that the study concerned variability in dream recall frequency across individuals as well as the emotional content of dreams in general.

Procedure

Participants were given definitions of a lucid dream, a bad dream, a nightmare and a night terror, and questions concerning these types of dreams were answered by the experimenter. In addition, participants received instruction sheets (Appendix VIII) detailing all pertinent definitions and procedures to follow for completing the dream logs. It was stressed to the subjects that we were equally interested in people with high or low frequency of dream recall, and that all types of dreams were of interest to the experimenters.

Subjects then completed two research protocols. The first contained the McGill Sleep/Dream Questionnaire. The second required the participants to record their dream experiences for a period of one calendar month each morning in the daily dream log provided (Appendix IX). Participants were

instructed to report, for each remembered dream, the main emotions present (if any), and their intensities on a nine-point scale with higher numbers indicating higher levels of emotional intensity. Subjects were also instructed to note whether the reported dream was a lucid dream, a nightmare, a bad dream, or a flying dream. Both phases of the study were completed by the participants at home. They were instructed to complete the McGill Sleep/Dream Questionnaire before beginning to record their dreams.

Subjects were divided into two groups depending on which dream types they reported in the logs. Subjects who reported at least one nightmare and one bad dream were classified into the nightmare + bad dream (NM+BD) category, whereas subjects who reported at least one bad dream, but no nightmares, were assigned into the bad dream only (BD) group. Only one subject reported nightmares but no bad dreams in the four-week logs. This subject's data was excluded from the group comparison analyses.

The primary emotions reported by the subjects for bad dreams and nightmares in the dream logs were grouped by the experimenter into eight separate categories : (1) fear, (2) anger, (3) sadness, (4) frustration, (5) disgust, (6) confusion, (7) guilt, and (8) others. These categories were derived from the most frequently reported emotions in people's bad dreams and nightmares in a pilot study (Zadra & Donderi, 1993). The experimenter assigned a reported emotion synonymous with one of the first seven categories into that group. For example, the reported emotion "terrified" was grouped into the fear category. The eighth category, other, was comprised of all emotions reported which did not fit into any of the first seven categories (e.g., stressed).

The emotional intensities of bad dream and nightmare were calculated by averaging the ratings reported by each subject across all of the bad dreams or

nightmares which were reported. This was done to eliminate any overrepresentation of a minority of subjects who may have reported either a large number of very intense nightmares or bad dreams or a particular emotion across many of their dreams.

Results

One-hundred and sixteen subjects attended the group orientation meetings. A total of 90 subjects completed all aspects of the study satisfactorily (73 women, 17 men, mean age = 20.7). The over representation of females was consistent with subject sex ratios reported in other nightmare studies (Belicki, 1992; Dunn & Barrett, 1988; Wood & Bootzin, 1990). Since no significant differences in either nightmare or bad dream frequency were found between male and female subjects on retrospective or dream log measures, their data were combined for all analyses.

Among NM+BD group subjects (n=36) the mean emotional intensity of their nightmares was 7.95 (*SD*=1.51). The mean emotional intensity of their bad dreams was 7.24 (*SD*=1.15). A paired t-test showed that nightmares were rated as being significantly more intense than bad dreams ($t(35) = 4.24$, $p < .001$). The reported mean emotional intensity of bad dreams from the BD group (n=29) was 7.06 (*SD*=1.54). A comparison of bad dreams from the BD group with the bad dreams from the NM+BD group indicated that the intensity of bad dreams of these two groups was not significantly different ($t(63) = .54$, $p > .05$).

The mean intensities for bad dreams and nightmares calculated on a per person, per emotion basis are presented in Table 13.

Table 13.
Mean Intensities of Emotions Reported per Person, per Group for Nightmares and Bad Dreams.

	Nightmares (NM+BD Group)		Bad Dreams (NM+BD Group)		Bad Dreams (BD Group)	
Emotion	n	Intensity	n	Intensity	n	Intensity
Fear	28	8.18	28	7.03	25	6.71
SD		0.98		1.45		1.83
Anger	4	8.25	10	6.75	5	8.20
SD		0.96		1.81		0.84
Sadness	3	9.00	9	7.09	8	7.79
SD		0.00		1.72		1.35
Frustration	3	8.67	8	7.46	5	5.90
SD		0.58		1.59		1.43
Disgust	1	8.00	7	6.93	1	8.00
SD		—		1.10		—
Confusion	0	—	8	7.31	2	6.88
SD		—		1.10		2.65
Guilt	3	5.67	2	7.00	0	—
SD		3.21		1.73		—
Other	4	7.25	12	6.83	11	5.91
SD		1.50		2.08		1.83

Note: NM+BD = nightmare + bad dream group. BD = bad dreams only group

Non-parametric tests were used to compare the mean emotional intensities among the NM+BD group subjects for each emotion category. The analyses showed that the mean emotional intensities for fear in nightmares were significantly greater than those reported in bad dreams (Wilcoxon Signed Rank Test = 3.13, $p<.005$). A comparison for emotional intensities for nightmares and bad dreams across the remaining seven emotion categories could not be computed due to the large proportion of subjects who did not report one or more of these emotions.

The mean emotional intensities of bad dreams reported by the BD group were compared to those reported by the NM+BD group. Non-parametric tests revealed non-significant differences for the emotion categories of fear (Mann-Whitney U = 323.5, $p>.05$) anger (Mann-Whitney U = 9.0, $p>.05$) , sadness (Mann-Whitney U = 28.5, $p>.05$), frustration (Mann-Whitney U = 7.5, $p>.05$), confusion (Mann-Whitney U = 7.0, $p>.05$), and other (Mann-Whitney U = 46.5, $p>.05$). A comparison for the emotion categories of disgust and guilt could not computed due to the small proportion of subjects who reported these emotions.

Figure 1 shows the distribution of the mean intensity of nightmares minus the mean intensity of bad dreams calculated on a per person basis for subjects from the NM+BD group. Six subjects reported mean emotional intensities for bad dreams that were greater than their mean nightmare intensities, and two individuals had identical mean intensities for nightmares and bad dreams. Further comparisons of the nightmares and bad dreams from the NM+BD group revealed that 25 out of 36 (69%) of the subjects reported having had at least one bad dream that was of equal or greater emotional intensity than the mean emotional intensity reported by the NM+BD group for

nightmares (7.95). These 25 subjects reported 84 highly emotionally intense bad dreams from a total of 180 bad dreams. This constituted 47% of the bad dreams. Nineteen out of 31 subjects (61%) in the BD group reported at least one bad dream of equal or greater emotional intensity than the average emotional intensity of nightmares reported by the NM+BD group. These individuals reported 44 such bad dreams out of a total of 95 bad dreams, or 46%.

Figure 1.
Distribution of the mean intensity of nightmares minus the mean intensity of bad dreams, calculated on a per person basis for subjects from the NM+BD group.

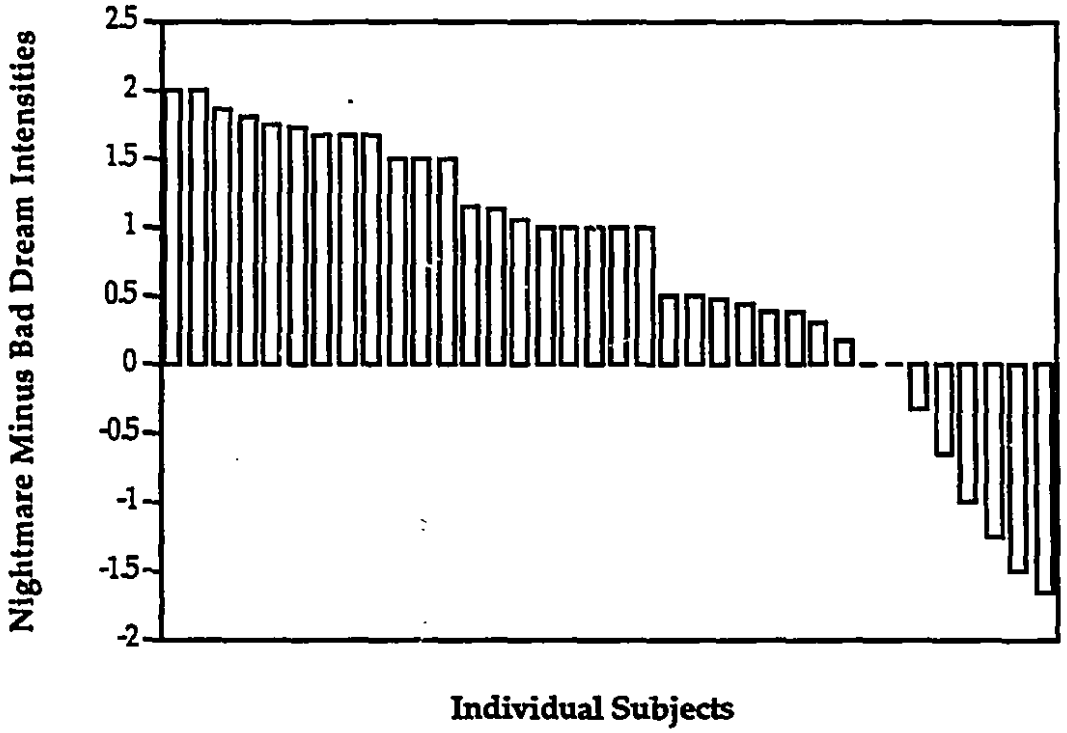


Table 14 presents the proportion of each of the eight emotions present in both nightmares and bad dreams for both the NM+BD and BD groups. The values were calculated on a per person basis so that the total number of nightmares or bad dreams of each subject would be given equal representation. Non-parametric tests revealed that in the NM+BD group, a significantly greater proportion of nightmares were reported to contain fear as a primary emotion as compared to bad dreams (Wilcoxon Signed Rank Test = 2.58, $p<.01$). A statistical comparison between nightmares and bad dreams could not be computed for any of the remaining 7 categories of emotion.

No significant differences were found in the comparison of primary emotions reported in bad dreams for the NM+BD and BD subjects in any of the emotion categories that were amenable to statistical comparisons (Mann-Whitney U values ranged from 418.6 to 517.0, ps>.05).

Table 14.
Mean Percentage of Emotions Reported per Person, per Group in Nightmares and Bad Dreams.

	Nightmares (NM+BD Group)	**Bad Dreams (NM+BD Group)**	**Bad Dreams (BD Group)**
Emotion	Percent	Percent	Percent
Fear	70	49	56
Anger	6	7	8
Sadness	3	9	11
Frustration	7	8	4
Disgust	0	6	0
Confusion	1	4	5
Guilt	5	2	0
Other	8	14	15

Note: NM+BD = nightmare + bad dream group. BD = bad dreams only group

Discussion

Hypothesis 1, which postulated that the average emotional intensities reported for nightmares would be higher than those reported for bad dreams by the NM+BD group, was supported. No significant differences were found between the mean emotional intensities in bad dreams reported by the NM+BD group subjects and those reported by the BD group members. Consequently, it is possible to extend the finding that nightmares are more emotionally intense than bad dreams to include both individuals who experience nightmares and bad dreams, and those who experience bad dreams only.

Looking at each emotion separately, the trend among the NM+BD group was towards higher ratings of emotional intensity for nightmares than for bad dreams. Unfortunately, statistical significance was obtained only for the fear category, as the limited data prevented calculations for the remaining categories of emotion. Guilt was the only emotion category among the NM+BD group members in which a higher emotional intensity was reported for bad dreams than nightmares. The validity of this finding, however, is severely limited due to the small group size for this emotion (BD: $n=2$; NM: $n=3$).

Statistical comparisons were possible between the bad dreams from the NM+BD and BD groups for six of the eight categories of emotion. No significant differences were found between the groups in any of these six categories of emotion, suggesting that the rating of emotional intensities for bad dreams is not affected by experiencing nightmares. Consequently, it is probable that the intensity rating of a bad dream reflects an independent assessment of that dream experience, and not a comparison of it to other disturbing dreams, such as nightmares.

Hypothesis 2, which stated that subjects will report some of their bad dreams as being as emotionally intense as their nightmares, was also supported. A significant subgroup of bad dreams were reported by both the NM+BD group (47%) and the BD group (46%) were of equal or greater emotional intensity than the average nightmare intensity reported by subjects in the NM+BD group. This may reflect, especially among the BD group, a distinct aggregation of individuals who have extremely intense disturbing dreams, but who do not awaken from them.

When the prevalence of various types of emotions was investigated, fear was found to be predominant in both nightmares and bad dreams for both NM+BD and BD group members. However, a considerable number of subjects reported main emotions other than fear in both nightmares and bad dreams (30% of nightmares and 51% of bad dreams in the NM+BD group; 44% of bad dreams in the BD group). These data confirm earlier reports that showed that although fear is the most common emotion in disturbing dreams, these dreams can also contain a variety of other unpleasant emotions (Belicki, Altay, & Hill, 1985; Dunn & Barrett, 1988; Zadra & Donderi, 1993). Across both nightmares and bad dreams, anger, sadness, and frustration were consistently reported as the most common main emotion other than fear. With the exception of the pilot data presented by Zadra and Donderi (1993), this is the first study in which the emotional content of unpleasant dreams was systematically evaluated using a set of categories of emotions while separately evaluating the content of nightmares and bad dreams.

The results from both the emotional intensity and the proportion measures have important implications for the operational definition of nightmares. The data indicate that an accurate definition of nightmares must

be sensitive to the following findings: (1) many individuals report disturbing dreams in which the main emotion is one other than fear, and thus the fright criterion in nightmare definitions should be reconsidered; (2) in some cases, intense affect does not necessarily awaken the dreamer and thus a clear, consistent waking criterion should be established with the understanding that dreams that do not awaken the sleeper can nonetheless be highly disturbing.

The results of the current investigation indicate the tendency of disturbing dream experiences to cluster into two distinct groups: a "mixed" group of people who report both nightmares and bad dreams, and a second group of people who report only bad dreams. Only one subject out of 90 reported one or more nightmares but no bad dreams in the 4-week log.

These findings have important implications for studies assessing the relation between nightmares and measures of psychopathology. In studies that define nightmares in terms of a waking criterion, these "bad dreams only" subjects would be placed in a control group. By contrast, in those nightmare studies that do not employ a waking criterion, these same subjects could be placed in the nightmare (experimental) group.

The observation that disturbing dream experiences tend to cluster into two categories can be conceptualized in terms of a dimension of negative affect that characterizes people's dreams. At one end of the dimension are those people who report both frequent nightmares and bad dreams. Nightmares have been shown in this study to be more emotionally intense than bad dreams. Thus, individuals who report frequent bad dreams but no nightmares are lower on the dimension of negative affect. Even lower on this dimension would be individuals who report the frequent presence of relatively mild negative affect in their dreams.

Numerous studies have investigated the prevalence of nightmares and their association to psychopathology. This research is reviewed in detail in the introduction to Study 5. Overall, these studies have produced inconsistent results. This may be due, in part, to the use of inconsistent definitions for nightmares. A clear differentiation between bad dreams and nightmares may resolve discrepancies in the literature on the prevalence of nightmares and their association to psychopathology.

The first goal of Study 5 was to clarify and extend the evidence presented by Wood and Bootzin (1990) that retrospective reports underestimate the frequency of nightmares when compared to daily dream log measures. The second goal was to investigate the relationship between nightmares and bad dreams and measures of psychological well-being.

Study 5:
Nightmares and Bad Dreams:
Their Prevalence and Their Relationship to Well-Being

Introduction

Both the prevalence of nightmares and the relation between nightmares and measures of psychopathology have been extensively studied. However, many of the studies are plagued with methodological problems. In the following review these problems are summarized and the measures taken in Study 5 to rectify them are described.

The Prevalence of Nightmares

Nightmares have been documented to occur as a concomitant of numerous traumatic experiences. For example, the occurrence of nightmares has been reported in subjects with post-traumatic stress disorder (Hefez, Metz, & Lavie, 1987; van der Kolk, Blitz, Burr, Sherry & Hartmann, 1984); combat veterans (DeFazio, 1975); survivors of the Holocaust (Krystal & Neiderland, 1971); Latin American survivors of torture (Hefez, Allodi & Moldofsky, 1985); prisoners of war (Crocq, Macher, Barros-Beck, Rosenberg, & Duval, 1994) survivors of natural disasters (Lifton & Olsen, 1976); young victims of kidnapping (Terr, 1981, 1983); the sexually abused (Cuddy & Belicki, 1991; Garfield, 1987); and refugees (Cernovsky, 1988, 1990; van der Veer, 1994).

Investigations of the prevalence of nightmares have yielded different estimates, depending on the methods employed and populations studied. Cason (1935) investigated the occurrence of nightmares in a study of over 650 people, divided into six different categories. He found that the percentage of subjects in each of the categories reporting one or more nightmares were: 32%

for normal children; 24% for crippled children and adults; 19% for normal adults (described as summer session students); 18% for blind students; 13% for "feeble-minded" patients; and 7% for psychiatric patients.

Among college and university students, 76% to 86% of students report having had at least one nightmare in the previous year, while 8% to 29% of them report having had one or more nightmares a month (Belicki, 1985, 1991; Belicki & Belicki, 1982, 1986; Feldman & Hersen, 1967; Haynes & Mooney, 1975; Lester, 1968; Levin, 1994; Wood & Bootzin, 1990). In addition, between 2% to 6% of undergraduate students report one or more nightmares per week (Belicki & Cuddy, 1991; Feldman & Hersen, 1967; Haynes & Mooney 1975; Levin, 1994).

Among clinical populations, approximately 24% of non-psychotic patients seen in psychiatric emergency services report nightmares (Brylowski, 1990). Similarly, approximately 25% of both chronic male alcoholics and female alcohol and drug users report having nightmares every few nights (item 31 of the MMPI) (Cernovsky, 1985, 1986).

Two surveys have assessed the incidence of complaints of nightmares, rather than the general rate of nightmare occurrence, in the general public (Bixler, Kales, Soldatos, Kales, & Healy, 1979; Klink & Quan, 1987). Together, these two surveys indicate that 5-8% of the general population report a current problem with nightmares, with about 6% reporting a previous complaint. In a national survey of over 4000 physicians, 4% of patients reported nightmares as one of their complaints in the course of the interviews (Bixler, Kales, & Soldatos, 1979).

In the aforementioned studies, nightmare frequency was almost always assessed by retrospective self-report (e.g., asking subjects how many nightmares they had in the previous month or year). Results from this method, however,

can be affected by such factors as poor memory and by how the question is formulated.

In order to overcome these limitations, Wood and Bootzin (1990) employed a non-retrospective method. They assessed nightmare frequency from daily dream logs. Two hundred and twenty undergraduates recorded each day, the number of nightmares experienced over a period of two consecutive weeks. As a comparison, the same undergraduates estimated the number of nightmares experienced during the past year and during the past month. One hundred and three (47%) reported at least one nightmare in their two-week logs. The logs produced an estimated mean nightmare frequency of 23.6 per year, the past-year report produced a mean of 9.36 nightmares per year, and the past-month report 13 nightmares per year. The levels of nightmare incidence obtained from the retrospective reports were consistent with previous studies. These results indicate that retrospective self-reports underestimated nightmare frequency when compared to daily logs.

Using the same protocol as Wood and Bootzin (1990), Salvio, Wood, Schwartz, and Eichling (1992) found that nightmares in the elderly were ten times more prevalent than had been previously estimated. Their results support Wood and Bootzin's (1990) conclusion that nightmares are more prevalent than had been previously reported.

Wood and Bootzin (1990) were the first to use daily dream logs to study nightmare prevalence. Their study, however, had several methodological shortcomings. First, their reporting period was only two weeks, which was pro-rated to 52 weeks for comparison to the 12-month retrospective reports. Small variations over two weeks would magnify the variability of a pro-rated 52-week estimate. Second, nightmares were defined as frightening dreams in the

retrospective questions whereas nightmares reported on the dream logs were self-defined by the students. Thus, the boundary between "nightmares" and "bad dreams" was unclear and it is impossible to determine whether highly unpleasant dreams which awaken the sleeper ("nightmares") and those that do not ("bad dreams") are equally underestimated. Third, their subjects were instructed only to record nightmares. It is possible that the focus of their experiment on nightmares influenced the subjects' reports.

One goal of Study 5 was to clarify and extend the evidence presented by Wood and Bootzin (1990) that retrospective reports underestimate the frequency of nightmares compared to daily dream log measures. Shortcomings of the Wood and Bootzin study were addressed by: 1) using a one-month dream log, 2) separately tabulating nightmare and bad dream frequency data, and 3) asking subjects to record data on all of their remembered dreams and provide retrospective and dream log information on pleasant dreams (e.g., flying dreams and lucid dreams) as well as disturbing ones.

Previous research on the prevalence of nightmares has not distinguished between nightmares and bad dreams, and a four-week log has never been used to assess nightmare frequency. Given the lack of data in the area, no predictions were made as to whether retrospective reports underestimate the nightmare and bad dream frequency estimated from daily dream logs. This part of the study was therefore exploratory.

Nightmares and Psychopathology

Much of the previous nightmare research had been dedicated to investigating the possible association between nightmare frequency and psychopathology. Though most studies have found a relationship (Berquier & Ashton, 1992; Feldman & Hersen, 1967; Hartmann, 1984; Hartmann, Russ, van der Kolk, Falke, & Oldfield, 1981; Haynes & Mooney, 1975; Hersen, 1971; Kales et al., 1980; Levin, 1990), others have not (Hearne, 1991; Lester, 1968, 1969; D. Belicki, 1987; K. Belicki, 1992; Wood & Bootzin, 1990). The studies are described in greater detail below and possible reasons for the inconsistent results are reviewed.

A large proportion of the aforementioned studies have investigated the relation of nightmares to anxiety. Feldman and Hersen (1967) studied 168 undergraduate students and found a significant positive relationship between nightmare frequency and conscious concerns about death. However, two studies of 304 and 170 female college students by Lester (1968, 1969) did not find a significant relationship between frequency of nightmares and the fear of death or dying. Hersen (1971) investigated the relationship between nightmare frequency and several personality measures (including the Taylor Manifest Anxiety Scale (TMAS), a measure of trait anxiety) in a group of 352 psychiatric inpatients. He found that inpatients with frequent nightmares demonstrated greater manifest anxiety (i.e., trait anxiety), lower ego-strength and heightened conscious concerns about death, when compared to with less frequent and non-nightmare inpatients. Haynes and Mooney (1975) reported two studies of college students (Ns = 201 and 76) which showed small but statistically significant correlations (r= .17 and .24) between nightmare frequency and scores on the TMAS. Cellucci and Lawrence (1978) had 29 undergraduates who

reported two or more nightmares per week keep daily anxiety ratings and sleep observations over an 8-week period. Correlations on within-subject data revealed positive relationships between state anxiety ratings and the occurrence of nightmares in 7 of the 29 subjects. In a study of undergraduate students, Dunn and Barrett (1988) compared the scores of 36 frequent nightmare subjects with those of 43 control (i.e., infrequent nightmares) subjects on seven inventories including the TMAS, the Ego Strength Scale, the Emotionality Scale, and two measures of death anxiety. The nightmare group had significantly higher scores than the controls on one of the death anxiety scales, while no significant differences were found on the other personality inventories. Levin (1989) compared the scores of 20 undergraduates with high self-reported frequencies of nightmares on measures of ego strength and death anxiety with those of 20 control (i.e., infrequent nightmares) students. Contrary to the results reported by Dunn and Barrett (1988), Levin found a significant difference between the scores of subjects with frequent and infrequent nightmares on the ego-strength scale but no significant group differences on the death anxiety scale. In a study of 220 undergraduates, Wood and Bootzin (1990) found a non-significant correlation ($r = .13$) between retrospective self-reports of nightmare frequency and scores on the TMAS. This correlation was consistent with the correlations between the same measures reported by Haynes and Mooney (1975). However, when daily logs were used to measure nightmare frequency, the correlation between nightmare frequency and scores on the TMAS was only .04. Based on these results, Wood and Bootzin (1990) suggest that "anxious individuals do not actually have more nightmares, but that they may be more likely to remember and report nightmares retrospectively" (p. 67). Zadra, Donderi, and Assad (1992) had fifty-two adults

complete the McGill Sleep/Dream Questionnaire, a self-report measure of trait anxiety, and collect a 14-day sample of their own remembered dreams. A total of 856 dreams were collected, including 154 bad dreams and 55 nightmares. All dreams were scored for the presence of anxiety using Gottschalk and Gleser's (1966) Anxiety scale. Trait anxiety was found to be moderately correlated with bad dreams ($r = .29$, $p < .05$) whereas no significant relationship was found between trait anxiety and nightmares ($r = .19$, $p > .05$).

Taken together, these studies suggest that the relationship between trait anxiety and the phenomena of nightmares and bad dreams is weak to moderate at best and nonexistent at worst. However, as noted by Wood and Bootzin (1990), the possibility exists that nightmares (and bad dreams) are correlated with state anxiety.

Several studies have investigated the relation between frequent nightmares and more diverse psychopathological symptoms such as those measured by the Minnesota Multiphasic Personality Inventory (MMPI). Kales et. al (1980) compared the scores of 30 adult subjects with a current complaint of nightmares on the MMPI and the Symptom Checklist (SCL-90) with those of 30 age- and sex-matched control subjects. The subjects with nightmares had significantly higher mean values on seven of the eight clinical scales of the MMPI and had particularly elevated scores on the psychopathic deviate and schizophrenia scales. In addition, the SCL-90 scores for the subjects with nightmares were significantly higher on each of the nine symptom dimensions and on the three global indexes of symptomatology. Hartmann and his colleagues (Hartmann & Russ, 1979; Hartmann, Russ, Oldfield, Sivan, & Cooper, 1987; Hartmann, Russ, van der Kolk, Falke, & Oldfield, 1981) studied adults with a life-long history of frequent nightmares. Their studies indicate

that people with a life-long history of frequent nightmares show greater elevations on the psychotic scales of the MMPI (i.e., paranoia, psychasthenia, and schizophrenia) but not the neurotic scales (i.e., hypochondriasis, depression, and hysteria) when compared with individuals with vivid dreams and with individuals with ordinary dreams. Berquier and Ashton (1992) compared the scores of 30 adults with a life-long history of frequent nightmares on the MMPI and the Eysenck Personality Questionnaire (EPQ) to those of 30 control subjects, matched for age, sex, and socioeconomic status. The results showed that the nightmare subjects scored significantly higher than the control subjects on the eight MMPI clinical scales and on the Neuroticism, but not the Psychoticism, scale of the EPQ.

In addition to the studies by Lester (1968, 1969) and Wood and Bootzin (1990) reviewed above, other studies have failed to find an association between nightmare frequency and psychopathology. Miller and Dipilato (1983) reported a controlled study that evaluated the effectiveness of relaxation and desensitization for the treatment of nightmares. Thirty-two self-referred adults who reported one or more nightmares per week took part in the study. The authors noted that most of their subjects did not exhibit notable waking psychopathology, as assessed by interviews and responses to the MMPI. In addition, approximately one half of their subjects showed no evidence of generalized tension or anxiety on the Profile of Mood States or the MMPI at intake. D. Belicki (1986) (cited in K. Belicki & Cuddy, 1991), found no differences in psychopathology between individuals with frequent nightmares and controls as assessed by interview, MMPI, and self and family psychiatric history. Hearne (1991) had 39 adults who reported having frequent nightmares complete a sleep/dream questionnaire and the Sixteen Personality Factor (16PF)

Questionnaire. Though the frequent nightmare subjects had moderately elevated scores on some of the 16PF scales, their mean 16PF profile was almost identical to that of a group of subjects claiming to have "psychic abilities." K. Belicki (1992) had 85 undergraduate students complete a sleep and dream experiences inventory, the SCL-90-R, the Fear Survey Schedule-II, and the Beck Depression Inventory. The results showed that nightmare distress, but not nightmare frequency, was significantly related to the three measures of psychopathology.

Taken together, these studies indicate that in at least some people who report nightmares there exists a relationship between nightmare frequency and psychopathology. The nature of this relationship, however, remains unclear. Moreover, no single measure or pattern of psychopathology has been exclusively or consistently associated with nightmare frequency.

Several factors may account for these inconsistent findings. First, different studies have focused on different populations, including undergraduate students (Cellucci & Lawrence, 1978; Dunn & Barrett, 1988; Feldman & Hersen, 1967; Haynes & Mooney, 1975; Lester, 1968, 1969; Levin, 1989; Wood & Bootzin, 1992), non-student adults (Hearne, 1991; Kales et al., 1980; Miller & Dipilato, 1983; Zadra, Donderi, & Assad, 1992), psychiatric in-patients (Hersen, 1971), and individuals with a lifelong history of frequent nightmares (Berquier & Ashton, 1992; Hartmann & Russ, 1979; Hartmann, Russ, Oldfield, Sivan, & Cooper, 1987; Hartmann, Russ, van der Kolk, Falke, & Oldfield, 1981). It is possible that the nature and magnitude of relationships between nightmare frequency and psychopathology vary across some of these populations. Furthermore, in some of the controlled studies, the adequacy of the control group can be questioned. For example, in the study by Berquier and

Ashton (1992), 30 adults with a life-long history of frequent nightmares were compared with 30 control subjects, matched for age, sex, and socioeconomic status. Four of the nightmare subjects reported receiving current psychiatric care and another seven reported previous outpatient psychiatric care. However, no subjects in the control group reported any past or current psychiatric history. It is possible that the higher levels of psychopathology found in the nightmare group were attributable in part to the psychopathology present in some of the experimental group subjects independent of nightmare frequency.

Another source of variability is the criterion used to classify subjects into a frequent nightmare group. In some studies, subjects are classified into a frequent nightmare group if they meet the inclusion criteria of reporting twelve or more nightmares over the previous year (i.e., one or more nightmares per month) (Berquier & Ashton 1992; Hersen, 1971; Kales et al., 1980; Levin, 1989), while in other studies the inclusion criteria consists of reporting one or more nightmares per week (Dunn & Barrett, 1988; Feldman & Hersen, 1967; Hartmann, Russ, van de Kolk, Falke, & Oldfield, 1981). In addition, almost all of these studies have used subject's retrospective estimates of nightmare frequency to determine group membership. Studies have shown that when compared to dream log data, retrospective self-reports greatly underestimate the absolute level of nightmare frequency (Salvio, Wood, Schwartz, & Eichling, 1992; Wood & Bootzin, 1990). Thus, it is possible that some individuals who estimate having had fewer than 12 nightmares over the previous year actually have one or more nightmares per month.

Finally, as was discussed in detail in Study 4, definitions of what constitutes a nightmare have been inconsistent.

The second goal of Study 5 was to learn whether psychological well-being is related to nightmares and bad dreams. Data from Study 4 indicate that nightmares are more emotionally intense than bad dreams. In addition, people who report nightmares also tend to report bad dreams whereas there exists a group of people who report bad dreams but no nightmares. Based on these results, we hypothesized that people with frequent nightmares should have a low level of psychological well-being, people with frequent bad dreams should have a higher level of well-being that the nightmare group, and controls who experience nightmares and bad dreams infrequently should have the highest psychological well-being.

Method

Participants

Participants were McGill University students who were recruited as nonpaid volunteers through class announcements in the Faculties of Arts, Science, and Engineering. Interested students were contacted by phone, and group orientation meetings were arranged. Participants were told that the study concerned variability in dream recall frequency across individuals and that the researchers were also interested in relative presence or absence of recurrent dreams, flying dreams, sexual dreams, lucid dreams and nightmares.

Procedure

Participants were given definitions of a lucid dream, a bad dream, a nightmare and a night terror, and questions on these types of dreams were answered by the experimenter. In addition, participants received instruction sheets (Appendix VIII) detailing all pertinent definitions and procedures to follow for completing the dream logs. It was stressed to the subjects that we

were equally interested people with high and low dream recall frequency, and that all types of dreams were of interest to the experimenters.

Subjects then completed two research protocols. The first contained the McGill Sleep/Dream Questionnaire and seven measures of psychological well-being. In addition to the six measures of well-being reported in Studies 2 and 3, Spielberger's STAI-S (a measure of state anxiety; see p. 44) was also included. The second set was the dream log, which required the participants to record their dream experiences for a period of one calendar month each morning in the daily dream log provided (Appendix IV). Participants were instructed to report, for each remembered dream, the main emotions present (if any), and their intensities on a nine-point scale. They were also instructed to note whether the reported dream was a lucid dream, a nightmare, a bad dream, or a flying dream. Both phases of the study were completed by the participants at home. They were instructed to complete the first protocol before beginning the dream recording set.

Frequency Variables

There were three measures of nightmare and bad dream frequency. Questions on the McGill Sleep/Dream Questionnaire required the participants to estimate the number of nightmares and bad dreams they had experienced over the past year and over the past month. These questions served as the 12-month and one-month retrospective self-report measures of incidence. The daily dream log served as the non-retrospective, on-going measure of both nightmare and bad dream frequency.

Group Comparisons

Participants were classified in one of three groups: the frequent nightmare group, the frequent bad dream group, and the control group. Participants were classified into the frequent nightmare group if they reported at least one nightmare in the dream log, at least one nightmare retrospectively in the previous month, and more than nine nightmares retrospectively over the previous year. The frequent bad dream group involved participants who had reported at least one bad dream in the dream log, at least one bad dream retrospectively during the previous month, and more than nine bad dreams retrospectively over the previous year. Participants who met the criteria for both the frequent nightmare and frequent bad dream groups were classified into the frequent nightmare group. The remaining participants who did not meet either of the above criteria were classified in the control group.

Multivariate analysis of variance followed by univariate analyses of variance were used to assess group differences on dependent measures of well-being. As in Studies 2 and 3, the Pillais-Bartlett statistic was used because it is robust with respect to possible violations of normality and homogeneity of variance (Olson, 1976, p. 579). Three planned multivariate comparisons were made: (a) the nightmare group versus the bad dream group; (b) the nightmare group versus the control group; and (c) the bad dream group versus the control group.

We also wanted to determine whether the dimensions of repetition and negative affect in dreams had combined effects on subjects' overall level of well-being. Participants in the frequent nightmare group who reported recurrent nightmares or recurrent dreams over the past year were compared to frequent nightmare subjects who did not report any recent recurrent dreams.

Similarly, participants in the frequent bad dream group who had recurrent dreams over the past year were compared to frequent bad dream subjects who did not report any recent recurrent dreams. Multivariate analysis of variance followed by univariate analyses of variance were used to assess group differences on dependent measures of well-being.

Results

One hundred and forty-eight subjects attended group information meetings, and a total of 103 subjects completed the study. Fourteen subjects were excluded from the first part of the study (prevalence of nightmares and bad dreams) as they gave non-quantitative responses on either the one-month or twelve-month retrospective estimates for nightmares and bad dreams (e.g., answering "many" or "over 20"). Data from another nine subjects who reported very high frequencies of nightmares and/or bad dreams and whose nightmare and/or bad dream scores were more than three standard deviations away from mean were also excluded from the first part of the study. This reduced the total number of subjects for which nightmare and bad dream frequency data were analyzed from 103 to 80 (63 women, 17 men, mean age = 20.7 years). Since no significant differences in either nightmare or bad dream frequency were found between male and female subjects on retrospective or dream log measures, their data were combined for all analyses (Appendix V).

Prevalence of Nightmares and Bad Dreams

Nightmare and bad dream data from both the one-year and one-month retrospective measures, as well as from the dream logs were first analyzed for all participants irrespective of group membership.

The mean number of nightmares reported per year on the 12-month retrospective measure was 3.43 (*SD* = 5.99). When asked how many nightmares they had experienced during the previous month (1-month retrospective report), 31.3% of the participants reported one or more nightmares. The mean number of nightmares reported for the previous month was .39 (*SD* = .66). Multiplying by twelve gives an estimated annual mean nightmare frequency of 4.68. This estimate is 36% higher than the estimate obtained by the 12-month retrospective report.

Thirty-five of the 80 participants (43.8%) reported having had at least one nightmare over the four weeks covered by the dream log. The mean number of nightmares reported during this period was .77 (*SD* = 1.07). This converts to an annual mean nightmare frequency of 9.24, which is 169% higher than the one-year retrospective mean estimate of 3.43, and 97% higher than the one-month retrospective mean nightmare estimate of 4.68.

The mean number of bad dreams reported per year on the 12-month retrospective measure was 16.03 (*SD* = 17.56). Fifty-three participants (66.3%) reported at least one bad dream in the previous month. The mean number of bad dreams reported on the one-month retrospective measure was 1.66 (*SD* = 2.01). Multiplying by twelve gives an estimated annual mean bad dream frequency of 19.92, which is 24% higher than the estimate obtained by the 12-month retrospective report.

Sixty-three participants (78.8%) reported in their dream logs having had at least one bad dream. The mean number of bad dreams reported during this period was 2.36 (*SD* = 2.34). This converts to an annual mean bad dream frequency of 28.32, which is 77% higher than the one-year retrospective mean

estimate of 16.03, and 42% higher than the one-month mean bad dream estimate of 19.92.

Combining the nightmare and bad dream frequency data gives an estimated annual mean nightmare + bad dream frequency of 19.46 and 24.60 for the twelve-month and one-month retrospective methods, respectively. Sixty-five participants (81.3%) reported at least one nightmare or bad dream during the 4-week period covered by the dream logs. Combining the mean number of nightmares and bad dreams reported on the logs gives an estimated mean annual frequency of 37.68. This estimate is 93% and 53% higher, respectively, than the twelve-month and one-month retrospective estimates.

Figure 2 shows a comparison of the results obtained in this study on the estimated mean number of nightmares and bad dreams per year for the three reporting methods with the results reported by Wood & Bootzin (1990). As can be seen from this graph, the degree of underestimation for nightmares and bad dreams in this study is consistent with the underestimation pattern found by Wood & Bootzin (1990).

The distribution of retrospective nightmare and bad dream frequency estimates, as well as the dream log data, were all positively skewed. In order to normalize the distribution, a constant of .5 was added to all data points and a square root transformation was performed on the retrospective and dream log data.

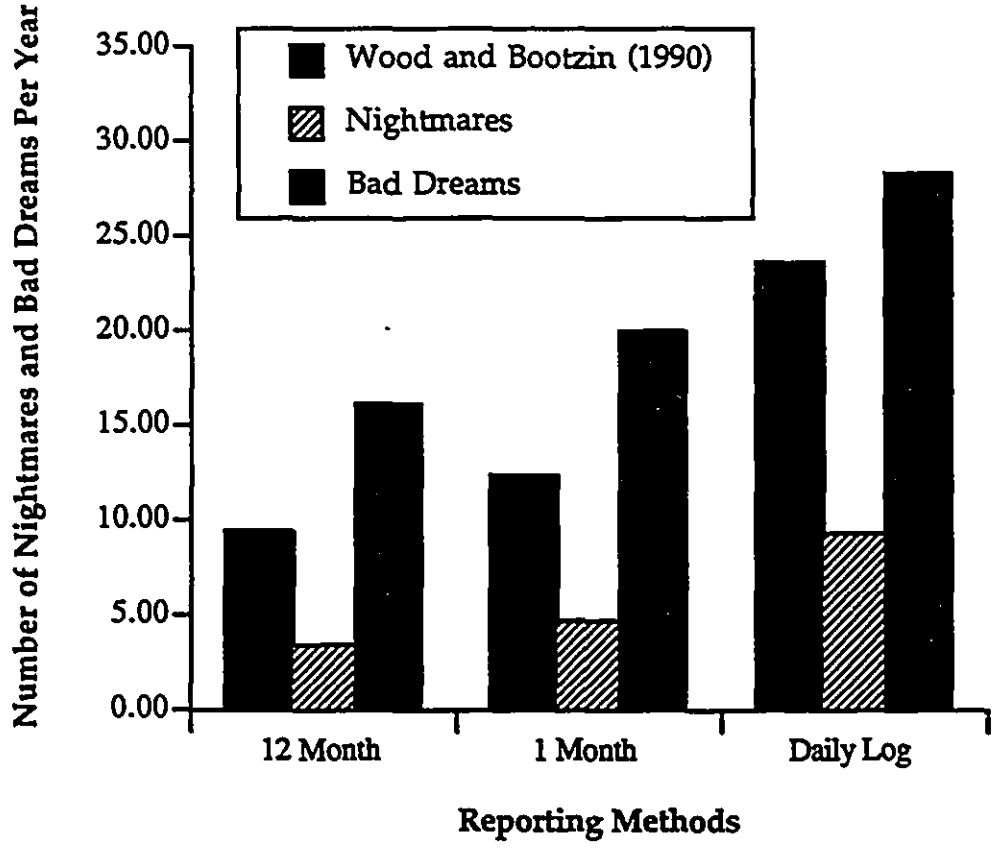
A one-way analysis of variance showed that the three reporting methods for mean frequency of nightmares were significantly different ($F(2, 158) = 9.79$, $p<.001$). Student Newman-Keuls Post Hoc comparisons showed that significantly fewer nightmares were reported by the two retrospective methods

than by the daily dream log (ps. <.05). There were no significant differences between the two retrospective measures (p>.05).

A one-way analysis of variance showed that the three reporting methods for mean frequency of bad dreams were significantly different ($F(2, 158) = 10.58$, p<.001). Student Newman-Keuls Post Hoc comparisons showed that significantly fewer bad dreams were reported by the two retrospective methods than by the daily dream log (ps <.05). There were no significant differences between the two retrospective measures (p>.05).

Figure 2.

Estimated mean number of nightmares per year as related to reporting method.



Psychological Well-Being

Based on group classification criteria, there were 22 (3 male, 19 female) participants in the nightmare group, 42 (10 male, 32 female) in the bad dream group, and 29 (5 male, 24 female) in the control group. Of the remaining 10 participants who took part in the study, seven were excluded due to inadequate responses on the retrospective measures and three were excluded for not having completed one or more measures of psychological well-being.

The mean scores on each of the well-being measures for the three comparison groups appear in Table 15. The frequent nightmare group had the highest (least adaptive) mean scores, followed by the frequent bad dream group and then the control group on the seven measures of well-being.

A one-way MANOVA showed that the frequent nightmare group had a significantly lower overall level of well-being than the frequent bad dream group ($F(7,56) = 2.55$, $p<.05$). Statistically significant univariate differences were found on measures of state anxiety ($F(1,62) = 4.92$, $p<.05$) and neuroticism ($F(1, 62) = 7.92$, $p<.01$).

The frequent nightmare group and the control group were significantly different on the multivariate measure of well-being, ($F(7, 43) = 5.41$, $p<.001$). Statistically significant univariate differences exist on well-being measures of neuroticism ($F(1, 49) = 29.86$, $p<.001$), state anxiety ($F(1,49) = 7.50$, $p<.01$), trait anxiety ($F(1,49) = 9.27$, $p<.005$), depression ($F(1,49) = 19.70$, $p<.001$), general symptomatology ($F(1, 49) = 18.72$, $p<.001$) and personal adjustment ($F(1, 49) = 5.77$, $p<.05$).

Table 15.

Psychological Well-Being Scores for the Frequent Nightmare, Frequent Bad Dream, and Control Groups.

Well-being measure	NM (n = 22)	BD (n = 42)	CON (n = 29)
Neuroticism: EPI[a]			
M	71.8	54.3	38.5
SD	20.4	25.2	22.4
State Anxiety: STAI[b]			
M	58.8	51.9	51.2
SD	11.7	11.7	8.2
Trait Anxiety: STAI[b]			
M	56.8	53.4	49.4
SD	10.1	9.6	7.3
Depression: BDI[c]			
M	9.6	7.8	3.8
SD	6.3	7.0	2.8
General Symptom Index: SCL[b]			
M	63.8	63.0	55.7
SD	6.3	8.4	6.8
Life-Event Stress: PLEI[c]			
M	4.8	4.3	3.4
SD	2.9	3.3	2.6
Personal Adjustment: ACL[b]			
M	41.3	45.0	47.7
SD	10.9	10.8	8.1

Note. NM = nightmare group, BD = bad dream group, CON = control group.

[a]Percentile. [b]Standard Score. [c]Raw Score

A one-way MANOVA showed that the frequent bad dream group had a significantly lower overall level of well-being than the control group ($F(7,63) = 2.65$, $p < .05$). Statistically significant univariate differences were found on well-being measures of neuroticism ($F(1, 69) = 7.35$, $p < .01$), depression ($F(1,69) = 8.65$, $p < .005$) and general symptomatology ($F(1, 69) = 15.41$, $p < .001$). Differences on the measure of trait anxiety were marginally significant ($F(1, 69) = 3.66$, $p = .06$).

Nine of the 22 frequent nightmare subjects reported having had a recurrent dream over the past year. Their scores on measures of well-being were compared to the scores from the remaining thirteen frequent nightmare subjects. The mean scores on each of the well-being measures for the two comparison groups appear in Table 16.

A one-way MANOVA showed that the nightmare + recurrent dream group did not differ significantly from the nightmare only group on the multivariate measures of well-being, ($F(7,14) = 2.26$, $p > .05$).

Thirteen of the 42 subjects from the frequent bad dream group reported having had a recurrent dream over the past year. Their scores on measures of well-being were compared to the scores from the remaining 29 frequent bad dreams subjects. The mean scores on each of the well-being measures for the two comparison groups appear in Table 17.

A one-way MANOVA showed that the bad dream + recurrent dream group did not differ significantly from the bad dream only group in overall level of well-being, $F(7,34) = .55$, $p > .05$.

Table 16.

Psychological Well-Being Scores for the Frequent Nightmare + Recurrent Dream Group and the Frequent Nightmare Only Group.

Well-being measure	NM+RD (n = 9)	NM (n = 13)	*F* (1, 20)	*p*
Neuroticism: EPI[a]				
M	59.7	80.2	6.94	<.05
SD	25.3	10.7		
State Anxiety: STAI[b]				
M	51.7	63.7	7.34	<.05
SD	14.5	5.8		
Trait Anxiety: STAI[b]				
M	49.2	62.1	13.99	<.005
SD	9.5	6.7		
Depression: BDI[c]				
M	6.7	11.6	3.69	ns
SD	4.1	6.9		
General Symptom Index: SCL[b]				
M	59.7	66.5	8.48	<.01
SD	7.0	3.9		
Life-Event Stress: PLEI[c]				
M	3.2	5.9	5.45	<.05
SD	1.9	3.1		
Personal Adjustment: ACL[b]				
M	40.7	41.7	.05	ns
SD	14.4	8.4		

Note. NM+RD = frequent nightmare + recurrent dream group, NM = frequent nightmare only group.

[a]Percentile. [b]Standard Score. [c]Raw Score

Table 17.

Psychological Well-Being Scores for the Frequent Bad Dream + Recurrent Dream Group and the Frequent Bad Dream Only Group.

Well-being measure	BD+RD (n = 13)	BD (n = 29)	F(1,40)	p
Neuroticism: EPI[a]				
M	60.5	51.2	1.14	ns
SD	26.3	24.6		
State Anxiety: STAI[b]				
M	50.8	52.5	.19	ns
SD	11.2	12.1		
Trait Anxiety: STAI[b]				
M	55.5	52.6	.82	ns
SD	8.4	10.1		
Depression: BDI[c]				
M	9.2	7.2	.68	ns
SD	8.3	6.5		
General Symptom Index: SCL[b]				
M	63.7	62.7	.11	ns
SD	10.4	7.5		
Life-Event Stress: PLEI[c]				
M	4.8	4.1	.50	ns
SD	4.1	2.9		
Personal Adjustment: ACL[b]				
M	42.6	46.1	.95	ns
SD	13.8	9.2		

Note. BD+RD = frequent bad dream + recurrent dream group, BD = frequent bad dream only group.

[a]Percentile. [b]Standard Score. [c]Raw Score

Discussion

To summarize the findings of Study 5: 1) The estimated yearly frequency of nightmares and of bad dreams depended on the reporting method, with the daily dream log extrapolations resulting in the highest estimates and the 12-month retrospective report estimating the fewest number of nightmares and bad dreams; 2) The frequent nightmare group had lower scores on measures of psychological well-being than the frequent bad dream group, and both the frequent nightmare group and the frequent bad dream group had lower well-being scores than the control group; 3) no consistent evidence was found to suggest that the repetition (recurrent dreams) and negative affect (nightmares and bad dreams) dimensions combine to influence subjects' levels of well being. These findings are discussed in turn.

Prevalence

The results from the four-week daily dream logs indicate that there was a clear underestimation of both nightmares and bad dreams using retrospective measures. This supports and extends the findings of Wood and Bootzin (1990) that nightmares are more prevalent that was previously believed. The results from this study also suggest that bad dreams are even more prevalent than nightmares.

When the nightmare frequency data from our four-week dream log was pro-rated over 52 weeks, it was found to be 169% higher than the mean 12-month retrospective estimate, and 97% higher than the mean one-month retrospective estimate. The pro-rated estimates for the bad dreams reported in the dream logs were 77% and 42% higher than the mean 12-month and one-month retrospective estimates respectively. By comparison, Wood and

Bootzin's (1990) subjects reported a 150% higher mean nightmare frequency using a pro-rated two-week dream log than that obtained on a 12-month retrospective estimate, and a 91% increase over their mean one-month retrospective estimates. Our data indicate that though the frequency of both nightmares and bad dreams are underestimated by retrospective measures, this underestimation is greater for nightmare frequency than for bad dream frequency.

Wood and Bootzin (1990) defined a nightmare as "a dream that frightens the dreamer." Thus, their nightmare criterion included dreams that did or did not waken the sleeper, and would therefore be a combination of both nightmares and bad dreams as defined in this study. While confirming the general trend towards underestimation of nightmares established in Wood and Bootzin (1990), there was a greater overall prevalence of bad dreams in the present study (see Figure 2). This finding may be the result of several factors. First, Wood and Bootzin's (1990) subjects kept only a two-week dream log and consequently there was greater uncertainty in the extrapolation needed to obtain an annual frequency estimate. As a result, data may have been affected by the variability of dream patterns over this short interval. Second, it is possible that by defining nightmares as a frightening dream, subjects did not report disturbing dreams in which the main emotion was one other than fear. Results presented in study 4 suggest that approximately 30% of nightmares are described as containing emotions other than fear. Third, Wood and Bootzin's (1990) subjects took part in their study as part of an undergraduate course requirement. The participants in the present study were recruited as volunteers from a variety of classes and presumably represent individuals

particularly interested in dreams. Our subjects may have had especially good recall of vivid nightmares and bad dreams.

We noticed in this study that, when compared to estimates of dream recall frequency (e.g., how many dreams a person thinks he or she remembers on average per week), a greater number of dreams were reported in dream logs. A question on the McGill Sleep/Dream Questionnaire asks the subject to estimate the number of dreams recalled per week. The subjects' mean estimate frequency of dream recall per week was 5.95 (*SD*=3.85). The mean number of dreams reported in the 4-week logs was 27.81 (*SD*=14.69), or 6.95 dreams per week. This suggests that people's retrospective reports underestimate the number of dreams they usually remember, or that keeping a dream log increases dream recall, or both. Could the levels of underestimation for nightmare and bad dream frequencies have been an artifact of keeping a dream log? Several observations suggest that this was not the case. Whereas subjects' dream recall frequency from the 4-week log is approximately 15% higher than their retrospective estimates, the level of underestimation for nightmares and bad dreams was considerably higher. Though the dream logs in this study covered a period that was twice as long as in Wood and Bootzin (1990), the overall level of underestimation for nightmares and bad dreams was approximately 40% less than in Wood and Bootzin's (1990) study. Finally, preliminary analyses of the retrospective estimates of various types of pleasant dreams (i.e., lucid and flying dreams) collected in this study indicate that these estimates are fairly accurate when compared to the frequencies obtained on the dream logs.

Past studies have typically used the yearly retrospective report method to assess nightmare frequency and to classify subjects into frequent and non-

frequent nightmare groups. By comparison to the dream log measure, Figure 2 shows that the one-month retrospective estimate is closer to the daily dream log estimate than is the 12-month retrospective estimate. Therefore, if a retrospective estimation method must be used, the data indicate that the one-month retrospective method is a more accurate measure of nightmare frequency.

Well-Being

It was hypothesized that people with frequent nightmares would have a low level of psychological well-being, people with frequent bad dreams would have a higher level of well-being that the nightmare group, and controls who experience nightmares and bad dreams infrequently would have the highest psychological well-being. This prediction was supported. The frequent nightmare group, when compared to the frequent bad dream group, had significantly lower scores on multivariate measures of well-being and significantly higher (i.e., less adaptive) scores on univariate measures of state anxiety and neuroticism. Control subjects scored significantly higher on multivariate measures of well-being than either of the two other groups, had significantly lower (i.e., more adaptive) scores than the frequent nightmare group on all univariate measures of well-being except for life-events stress, and had significantly lower scores than the frequent bad dream group on univariate measures of neuroticism, depression, and general symptomatology. Although group comparisons on some univariate measures were not significant, the differences were in the predicted direction. It should also be noted that subjects who served as controls were not people who never experienced nightmares or bad dreams. Rather, they were subjects who did not meet inclusion criteria for

either the frequent nightmare group or frequent bad dream group. Twenty-two of the 29 control subjects (76%) reported having the occasional nightmare or bad dream on the McGill Sleep/Dream Questionnaire and eight (26%) reported at least one nightmare or bad dream on the dream logs. Thus, the controls are best described as non-frequent nightmare and bad dream subjects.

Life-event stress was the only measure of well-being that was nonsignificant across all group comparisons. This finding is consistent with the data from Dunn and Barrett (1988), who found no significant differences between the scores of frequent and nonfrequent nightmare subjects on the Revised Life Experiences Survey.

Study 4 proposed that people with frequent nightmares are at one end of a dimension of negative dream affect and that people reporting frequent bad dreams occupy a middle place on this dimension. The results from this study support the idea that the dimension of negative dream affect is associated to scores on self-reported measures of well-being. The data indicate that people who experience bad dreams show a deficit on measures of well-being, but not to the extent exhibited by those with nightmares. These results form a pattern which suggests that scores on measures of well-being are inversely related to the position of a dreaming experience on the dimension of negative dream affect.

This study did not find any consistent evidence to suggest that the dimension of repetition and negative affect have combined effects on people's well-being. Subjects reporting frequent bad dreams and recurrent dreams tended to have lower scores on measures of well-being than people with frequent bad dreams only. However, people reporting recurrent dreams and frequent nightmares tended to have higher scores on measures of well-being

when compared to people with only frequent nightmares. The generalizability of these nonsignificant trends is also limited by the small sample sizes in the comparison groups. This is especially true for the two nightmare groups (n= 9 for NM+RD group ; n = 13 for NM group).

The length of time over which people have had frequent nightmares, frequent bad dreams, or recurrent dreams may be another variable that is related to well-being. We know that our subjects have had their frequent nightmares, frequent bad dreams, or recurrent dreams over a minimum of a one year period prior to taking part in this study. However, the study did not assess how many of the subjects in the frequent nightmare group may have had a life-long history of nightmares and how many first experienced frequent nightmares only in the past few years. The same is true for subjects in the frequent bad dream group. The possible interaction effects between the period of time over which people have had frequent nightmares, frequent bad dreams, recurrent dreams and measures of well-being remains unknown.

Studies have shown that nightmare frequency is only moderately related to the waking suffering or distress associated with nightmares (Belicki, 1985, 1992b; Wood & Bootzin, 1990). Moreover, Belicki (1992a) reported that subjects' ratings of nightmare distress, but not nightmare frequency, was significantly related to their scores on both the Symptom Checklist 90 and the Beck Depression Inventory. These studies indicate that subjects' waking levels of distress over their nightmares is an important variable that can influence (or mediate) the relation between nightmare frequency and scores on measures of psychopathology. It is possible that nightmare distress was higher in the NM+RD group than in the NM group. The issue of nightmare distress versus nightmare frequency has only been studied in recent years. Similarly, this

study was the first to separately assess the relation between nightmares, bad dreams, and measures of well being, and to explore the interaction between the dimension of negative dream content and recurrent dreams. An understanding of the interaction effects of nightmare frequency, nightmare distress, and recurrent dreams on measures of psychopathology requires further study.

It may also be the case that the occurrence of frequent nightmares is more strongly related to personality traits as described by Hartmann (1984) than to current life-problems or concerns *per se*. Bad dreams may be more similar to recurrent dreams than are nightmares in that bad dreams may not reflect personality traits (e.g., "thin boundaries") as much as they do currently unresolved psychological conflicts or concerns.

The data presented in this study have important implications for research on the relation between nightmares and measures of psychopathology. As was discussed in Study 4, studies that define nightmares in terms of a waking criterion could classify "bad dream only" subjects as control subjects. In contrast, nightmare studies that do not employ a waking criterion could place these very same subjects in the nightmare (experimental) group. This study shows that people who report frequent bad dreams have scores on measures of well-being that fall between those of frequent nightmare and control subjects. Consequently, placing subjects with frequent bad dreams in a nightmare group could decrease that group's mean scores on dependent measures of psychopathology. Classifying "bad dream only" subjects as control subjects may result in an increase of that group's scores on such measures. This possibility may account for some of the inconsistent findings reported in the literature on the relation between "nightmare" frequency and measures of psychopathology.

Study 6:
Lucid Dreaming as a Treatment for Recurrent Nightmares

Introduction

Approximately 5% to 7% of adults report a current problem with nightmares (Bixler, Kales, Soldatos, Kales, & Healy 1979; Klink & Quan, 1987). More recent studies indicate that the prevalence of nightmares may be considerably higher (Wood & Bootzin, 1990; Salvio et al., 1992). Though the prevalence of recurrent nightmares has not been specifically investigated, their occurrence has been documented in a variety of individuals including otherwise normal clients (e.g., Geer & Silverman, 1967; Eccles, Wilde, & Marshall, 1988), victims of sexual abuse (e.g., Cuddy & Belicki, 1992; Garfield, 1987), psychosomatic patients (e.g., Levitan, 1980, 1981), and war veterans (e.g., Eichelman, 1985; Schindler, 1980). Recurrent nightmares are also considered as a diagnostic sign of post-traumatic stress disorder (DSM IV, 1994; Blank, 1994). In addition, many people who report frequent nightmares also report recurrent nightmares. For example, recurrent nightmares were reported by 54 of the 64 frequent nightmare subjects (i.e., those who experienced one or more nightmares per week) studied by Feldman and Hersen (1977) and by 17 of the 32 self-referred adult nightmare sufferers in Miller and DiPilato's (1983) treatment study.

Several authors have suggested that lucid dreaming may be clinically useful, particularly in the treatment of nightmares (Arnold-Forster, 1921; LaBerge, 1985; Saint-Denys, 1982; Tholey, 1988). Lucid dreams occur when a person becomes aware that he or she is dreaming while still in the dream state. Some lucid dreamers report recall of events from their waking life (i.e., their memory remains intact), the ability to reason, and control of their dream bodies

as desired. Furthermore, some lucid dreamers can change the dream scenery at will. Lucid dreaming is a learnable skill (Purcell, Mullington, Moffitt, Hoffmann, & Pigeau, 1986; Zadra, Donderi, & Pihl, 1992), and it is now known that lucid dreams occur during unequivocal REM sleep (e.g., LaBerge, Levitan, & Dement, 1986; Schatzman, Worsley, & Fenwick, 1988).

The use of lucid dreaming in the treatment of nightmares has been previously reported (Brylowski, 1990; Halliday, 1982, 1988; Tholey, 1988). However, the two case studies presented by Halliday (1982, 1988) do not contain follow-up data, and none of the three case histories presented by Tholey (1988) contains baseline data and only one contains follow-up data. In this paper, we suggest mechanisms through which lucid dreaming may operate to reduce the frequency and intensity of nightmares, describe how lucid dreaming was used to treat nightmares, and provide baseline and follow-up data for five case studies.

Lucid dreaming may operate through a number of mechanisms to achieve positive therapeutic outcomes. In his review of psychological therapies of nightmares, Halliday (1987) suggested four distress-producing factors for nightmares: their believed importance, their dreadful and anxiety producing story line, their perceived realism, and their uncontrollability. By becoming lucid in one's nightmare, an individual may directly affect three of these four factors. Specifically, achieving lucidity within a nightmare can allow a client to: alter the anxiety producing story line by consciously modifying the content of the nightmare, realize that the experience is a dream and not a real event taking place in the physical world, and choose the manner with which to respond to and interact with the dream imagery, thus reducing the

nightmare's uncontrollability. Becoming aware during a nightmare that the experience "is only a dream" may also reduce its perceived importance.

LaBerge and Rheingold (1990) have suggested that expectations can play an important role in dream construction, so that what a person expects to happen next in a dream often influences or determines the manner in which the dream will unfold. It is possible that individuals who suffer from recurrent nightmares may be locked into a fixed way of responding to the nightmare's imagery and of anticipating what will happen next. This in turn leads the dreamer to re-experience the same threatening imagery. Lucid dreaming may provide recurrent nightmare sufferers with new responses and expectations concerning the nightmare's progression, thereby altering the repetitive nature of such nightmares.

Treatment

Subjects are first trained in progressive muscle relaxation (Bernstein & Borkovec, 1973). Once subjects are relaxed, they rehearse (i.e., imagine) their recurrent dream in as much detail as possible while describing it to the therapist. The therapist guides this rehearsal, for example, asking about various elements in the dream or bringing particular details to the subject's attention. The subject then selects a part of the recurrent dream which is emotionally and/or visually salient, and during which he or she can imagine carrying out a particular task. The subject imagines performing this task in the dream while saying that he or she is dreaming. Later, during an actual dream, this action will cue that the experience is a dream. Typically, this task is as simple as looking at one's hands. Once the relaxation and imagery exercises have been completed, subjects are instructed to practice them at home, especially just before going to sleep.

The rationale for this treatment is as follows: by repeatedly rehearsing the recurrent dream together with a task which is intentionally carried out at a preselected salient point in the dream, the subject will remember to carry out the task when the recurrent dream occurs. The task serves as a pre-rehearsed cue to remind the subject that the experience is a dream. At this point, the subject is dreaming lucidly and can determine a different course for the dream content.

The therapist consults with the subject to find an appropriate way to modify the recurrent nightmare once lucidity is achieved. Various approaches include Garfield's (1974) suggestion to "confront and conquer" the feared scene, Halliday's (1982, 1988) suggestion to alter some small aspect of the dream, and Tholey's (1988) suggestion to have the dream ego engage in conciliatory dialogue with hostile dream figures.

Case Reports

Three of the five subjects were referred by colleagues familiar with the author's research interests. Two subjects were participants in a dream study who had expressed a desire to receive treatment for their nightmares. All met DSM-III-R criteria for the diagnosis of dream anxiety disorder (nightmare disorder). None of the subjects had recieved prior treatment for their nightmares nor had any been in psychotherapy. The nature and limitations of the treatment were made clear to the subjects, and all provided written consent. The studies were supervised by Dr. R. O. Pihl, a licensed clinical psychologist and professor of psychology at McGill University. The subjects were instructed to keep a written record of any nightmares they had, as well as of dreams that they felt resembled any aspect of their nightmares, for a minimum of five weeks following the treatment.

Case 1. G.V. was a 52-year-old Italian homemaker who came to Canada with her husband in 1957. G.V. reported experiencing the same nightmare for over twenty years with a frequency ranging from once a week to once every several months. As a young child, during the second world war, she had witnessed several bombings. The nightmare consisted of being in her home in Canada when loud sirens were heard. The subject would begin to panic and to look for her two children who, in the dream, were much younger than in waking life. Finding herself in the kitchen, she would look through the window and see a bomber that appeared to be headed straight for her home. She would then hide beside the window while calling frantically for her children. The plane would stop by the kitchen window and the pilot would peer into the home looking for her and her children, presumably to kill them. At this point in her dream, G.V. would wake up, sometimes in a cold sweat and frequently with heart palpitations.

During the guided imagery, a target point in the dream was selected when G.V. was to look at her hands. This was to occur at the moment in which the pilot looked into the window, since this was the most emotionally salient part of her dream. A discussion was then undertaken to determine what she would like to do in her dream if she became lucid. G.V. decided that she wanted to confront the pilot and command the scenery to disappear. Because of the strength of G.V.'s religious convictions, she suggested that she use the phrase "In the name of God, I command you to go away."

This subject was already familiar with lucid dreaming, and reported having had such dreams in the past. She explained that she would at times become aware that she was dreaming either when she flew in her dreams or

when she found herself talking to a dream character whom she knew to be deceased.

Four weeks after the treatment, the subject twice experienced her recurrent nightmare. On the first occasion, the nightmare was experienced as usual. On the second occasion, G.V. successfully remembered to look at her hands and became lucid. When she said "In the name of God I command you to go away," the dream scenery shifted and she found herself in a church that she had attended in Italy. She reported that a powerful feeling of both joy and peace accompanied the change in dream content. She began to examine various details in the "dream church" and woke up shortly thereafter.

This subject's progress was followed at six-month intervals over a two year period. During this time, she did not have a recurrence of her nightmare, though three unrelated anxiety dreams were reported. In addition, she reported an increase in the frequency of her lucid dreams which she described as being highly pleasurable.

One of her anxiety dreams is noteworthy in that a particular element of the treatment (i.e., looking at her hands) re-occurred, albeit in a different manner. In this dream, her brother's feet had somehow become stuck on a railway track. A train was quickly approaching and both the subject and the dream character became extremely agitated. When the train was no more than a 100 meters away, the subject raised her hands and yelled "Stop!" At that moment, the train came to a halt and thus was prevented from hitting her brother. At no point in this dream did she realize that she was dreaming. G.V. explained that she noticed her hands while trying to rescue her brother, and that something made her realize that her hands contained some sort of magic or power.

At a four-year follow-up the subject reported no further nightmares.

Case 2. P.A. was a 43 year-old female. She had previously worked as a clerk in a small store but was forced to quit her job due to major depression. The depression resulted from the suicide of her 21 year-old son, whose body she had found in the basement of her home. The depression had persisted for two and a half years, and the subject refused to take any medication for her condition. P.A. also harbored intense feelings of guilt over not having "felt" that her son's suicide was about to happen.

Over a seven to eight month period following this tragedy, P.A. experienced frequent nightmares with varying content. These nightmares typically involved situations related to the suicide, such as finding her son's body or having the paramedics arrive. After eight months, a particular nightmare began to recur to the exclusion of her other nightmares. The nightmare was reported as occurring once a week on average, and was sufficiently anxiety provoking to cause her to awaken. At the time of treatment, the nightmare had been occurring for close to three years.

The nightmare was described as follows: the subject is in the living room of her home when she notices her son walking by on the sidewalk. She begins to yell his name and pound on the windows, but he does not appear to notice and continues walking. She then runs out into the street screaming his name, but her son is nowhere in sight. At this point, the subject wakes up.

P.A. had never had a lucid dream, and was intrigued by the possibility of becoming lucid in her nightmare. The concept of dream lucidity was explained to her in greater detail. The treatment procedure used with this subject was otherwise identical to the treatment described in the previous case study.

During the guided imagery exercise, P.A. recalled having sometimes seen a mansion in her dreams which was located on the right side of the street (near her own home) but which did not really exist. When asked if she thought anyone lived in the mansion, the client answered that she didn't know but that maybe that was where her son was going. The suggestion was made that she might want to go into this house and find out who lived there. P.A. agreed to this suggestion, and a target point in the dream was selected for her to become lucid. P.A. was instructed to pay attention to her hands and to look at them when she found herself pounding on the windows in her dream.

During the first week that followed the session, P.A. experienced her recurrent nightmare once but did not become lucid. During the second week, she reported having had the nightmare on two consecutive nights. On neither occasion did she become lucid. An interesting development occurred, however, on the second night. After P.A. had run out onto the street looking for her son, she noticed the mansion and remembered that she was supposed to see who lived there. She went up to the house and rang the doorbell. A beautiful young lady wearing a white gown answered the door. P.A. asked if her son was inside and the lady took her by the hand and led her to a room. At that moment, the lady spoke for the first time and said simply, "Your son is in here." P.A. opened the door and found the room to be filled with white flowers. P.A. was deeply moved and woke up shortly thereafter. It is interesting to note that P.A. never actually became lucid in her dream. What she did do, however, was remember that it was important for her to go to the mansion. No other nightmares were reported over the 3 weeks that followed.

P.A. was contacted for a six-month follow-up. She reported that since the "white flowers" dream, she had not experienced any type of nightmare,

nor had she ever become lucid in one of her dreams. Though P.A. was still depressed, her condition was less severe than it had been. She had become more active, participating in some social events, and had began to work in a small business that she had helped establish. A one-year follow-up showed that her depression had lessened, and that she was still free of nightmares.

The treatment reported in the previous two cases is eclectic, and contains approaches found in several other treatments. Although this treatment does not involve the standard procedure of formally constructing hierarchies of disturbing dream images, it nevertheless shares some similarities with desensitization, and other behavioral procedures. Two controlled studies have demonstrated the therapeutic effectiveness of such approaches in treating nightmares (Miller & Dipilato, 1983; Cellucci & Lawrence, 1978). This technique also bears some resemblance to what Halliday (1987) has termed story line alteration procedures, in which an attempt is made to change some aspect of the nightmare content, typically through waking imagery exercises. This approach has also been shown to be effective (Kellner, Neidhardt, Krakow, & Pathak, 1992; Neidhardt, Krakow, Kellner, & Pathak, 1992).

Given the findings described above, we cannot say which of the elements (or combinations) of our technique were most useful in alleviating the nightmares. To address this issue, the efficacy of lucid dream induction alone was assessed in three case studies, which are presented below. Progressive muscle relaxation was not used with these subjects, while guided imagery was used only insofar that they were asked to practice visualizing themselves becoming lucid in their nightmares and carrying out a prescribed task.

Case 3. N.D. was a 35-year old divorced woman who worked as a high-school teacher and as a self-employed artist. She presented with a complaint of life-

long nightmares. Since approximately the age of 16, her nightmares consisted primarily of dreams in which she was being chased by a mob who killed and mutilated everyone they caught. The client herself had never been caught by her pursuers and would wake-up while hiding (e.g., behind buildings, barrels, or in wooded areas) with the mob closing in on her. The nightmares were reported as occurring from several times a week to once every two to three weeks. Because N.D. would sometimes re-experience or "continue" her nightmare when returning to sleep, she would often avoid falling back to sleep after awakening from a nightmare.

Though N.D. had never had a lucid dream, she was familiar with the concept and had read several books on dreams and nightmares. The most salient part of her nightmare was described as when she would be hiding, often with several mutilated corpses nearby. She was instructed to associate her hiding with the fact that she was dreaming and to imagine herself clenching her fists. N.D. stated that she did not want to attack or kill her pursuers but rather try to talk to or confront one of her pursuers. Several strategies for interacting with these characters were discussed, and N.D. decided that she would think about it further on her own that evening.

That very same night the client had her nightmare but awoke early in the dream. The nightmare reoccurred the following week. In this dream, she was hiding when she heard one of the pursuers approaching. Though she did not realize that she was dreaming, she stepped out and yelled, "I'm not going to hide anymore! Who am I?" Her pursuer replied in an enthusiastic tone that she was the person they had been looking for all this time and went to explain the geographical importance of the area . While he was talking, N.D. heard someone yell "Cut!" Looking around her she realized that she was on a

large movie set, complete with cameras and lighting equipment. Her pursuer walked over to her, gave her a hug, and said, "Good job." N.D. was somewhat confused and the movie director came over and talked to her about her acting, but she could not remember the details upon awakening. During the next four weeks, the client did not have a nightmare but reported one brief lucid dream.

A six-month and 1-year follow-up showed that the client's nightmares had decreased in frequency, occurring once every five to six weeks. Moreover, the nightmares were described as being much less intense and frightening than they had been before the intervention, and they no longer involved dead or mutilated bodies. In addition, N.D. reported that she was no longer afraid of returning to sleep after awakening from a nightmare.

Case 4. R.C. was a 22 year-old undergraduate who had a recurrent nightmare with a frequency ranging from once a month to several times per week. R.C. had begun to experience her nightmare sixteen months prior to treatment, following the accidental death of her uncle. In this nightmare, R.C. arrives home from school and notices an ambulance in the driveway. She becomes extremely anxious and quickly enters her house. In her house there is much commotion: people she does not know talking loudly and giving orders, her mother crying, and paramedics carrying a body on a stretcher covered by a white blanket. Oddly, one of the living room walls is dark red in color. She panics, asking people what has occurred, and someone mentions that her uncle is dead. She exclaims, "It can't be! It can't be!" and runs upstairs. There she discovers other unknown characters who are passing various documents back and forth. At that moment, R.C. runs back downstairs to see the body and talk to her mother, whereupon she awakens.

R.C. had occasionally experienced lucid dreams. She found the idea of becoming lucid within her nightmare interesting but was unsure whether she would succeed, as her lucid dreams occurred infrequently. Two case studies where dream lucidity had proved to be of help in reducing nightmare distress were discussed.

After she described her nightmare, R.C. was told to form an association between the red living room wall and the fact that she was dreaming. R.C. was also told to think of this association at night before going to sleep. If she became lucid during her nightmare, R.C. was to close her eyes and imagine the living room wall being white (its true color) and to tell herself that the wall would be its usual color once she re-opened her eyes in her dream.

One and a half weeks after the session, R.C. had her nightmare and became lucid as soon as she saw the red wall. She remembered that she was to try to change the wall's color but awakened after having stared at the wall for several seconds. Three weeks later, she again reported having become lucid during her nightmare. R.C. successfully closed her eyes and imagined the wall being white. Once she re-opened her eyes she saw that the living room wall had in fact changed from deep red to white. At that point, she decided to leave the house and told one of the paramedics "He's not really dead. It's just a dream.", to which he replied "I guess we should all get on with our lives then." Once outside, R.C. noticed that the ambulance was no longer there. She began to walk down her street and admired various cloud formations in the sky. R.C. did not awaken during this dream, and only recalled it in the morning.

R.C. stated that she was surprised by the fact that she was able to change this anxiety dream into such a pleasant one, especially the part with the clouds.

She also reported that the experience had increased her self-confidence, and that she felt she had more control over her future than she had initially believed.

R.C. was contacted for a six-month and one-year follow-up. On both occasions she reported neither a recurrence of her nightmare, nor any new anxiety dreams. The frequency with which she had lucid dreams, however, had not increased.

Case 5. A.R. was a 42-year-old married construction worker. He complained of nightmares in which he would lose control of his car while driving down steep mountain roads. Invariably, he would awaken as his car was about to crash or fall over a precipice. A.R. had never driven on mountain roads in actual life nor had he ever been involved in a serious car accident. The nightmares were not recurrent in that the specific content of the nightmare would vary from one time to the next. For instance, he would lose control of his car for a variety of reasons including brake failure, having an incoming car in his lane, coming to an unexpected hairpin turn, or while trying to avoid obstacles such as small animals or debris. A.R. reported that the nightmares had begun in his mid-twenties and that they occurred from two times a week to once every two to three months.

A.R. had never had a lucid dream but recalled having had numerous flying dreams as a child. He decided that if he became lucid during his nightmare, he would make his car fly over the mountains. A.R. was instructed to form an association between driving in mountainous terrain and the fact that he was dreaming and to imagine himself saying the work "Fly!" while driving down the mountains.

Two weeks after the session, A.R. had a dream in which he was speeding down a long and twisty road when he had to avoid a large rock that had fallen onto his lane. Unlike his usual nightmares however, he was able to maneuver his car around the obstacle without loosing control of his vehicle. This nonlucid dream did not awaken him, and was only recalled in the morning. A few days later, A.R. dreamt that he was driving relatively slowly *up* a steep mountain road and became aware that he was dreaming. He then accelerated and when he reached the top of the mountain willfully drove his car off a cliff with the intention of making it fly. The car did not gain much altitude and soon began to fall towards a large body of water. However, A.R. reported that he wasn't frightened and that the car dropped slowly and in a pleasant way. A.R. also told himself that since this was a dream, there was no reason why his car could not float on the water. Once the car hit the water, A.R. pressed down on the accelerator and the car began to travel much like speed-boat gaining tremendous speed. A.R. noted that this dream had been exhilarating. In the 4 weeks that followed this dream, the client had two lucid dreams, an uneventful dream in which he was driving in the countryside, and no nightmares or anxiety dreams.

Six months after the initial treatment session, A.R. was still free of nightmares and continued to have an occasional lucid dream. These gains were maintained at 1-year and 18-month follow-up.

Discussion

The alleviation of recurrent nightmares in these five cases parallels the results reported by other authors who have used training in lucid dreaming to treat nightmares (Brylowski, 1990; Tholey, 1988; Halliday, 1982, 1988). Our results support the idea that treatments based on lucid dream induction can be of therapeutic value. Even in the two cases (i.e., P.A. and N.D.) where dream lucidity was not achieved, the subjects clearly incorporated elements from the lucidity rehearsal exercises into their nightmares with positive results.

Several features of the treatment are noteworthy. Lucid dreaming allows the subject to interact with the nightmare in a creative fashion *while in the dream*. As discussed by Tholey (1988), the ability to become lucid in one's anxiety dreams can lead to important insights for both the client and the therapist. Though the treatment was originally designed for recurrent nightmares, cases 3 and 4 suggest that it can be used successfully in the treatment of nightmares with differing contents across occurrences. Finally, as was reported by R.C., dream lucidity can give rise to positive psychological elements which carry over into waking life. Similar effects have been reported by Tholey (1988) and Brylowski (1990). Galvin (1990) also suggested that by turning nightmare sufferers into lucid dreamers, the sufferers may develop "a more coherent psychological sense of self through the experience of a degree of mastery in the dream state. . ." (p. 78).

Based on these and other case studies, it remains unclear whether the principal factor responsible for the alleviation of nightmares is lucidity itself, or the ability to alter some aspect of the dream. In the cases of P.A. and N.D., remembering to perform a certain action in their nightmare resulted in a positive outcome. Though neither of them became lucid during their

nightmare, elements from the training in lucid dreaming were clearly incorporated into the nightmare. One of the dreams reported by G.V. raises a similar point. In this non-lucid dream, G.V. felt that her hands contained some sort of magic or power, and successfully used this power to stop a train from hitting her brother. Conversely, both Halliday (1988) and Zadra (1990) have reported case studies in which lucidity without the element of control actually worsened the nightmare. Based on these cases, we suggest that a crucial aspect in the treatment of recurrent nightmares is the dreamer's ability to alter some detail in the otherwise repetitive dream. The client's ability to affect the nightmare's uncontrollability, either through new responses or altered expectations during the dream, may represent a key element in the elimination of nightmares. This reasoning agrees with Halliday's (1988) suggestion that such case studies "may imply that therapy should sometimes aim for control rather than just lucidity *per se*." However, given the limited number of case studies that have appeared in the literature to date, an adequate understanding of the relative importance of dream lucidity versus dream control requires further investigation.

Although case studies can provide some information, what is clearly required are controlled treatment studies in which the therapeutic benefits of treatment elements can be separately evaluated. Four studies have demonstrated the effectiveness of cognitive-behavioral interventions such as relaxation, desensitization, and imagery rehearsal in the treatment of nightmares (Cellucci & Lawrence, 1978; Kellner et al., 1992; Miller & Dipilato, 1983; Neidhardt et al., 1992). However, in addition to data on nightmare frequency, it would be useful for future studies to evaluate pre- to post-treatment changes in the content of nightmares and related dreams. Such data

may help clarify differential effects of these various treatment approaches. For instance, it is possible that these approaches alter different aspects of nightmare content such as the setting, emotional intensity, time of awakening, or the dreamer's response to the dream content. Miller and Dipilato (1983) noted that some of their subjects reported a decrease in the frequency of their nightmares subsequent to treatment, but when the nightmares did occur, they were experienced as being more intense than prior to treatment. In addition, the authors noted that some of their successful clients reported dreams with content similar to that of their old nightmares, but were no longer calling such dreams "nightmares." It is possible that some treatments alter client's conscious attitudes towards their nightmares rather than nightmare content *per se*. Objective dream content scales have been used successfully in the study of recurrent dreams and their relation to psychological well-being (Brown & Donderi, 1986; Studies 2 and 3), and could be particularly useful in evaluating differential treatment effects.

Finally, as noted by Kellner et al. (1992), non-specific factors such as disclosure, placebo effects, and exposure to the nightmares in the waking state may contribute to observed reductions in nightmare frequency and associated distress. Furthermore, there is some evidence to indicate that simply recording one's nightmares can lead to a decrease in nightmare frequency (Neidhardt et al., 1992). The relative importance of such factors and their mode of action in decreasing the frequency of nightmares remains unknown.

Summary and Conclusions

This thesis described two dimensions of dream content, repetition and negative affect. It then investigated the relationship between these two dimensions and both objective measures of dream content and self-reported measures of well-being. Study 1 presented the results from the first-ever content analysis of childhood and adult recurrent dreams. The findings indicated that the content of recurrent dreams changes with age and suggested that the dream symbols or metaphors believed to depict current problems or concerns that underlie recurrent dreams also change with age. Study 2 replicated several of Brown and Donderi's (1986) findings in a younger adult population by showing that recurrent dreamers scored consistently lower on measures of well-being than non-recurrent dreamers. Specifically, recurrent dreamers reported higher levels of neuroticism, anxiety, depression, somatic symptomatology, life-events stress and lower levels of personal adjustment. This study also replicated Brown and Donderi's (1986) finding that the dreams of recurrent dreamers contain significantly more negative dream content than those of non-recurrent dreamers. For example, the dreams of the recurrent dream group contained greater proportions of anxiety, hostility, failure, and misfortunes. A past-recurrent dream group was also included in Study 2. This group was composed of individuals who had experienced a recurrent dream in early childhood, but for whom the dream had ceased to recur between the approximate ages of 10 and 12. Participants in this group had not experienced any other recurrent dreams since then. The results showed that these past-recurrent dreamers did not differ from non-recurrent dreamers on the measures of well-being or on any of the dream content measures.

The data from Study 2, together with those reported by Brown and Donderi (1986), provide support for the following conclusions. In both older teenagers and adults, recurrent dreams: 1) occur in times of stress, 2) are accompanied by increased levels of negative dream content in everyday dreams, and 3) are associated with relatively lower scores on measures of well-being. Furthermore, the cessation of a previously recurrent dream in adulthood is associated with increased psychological well-being. The cessation of a recurrent dream in early childhood, however, does not appear to have any long-term psychological benefits. These conclusions are consistent with the theories of recurrent dreams reviewed in the thesis.

Study 3 extended some of the findings on recurrent dreams to the domain of recurrent themes. Specifically, we compared individuals who reported recurrent themes in their dreams with people who did not report recurrent themes. Recurrent themes fall lower on Domhoff's (1993) continuum of repetition than do recurrent dreams. For this reason, it was predicted that, relative to non-recurrent dreamers, people with recurrent dream themes would show deficits in well-being and negative dream content, but not to the extent shown by recurrent dreamers in their previous studies. People with recurrent dream themes were found to score significantly lower than people without recurrent dream themes on four of six measures of well-being . What is more, the scores of the recurrent theme group on these four measures were higher (more adaptive) than the scores obtained by the recurrent dreamers studied by Brown and Donderi (1986) and in Study 2. A content analysis of dream diary reports revealed that the dreams of the recurrent theme group contained more negative dream elements than did the dreams of the control group. However, the frequency and intensity of these negative dream elements were

not as great as that which was found in the everyday dream reports of people with recurrent dreams.

The results from these studies support both the validity and heuristic value of Domhoff's (1993) repetition continuum. As predicted, the data indicate that people who experience recurrent themes report lowered levels of well-being and negative dream content, but not as low as shown by those with recurrent dreams.

Study 4 began with a review of how nightmares had been inconsistently defined in the literature. Two principal areas of inconsistency involve the use of a waking criterion and the necessity for the presence of fear in defining a nightmare. The study distinguished between nightmares (i.e., disturbing dreams which awaken the sleeper) and bad dreams (i.e.., disturbing dreams which do not awaken the sleeper) and tested the assumptions behind frequently proposed operational definitions of "nightmares." Though nightmares were found to be more emotionally intense than bad dreams, the study found that some bad dreams were rated as being as intense as nightmares. Data on the emotional content of nightmares and bad dreams showed that although fear was the most common emotion, these dreams also contained a variety of other unpleasant emotions (e.g., anger, sadness, frustration). Finally, the results indicated that people with disturbing dream experiences clustered into two groups: a "mixed" group of people who reported both nightmares and bad dreams, and a second group of people who reported bad dreams but not nightmares. It was proposed that a dimension of negative affect characterizes people's dreams, and that people who report both frequent nightmares and bad dreams are close to the extreme end of this dimension, while people who report frequent bad dreams but no nightmares are lower on this dimension.

The first part of Study 5 clarified and extended previously reported findings which indicated that retrospective reports underestimate the frequency of nightmares by comparison to daily dream log measures. Data from four-week dream logs showed a clear underestimation of both nightmares and bad dreams using retrospective measures, thus supporting the contention that nightmares are more prevalent than was previously believed. In addition, the results indicated that bad dreams are even more prevalent than are nightmares.

The second part of Study 5 showed that people with frequent nightmares had lower scores on measures of well-being than people with frequent bad dreams, and both the frequent nightmare group and the frequent bad dream group had lower well-being scores than the control group. These results support the idea that negative affect in dreams is associated with low scores on self-reported measures of well-being. The data show that people who experience frequent bad dreams are low on measures of well-being, but not as low as people with frequent nightmares. These findings are similar to those reported in Studies 2 and 3 on the relation between recurrent dreams and repetitive dream themes and measures of well-being. Preliminary data did not reveal any consistent evidence to suggest that repetition and negative affect have additive effects on people's overall well-being. Further study with larger sample sizes are required before any firm conclusions can be drawn concerning this issue.

Study 6 presented case reports of five recurrent nightmare sufferers who were successfully treated with lucid dreaming. The results support the therapeutic value of lucid dream induction. The study also demonstrates that training in lucid dreaming can be used to alter dream content. The technique

described could therefore be used to manipulate dream content as an independent variable.

Testable Hypotheses Suggested by Findings

This thesis raises a number of questions that should be addressed by future investigations. For example, in a controlled treatment study, it may be possible to demonstrate pre-to post-manipulation changes both in dream content and in measures of well-being, as well as to assess the direction of causality between dream content and waking emotional states. One hypothesis that could be tested is that changing subjects' repetitive or negatively-toned dream patterns to progressive or more positively-toned patterns of dream content would lead to an increases in subjects' levels of well-being. Such a study is being planned by Nielsen, Zadra and Donderi as part of the author's post-doctoral research.

We plan to conduct a follow-up investigation by contacting as many as possible of the 434 subjects who took part in the research studies presented in the thesis. All participants will be classified according to conventional criteria into recurrent, non-recurrent, past-recurrent, frequent nightmare, and frequent bad dream groups. They will then complete the same measures of well-being and will keep a home dream journal for two weeks. This data will be used to assess the stability of previously demonstrated relationships between the dimensions of repetition and negative affect in dreams and well-being. The data collected will also allow evaluation of random population changes in the occurrence or remission of recurrent dreams, repetitive dream themes, nightmares, and bad dreams and associated changes in measures of well-being and dream content.

The findings presented in the thesis together with those from other researchers suggest several testable hypotheses. People who reported having recurrent dreams during the original studies but for whom the recurrent dream had since ceased to recur should show higher levels of well-being as compared to their original levels of well-being. Similarly, people who reported never having had a recurrent dream during the original studies but who now do should score lower on indices of well-being as compared to their original scores. Analogous predictions can be made as to the relation between the occurrence or remission of bad dreams and nightmares.

Dream Content and Life-Events

A question of interest to some dream researchers and to most clinicians who work with clients' dream reports is whether people with similar life events report similar recurrent dreams. The answer to this question has implications about how specific dream content may be constructed across individuals. Clinicians' interests lie in their desire to understand the possible significance of specific dream content for the dreamer and the possible metaphorical expressions represented by specific dream content. In the large sample of recurrent dreams we have reviewed, different people never reported the same recurrent dream, but different life-events have produced the same type of recurrent dream content. For example, two people in recurrent dream group of Study 2 reported recurrent dreams involving the loss of their teeth. However, there was no overlap in any of the life-events or difficulties reported by these two people. The opposite scenario has also been noted. People reporting the same life-events (e.g., major financial difficulties, divorce, unwanted pregnancies) were found to have very different content in their

recurrent dreams. Thus, the same dream themes or symbols may represent different things to different people.

Some adults who experienced the same recurrent dream since childhood report that the content of the dream changes gradually over the years. Although the thematic content of the dream remained the same, the dream's setting or characters had become altered in ways that often reflected changes in the person's life. One such example came from a 23 year-old student who reported a recurrent dream in which someone she cared about would hurt her emotionally and show no consideration for her feelings. During this women's childhood, the recurrent dream consisted of her mother giving away belongings that the subject cherished to other children. In early adolescence, she also began to have recurrent dreams in which her older brother would be verbally abusive towards her while damaging her personal belongings. These dreams began to decrease in frequency around the age of 18. From that point onward, she began to have recurrent dreams about her boyfriend, who would say hurtful things to her. In these recurrent dreams, the setting was always the subject's home, while the feelings were always ones of extreme sadness and frustration. Invariably, the subject would cry and beg the other characters to stop what they were doing, but her appeals were always ignored. These dreams were described as emotionally intense and extremely vivid. Frequently, the feelings experienced in the recurrent dream would persist upon awakening. The subject reported that at times these feelings were so strong that on several occasions over the past two years, she made her boyfriend apologize to her in real life.

Some of our recurrent dreamers also report that their recurrent dreams cease for a period of years, only to resurface when a new stressor is

encountered. One 38-year old woman, who had kept a dream diary since the age of 15, reported having had the same recurrent dream intermittently for over 20 years. The dream was an "examination dream" in which she found herself unprepared for an important college exam. This dream had first appeared at the age of 19 when she had been in college. She reported that this dream reappeared every seven to ten days for several months prior to her getting married, but that it stopped recurring shortly after her wedding. Though she had not had the dream for over five years, she stated that the dream had re-occurred with varying frequencies in the previous 18 months. During this period, she had lost her job and had been actively looking for a new one. This case is similar to the examples described by Kramer, Schoen, and Kinney (1987) in their work with Vietnam veterans. Many veterans re-experience their old traumatic dreams when dealing with marital crises, demonstrating that old recurrent dreams can reappear when one is faced with new stressors. The same phenomenon can take place in individuals who have non-traumatic recurrent dreams.

Conclusion

The findings presented in the thesis support Kramer's (1992, 1994) conclusion that dreams are a meaningful psychological product of the mind in that dreams reflect important psychological differences, show responsiveness to psychological influences, and demonstrate a systematic relationship to waking thought. The data are also in agreement with recent theories which suggest that dreaming is functionally significant (see Moffitt, Kramer, & Hoffmann, 1993). However, the data do not indicate that dreaming necessarily has *a* function. As stated by Hunt (1989), "there may not be a fundamental *function*

of dreaming, any more than we can find a function for human existence generally. A self-referential, self-transforming system like the human mind will evolve its uses creatively and open-endedly as it evolved its structures" (p. 76). Regardless of whether dreaming has one or more functions, the results indicate that patterns of dream content can be considered meaningful to the extent that they are related to waking state functioning.

In conclusion, the data presented support the generic psychological position that dreams are related to waking states. It has been shown that the link between people's dream content and their current levels of well-being is particularly evident in dreams which make up Domhoff's (1993) repetition continuum. The data suggest that changes from repetitive to progressive dream patterns may be important indicators of how well people are adapting to their life circumstances. The same may be true for dreams best characterized by the dimension of negative affect.

These findings underscore the importance of examining a series of dreams instead of focusing solely on individual dreams. There is much to be gained from the study of repetitive and negatively-toned dream content. This is equally true for clinicians seeking to better understand their clients, and for researchers interested in the possible psychological functions of dreaming.

Statement of Original Contribution

This thesis makes several original contributions to knowledge. These include: 1) presenting a systematic classification of the thematic content of childhood and adult recurrent dreams; 2) demonstrating an association between recurrent dreams, repetitive dream themes, bad dreams, nightmares and measures of well-being; 3) showing how nightmares and bad dreams are separable dream experiences; and 4) finding that bad dreams and nightmares are more prevalent than had been previously reported.

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Appendix I

Dream Content Scales

Emotions

(Hall-Van de Castle, 1966)

AN Anger: annoyed, irritated, mad, provoked, furious, enraged, belligerent, incensed, indignant

AP Apprehension: fear, anxiety, guilt, embarrassment, terrified, horrified, frightened, scared, worried, nervous, concerned, panicky, alarmed, uneasy, remorseful, sorry, apologetic, regretful, ashamed

HA Happiness: includes all words that describe a general state of pleasant feeling tone, including contented, pleased, relieved, amused, cheerful, glad, relaxed, gratified, gay, wonderful, elated, joyful, exhilarated

SD Sadness: includes all words that describe an unhappy emotional state, including disappointed, distressed, hurt, depressed, lonely, lost, miserable, hopeless, crushed, heartbroken

CO Confusion: includes surprised, astonished, amazed, awestruck, mystified, puzzled, perplexed, strange, bewildered, doubtful, conflicted, undecided, uncertain

Activities

(Hall-Van de Castle, 1966)

P Physical activities. Any voluntary movement of the whole body or part of the body while the character remains more or less in one place is scored as a physical activity. (Examples: dressing, combing hair, brushing teeth, sitting down, getting up, bending, writing, picking up an object, chopping wood.)

M Movement. This score is given when a character changes his physical location by self-propelled movements of his body. Involuntary movements such as falling, slipping, or being thrown through space are not scored as movement. (Examples: walking, running, crawling, sliding, swimming, climbing.)

L Location change. Whenever a character moves in a spatial dimension and arrives at a different location through any means other than self-propelled muscular activity, a location change score is given. Included are verbs which suggest change of location but are vague as to how the change occurred. (Examples: went, came, arrived, departed, journeyed, traveled.)

V Verbal. Any type of vocalization including singing.

E Expressive communication. Included in this class are those nonverbal activities associated with emotional states which are sometimes not under voluntary control. (Examples: laughing, crying, smiling, scowling, baring one's teeth, drooling, gasping.)

S Visual. Includes all types of seeing activities. (Examples: see, notice, read, watch, peek, glance, view, inspect, distinguish.)

A Auditory. Includes any type of hearing or listening behavior.

C Thinking. In order to be scored as a thinking activity, the description should indicate that deliberate continued mental activity was involved which possessed a goal-directed or problem-solving quality.

Characters

(Hall-Van de Castle, 1966)

Number	Sex	Identity		Age
1 Individual	M Male	F Father	T Sister	A Adult
2 Group	F Female	M Mother	H Husband	T Teenager
3 Individual dead	J Joint	X Parents	W Wife	C Child
	I Indefinite	B Brother	A Son	B Baby
4 Group dead		D Daughter	P Prominent	
5 Individual imaginary		C Child	O Occupational	
		I Infant	E Ethnic	
6 Group imaginary		Y Family member	S Stranger	
		R Relative	U Uncertain	
7 Original form		K Known		
8 Changed form				

Miscellaneous

ANI Animal

CZZ Creature

Friendly Interactions
(Hall-Van de Castle,1966)

F7 Friendliness expressed through a desire for a long-term close relationship with a character (getting engaged, being married, falling in love)
F6 Friendliness expressed through socially acceptable forms of physical contact (shaking hands, cuddling a baby, dancing, kissing and embracing if not sexual in intent)
F5 Friendliness expressed by taking the initiative in requesting a character to share in a pleasant social activity (dating and visiting are scored, but simple joint activity is not)
F4 Friendliness expressed through extending assistance to a character or offering to do so (helping, protecting, rescuing)
F3 Friendliness expressed by offering a gift or loaning a possession to a character
F2 Verbal or gestural expressions of friendliness (welcoming, greeting, waving hello or goodbye, introducing people, smiling at someone, telephoning or writing someone for a friendly purpose, sympathizing with or praising someone).
F1 Friendliness felt toward a character but not expressed overtly

Friendly interaction may be scored to show the initiator of the act, the subclass, and the recipient. Reciprocated, mutual, witnessed, and self-directed friendliness may also be scored.

Aggressive Interactions
(Hall-Van de Castle,1966)

A8 An aggressive act which results in the death of a character.
A7 An aggressive act which involves an attempt to physically harm a character; threatening a character with a weapon is also included in this subclass.
A6 An aggressive act which involves a character being chased, captured, confined, or physically coerced into performing some act.
A5 An aggressive act which involves the theft or destruction of possessions belonging to a character.
A4 An aggressive act in which a serious accusation or verbal threat of harm is made against a character.
A3 An attempt made by one character to reject, exploit, control, or verbally coerce another character.
A2 Aggression displayed through verbal or expressive activity.
A1 Covert feelings of hostility or anger without any overt expression of aggression.

Aggressive interactions are scored to show the initiator of the act, the subclass, and the victim. Reciprocated, mutual, witnessed, and self-directed aggressions are also scored in this system.

Sexual Interactions
(Sexual-Friendly and Sexual-Aggressive)
(Hall-Van de Castle,1966)

S5 A character has or attempts to have sexual intercourse with another.
S4 This subclass covers various types of foreplay activities generally preceding intercourse, including handling another character's sex organs and related fondling and petting activities.
S3 This subclass covers necking and "nonplatonic" kissing.
S2 A character makes sexual overtures to or "propositions" another character.
S1 A character has sexual thoughts or fantasies about another character.

Sexual interaction may be scored so as to show the initiator, the recipient, reciprocated sexuality, mutual sexuality, or witnessed sexuality, as well as self-directed sexuality.

Anxiety
(Gottschalk-Gleser, 1969)

1. Death anxiety—references to death, dying, threat of death, or anxiety about death experienced by or occurring to
   a. Self (3).
   b. Animate others (2).
   c. Inanimate objects destroyed (1).

2. Mutilation anxiety—references to injury, tissue or physical damage, or anxiety about injury or threat of such experienced by or occurring to
   a. Self (3).
   b. Animate others (2).
   c. Inanimate objects (1).

3. Separation anxiety—references to desertion, abandonment, loneliness, ostracism, loss of support, falling, loss of love or love object, or threat of such experienced by or occurring to
   a. Self (3).
   b. Animate others (2).
   c. Inanimate objects (1).

4. Guilt anxiety—references to adverse criticism, abuse, condemnation, moral disapproval, guilt, or threat of such experienced by
   a. Self (3).
   b. Animate others (2).

5. Shame anxiety—references to ridicule, inadequacy, shame, embarrassment, humiliation, overexposure of deficiencies or private details, or threat of such experienced by
   a. Self (3).
   b. Animate others (2).

6. Diffuse or nonspecific anxiety—references by word or in phrases to anxiety and/or fear without distinguishing type or source of anxiety experienced by or occurring to
   a. Self (3).
   b. Animate others (2).

Achievement Outcome
(Hall-Van de Castle, 1966)

Success: The character is described as expending some energy and perseverance in pursuit of his goals, works at a solution, and eventually manages to succeed.
Failure: The character exhibits willingness to deal with an existing problem and continuing efforts to master it but is not able to achieve his desired goal because of personal limitations and inadequacies.

Environmental Press
(Hall-Van de Castle, 1966)

Misfortune

M6 A character is dead or dies as a result of accident or illness or some unknown cause.
M5 A character is injured or ill (including pain, operations, bodily or mental defects, insanity, amnesia, or blindness).
M4 A character is involved in an accident without suffering physical or mental injury; a character loses a possession or has one destroyed or damaged; a character has a defective possession.
M3 A character is threatened by something in the environment, not including a threat of falling.
M2 A character is falling or is in danger of falling.
M1 A character encounters an environmental barrier or obstacle; a character is unable to move; a character is lost, late, or is in danger of being late.

Good fortune

GF A character has "something good" happen to him, including finding himself in a bountiful environment, finding money, or winning a door prize.

Hostility Directed Outward-Overt
(Gottschalk-Gleser,1969)

10 Self killing, fighting, or injuring other individuals, or threatening to do so.
9 Self robbing or abandoning other individuals, causing suffering or anguish to others, or threatening to do so.
8 Self adversely criticizing, depreciating, blaming, or expressing anger or dislike of other human beings.
7 Self killing, injuring, or destroying domestic animals or pets, or threatening to do so.
6 Self abandoning or robbing domestic animals or pets, or threatening to do so.
5 Self criticizing or depreciating others in a vague or mild manner.
4 Self depriving or disappointing other human beings.
3 Self killing, injuring, destroying, or robbing wildlife, flora, or inanimate objects, or threatening to do so.
2 Self adversely criticizing, depreciating, blaming, or expressing anger or dislike of subhumans, inanimate objects, places, or situations.
1 Self using hostile words, cursing, or mentioning anger or rage without referent.

Hostility Directed Inward
(Gottschalk-Gleser,1969)

11 References to self (speaker) attempting or threatening to kill self, with or without conscious intent.
10 References to self wanting to die, or needing or deserving to die.
9 References to self injuring, mutilating, or disfiguring self or threatening to do so, with or without conscious intent.
8 Self blaming or expressing anger or hatred to self, considering self worthless or of no value, causing self grief or trouble, or threatening to do so.
7 References to feelings of discouragement, giving up hope, despairing, feeling grieved or depressed, or having no purpose in life.
6 References to self needing or deserving punishment, paying for one's sins, or needing to atone or do penance.
5 Self adversely criticizing or depreciating self, referring to regretting, being sorry or ashamed for what one says or does, or referring to self as mistaken or in error.
4 References to feelings of deprivation, disappointment, or lonesomeness.
3 References to feeling disappointed in self or unable to meet expectations of self or others.
2 Denial of anger, dislike, hatred, blame, or destructive impulses from self to self.
1 References to feeling painfully driven or obliged to meet one's own expectations and standards.

Ambivalently Directed Hostility
(Gottschalk-Gleser,1969)

7 Others (human) killing or threatening to kill self
6 Others (human) physically injuring, mutilating, or disfiguring self, or threatening to do so
5 Others (human) adversely criticizing, blaming, or expressing anger or dislike toward self or threatening to do so
4 Others (human) abandoning or robbing self, causing suffering or anguish, or threatening to do so
3 Others (human) depriving, disappointing, or misunderstanding self or threatening to do so
2 Self threatened with death from subhuman or inanimate object or death-dealing situation
1 Others (subhuman, inanimate, or situation) injuring, abandoning, or robbing self, causing suffering or anguish
– Denial of blame

Archetypality Rating Scales
(Kluger,1975, modified by Cann,1979)

Affect.

It is the affect of the dreamer (the dream ego) which is scored, not that of any other dream character. If the presence or absence of affect is not explicitly stated, or implied, estimate the degree of affect which would usually be associated with the situation and context surrounding the dreamer. Score the highest degree of affect which occurs within the general context of the dream.

6. Extreme : panic, horrified, terrified, ecstatic, enraged, furious, paranoia, suicidal depression.

5. Very Strong : great fear or anger, hatred, incensed, dread, mortified, crushed, grief-stricken, revulsion, awe-stricken, exhilarated, elated, heart-broken, astonished, amazed, desperate.

4. Strong or stressed : afraid, scared, happy, delighted, excited, mad, angry, sorrowful, alarmed, ashamed, foreboding, very embarrassed, contempt, depressed, hopeless, mourning, very disgusted, repulsed, bewildered, mystified, joyful, distressed, miserable.

3. Moderate : glad, annoyed, very interested or satisfied, irritated, apprehensive, nervous, uptight, indignant, provoked, disappointed, upset, sad, lonely, frustrated, surprised, weird, confused, cheerful, gay, hurt, dislike, compassionate.

2. Mild : pleasant, unpleasant, uneasy, worried, concerned, sorry, defensive, apologetic, regretful, bored, discontented, puzzled, uncertain, doubtful, contented, amused, sympathetic.

1. Slight or Absent : relaxed, unconcerned, neutral.

N.B. The addition of intensifiers (e.g. very, greatly, extremely, etc.) will increase the degree of affect scored.

Rationality

The considerations in scoring dream content under this category are the degree of likelihood of their occurrence, and the degree of their adherence to natural law.

6. (4.) Rational, and not unlikely Examples: riding a bike, hitting a stone and falling off.

5. (3.) Rational - possible (i.e., possible, conceivable, but uncommon or unexpected). Examples: being chased, caught, and raped; San Francisco being bombed by the Russians.

4. (2.) Rational - unlikely (i.e., very unlikely, although not violating any natural law). Examples: being chased from tree to tree by a white bear; some chased, caught, and tried to poison me.

3. (1x.) Borderline (i.e., the operation of natural law is uncertain or questionable). Example: a long row of black box-cars rolling by on a railroad track. There was no engine.

2. (1.) Non-rational but comprehensible Examples: playing in the barnyard and suddenly covered with green snakes; our guns wiped out everything in front of them.

1. (0.) Irrational (i.e., impossible in reality). Examples: a toothed fish chased me out of the pool and across the fields; about a man with a lion's head.

0. (B.) Bizarre Example: the veins on my chest stood out, studded with rhinestones and sequins.

Everydayness

The consideration in scoring dream content under this category is in the degree to which it approximates that of everyday life.

6. (4.) For dreams just like everyday life. Examples: making plans with a friend for a car trip to a neighboring town; having to go to the bathroom; working or talking with some people.

5. (3.) Slight variations from everyday life. Examples: running in a relay race with two best friends, somehow got in wrong exchange area and have to give up the race; or (a student), "I had already graduated and gotten a good position in my field."

4. (2.) Unlikely variations from everyday life. Examples: returning to apartment to find all the furniture gone and workmen removing the bathroom pipes; all the girls in the dorm getting together for the last time before vacation, and all sad and crying at the prospect of the long separation.

3. (1x.) With an impossible twist to everyday life. Examples: cleaning out a fishbowl, the fish swim up the stream of water pouring into it; a horse performing tricks suddenly turns into an elephant.

2. (1.) Very unlikely in everyday life. Examples: walking along a dirt road, an airliner flies so low over us we could almost touch it. It circles back, lands on the road hitting a group of people as though intentionally.

1. (0.) Very remote from everyday life, with the feeling tone of the strange and unfamiliar. Examples: three priests with icepicks sitting at a round table, each begins lightly pricking the left arm of his neighbor, increasing this to jabbing and furiously stabbing till it's a horrible bloody scene; "I walk through a maze of high hedges. I am trying to reach the center. There is a mist in the air, and grass is beneath my feet. I have very long hair and clothes that belong to another century. I sing the old folksong, 'Where I come from nobody knows.' I feel I must get out or get to the center."

0. (B.) Bizarre. Example: The veins on my chest stood out, studded with rhinestones and sequins.

McGill Sleep/Dream Questionnaire

Name: Participant Code:
Sex:
Current Age: Faculty (e.g., Arts, Science):
Marital Status: Major:
Current Occupation:
Education (Degrees Obtained):
Phone No:
Current Address: Permanent Address:

Instructions: Please answer the following questions as honestly as you can. These questions are necessary since there are a great number of factors which affect your dreams. Your answers and the information you provide are completely confidential. They will be filed under a code number, and no one except the researcher will ever see them. If you cannot answer a question, please indicate why--this will help in designing future questionnaires. Thank you.

1. On average, how many dreams do you usually remember per week: ____

2. When you wake up in the morning can you usually remember having
   1 2 3 4 More than 4 dreams the previous night?

3. When you wake up can you usually remember your dreams:
   Easily Without Much Effort With Some Effort Much Effort Great Effort

4. When you wake up do you usually remember your dreams:
   Entirely Almost as a Whole With Some Missing Parts Many Missing Parts
   Only as a Fragment

5. Rate on the following scale the consistency of your dream recall (i.e., do you go through periods of good and poor dream recall) - circle one:

   very consistent.....very inconsistent
   1 2 3 4 5

6. How vivid are your dreams? (circle one): (a) extremely vivid;
   (b) very vivid; (c) vivid; (d) average; (e) unclear; (f) very unclear.

7. Have you ever kept a dream diary? Yes___ No___
   If yes, for how long? _____

8. Have you any previous experience in working with your dreams?
   If so please specify.

9. Have you ever been in psychotherapy in which dreams played an important part?
   Yes___ No___ If so, when and for how long? What kind of therapy?

10. Are you in any kind of psychotherapy right now?_____
    With or without dreams? _____

11. Are you under a physician's care for any serious medical condition?
If yes, please describe briefly.

12. Are you currently taking any prescription medication? Yes____ No____
If so, please specify.

13. Do you currently smoke cigarettes? Yes____ No____
If yes, i) for how long have you been a smoker?_____
ii) approximately how many cigarettes do you smoke per day? ____

14. Do you normally wake up with an alarm? Yes_____ No_____

15. On the average, how long does it take you to go to sleep (in minutes)?_____

16. How many times a week do you fall asleep within 5 minutes? _____
17. How many times a week does it take you more than 30 minutes? _____

18. How rested do you feel in the morning generally? (circle one):
(a) very; (b) moderately; (c) not very; (d) not at all.

19. Nightmares are disturbing dreams (e.g., frightening, anxious, distressing) **in which the unpleasant visual imagery and/or emotions wake you up.**

How frequently do you have nightmares, as defined above? (circle one):
More Than Once a Week Once a Week More Than Once a Month Once a Month
Once Every Several Months Once a Year Once Every Few Years Never

20. Estimate the number of nightmares you have had in the past year: _____

21. Estimate the number of nightmares you have had in the past month: _____

22. Bad dreams are disturbing dreams (e.g., frightening, anxious, distressing) which, though being unpleasant, do not cause you to awaken.

How frequently do you have "bad dreams," as defined above? (circle one):
More Than Once a Week Once a Week More Than Once a Month Once a Month
Once Every Several Months Once a Year Once Every Few Years Never

23. Estimate the number of "bad dreams" you have had in the past year: _____

24. Estimate the number of "bad dreams" you have had in the past month: _____

25. Do you have a current problem with nightmares or "bad dreams"? Yes_____ No_____

26. How concerned or distressed are you over your nightmares or "bad dreams" (circle one):
very little.....very much
1 2 3 4 5 6 7

27. i) As a child, did you ever fly in your dreams? Yes_____ No_____
ii) Do you currently have flying dreams? Yes____ No____
If yes, how often to do you fly in your dreams?
More Than Once a Week Once a Week More Than Once a Month Once a Month
Once Every Several Months Once a Year Once Every Few Years Never

28. Estimate the number of flying dreams you have had in the past year: _____

29. Estimate the number of flying dreams you have had in the past month: _____

30. Have you ever had a "falling dream" (a dream in which there typically is little or no visual imagery and during which you experience a sensation of falling usually ending with an abrupt awakening)? Yes____ No_____ Not Sure_____

31. Have you ever been able to dream of a specific topic you had previously planned to dream about? Yes____ No____

32. Do you ever exert any "control" over your dreams (i.e., can you change dream sceneries or command things to happen at will)?
Yes_____ No_____ Sometimes_____ Rarely_____ Never_____

33. Lucid dreams are those in which a person becomes aware of the fact that he or she is dreaming while the dream is still ongoing. For example: "I was in England talking to my grandfather when I remembered that (in real life) he had died several years ago and that I had never been to England. I concluded that I was dreaming and decided to fly in order to get a bird's eye view of the countryside. After a while, I decided that I was going to try to do a few "back-flips" in mid-air but then I woke up..."

Have you ever had a lucid dream? Yes___ No___ Not Sure____
If yes: (i) How many? _____ (please give approximate number)
(ii) When was the most recent? _____
(iii) In such dreams, do you ever attempt to use your lucidity to alter the dream's course and or control aspects of the dream scenery? Yes____ No_____
(iv) If yes, estimate the proportion of these dreams in which you successfully exert such control: 0% 10% 25% 50% 75% 100%

34. If you have had lucid dreams, please approximate the frequency with which you have such experiences (circle one):
More Than Once a Week Once a Week More Than Once a Month Once a Month
Once Every Several Months Once a Year Once Every Few Years Never

35. Estimate the number of lucid dreams you have had in the past year: _____

36. Estimate the number of lucid dreams you have had in the past month: _____

37. If you have lucid dreams, please describe a very recent or salient one below. Be certain to include information about how you came to realize that you were dreaming. Use reverse side for additional space.

38. Have you ever had a recurrent dream; that is, a dream that when you remember it leaves you with the subjective feeling of having had it before?
Yes___ No___ Uncertain___
(If you have answered 'no' to this question proceed to question #47. If you have answered 'yes,' please complete the following questions.)

39. Is the dream content in your recurrent dream: Always Identical Often Identical Sometimes Identical Rarely Identical Never Identical.

40. Is the theme in your recurrent dream: Always Identical Often Identical Sometimes Identical Rarely Identical Never Identical.

41. Can you remember having had such a recurrent dream:
In early Youth In Adolescence As an Adult Not Sure Never

42. Have you had a recurrent dream in the past twelve months? Yes No Uncertain

43. Have you had a recurrent dream in the past six months? Yes No Uncertain

44. Are you currently having a recurrent dream? Yes No Uncertain

45. If applicable, approximately how long has your recurrent dream (past or present) persisted? A Week A Month Several Months A Year
More Than a Year/Please Specify

46. Please describe your recurrent dream. (Try to include in your description such aspects as the dream's setting, the main people or things involved, the ending (if it has one), and whatever other details you think pertinent.). Use reverse side for additional space.

For questions 47-57 please indicate how often each feeling appears in your remembered dreams.

	always	often	sometimes	seldom	never
47. Happiness:	1	2	3	4	5
48. Fear:	1	2	3	4	5
49. Sadness:	1	2	3	4	5
50. Relaxed:	1	2	3	4	5
51. Confusion:	1	2	3	4	5
52. Satisfaction:	1	2	3	4	5
53. Anger:	1	2	3	4	5
54. Frustration:	1	2	3	4	5
55. Sexual Arousal:	1	2	3	4	5
56. Apprehension:	1	2	3	4	5
57. Embarrassment:	1	2	3	4	5

58. Are your dreams generally (circle one):
Pleasant Unpleasant Both Pleasant and Unpleasant Neutral

59. In your dreams are you more likely to be feeling (circle one):
Anxious Relaxed Both Not Sure

60. In your dreams are you more likely to experience:
Success Failure Not Sure

61. In your dreams which are you more likely to experience?
Good Luck/Good Fortune Bad Luck/Misfortune Not Sure

62. Check one of the following regarding your experience with and interest in meditation:
____ a. no experience, no interest
____ b. no experience, moderate interest
____ c. no experience, very interested
____ d. some experience, but not currently regular, no interest
____ e. some experience, but not currently regular, moderate interest
____ f. some experience, but not currently regular, very interested
____ g. currently regularly meditating. If you checked "g," please give the following details:
(i) number of months you have been meditating_____
(ii) average length of time per day that you meditate_____

63. The items mentioned in the following statements will bring images to your mind. Rate each image by reference to this scale:

no image: only know I am thinking ——— moderately clear and vivid ——— clear and vivid as the actual
1 2 3 4 5 6 7

(i) Imagine each of the following sounds in your mind and classify by the degree of clearness and vividness specified above (i.e., give a number):

a. the sound of a forest creek ____ b. the barking of a dog ____
c. the cry of a baby ____ d. the breaking of glass ____

(ii) Imagine each of the following acts in your mind and classify by the the degree of clearness and vividness specified above (i.e., give a number):

a. touching your shoulder____ b. skipping on a sidewalk ____
c. writing with a pen ____ c. rolling over in bed ____

64. How often to you discuss your dreams with family or friends? (circle one):
Very Often Often Sometimes Almost Never Never

65. How much attention do you usually pay towards your dreams? (circle one):
very little.....very much
1 2 3 4 5 6 7

66. How much significance do you usually attach to your dreams? (circle one):
very little.....very much
1 2 3 4 5 6 7

67. Have you ever remembered specific smells or tastes from a dream?
Yes____ No____ If yes, which: tastes____ smells____ both____

68. Have you ever experienced sensations of physical pain in your dreams? If so, please describe briefly.

69. Do you recall ever having tried to read a passage (e.g., parts of a book, lecture notes, a text, etc.) in one or more of your dreams? Yes____ No_____
If yes, were you successful? Yes___ No____ Sometimes_____

70. What is the earliest dream you remember? At about what age? (Please write out the dream as fully as possible);

71. What is the most vivid dream you can recall, and with what situation or event do you associate it, if any? (Please describe the dream first and then the event, as fully as possible.)

EYSENCK PERSONALITY INVENTORY

FORM A

By H. J. Eysenck

Name_____ Age_____ Sex_____

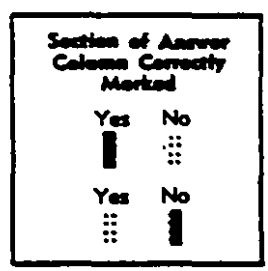
Grade or Occupation_____ Date_____

School or Firm_____ Marital Status_____

INSTRUCTIONS

Here are some questions regarding the way you behave, feel and act. After each question is a space for answering "Yes," or "No."

Try and decide whether "Yes," or "No" represents your usual way of acting or feeling. Then blacken in the space under the column headed "Yes" or "No."



Work quickly, and don't spend too much time over any question; we want your first reaction, not a long drawn-out thought process. The whole questionnaire shouldn't take more than a few minutes. Be sure not to omit any questions. Now turn the page over and go ahead. Work quickly, and remember to answer every question. There are no right or wrong answers, and this isn't a test of intelligence or ability, but simply a measure of the way you behave.

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BOX 7234, SAN DIEGO 7, CALIFORNIA

E N L

1. Do you often long for excitement?	Yes	No
2. Do you often need understanding friends to cheer you up?	Yes	No
3. Are you usually carefree?	Yes	No
4. Do you find it very hard to take no for an answer?	Yes	No
5. Do you stop and think things over before doing anything?	Yes	No
6. If you say you will do something do you always keep your promise, no matter how inconvenient it might be to do so?	Yes	No
7. Does your mood often go up and down?	Yes	No
8. Do you generally do and say things quickly without stopping to think?	Yes	No
9. Do you ever feel "just miserable" for no good reason?	Yes	No
10. Would you do almost anything for a dare?	Yes	No
11. Do you suddenly feel shy when you want to talk to an attractive stranger?	Yes	No
12. Once in a while do you lose your temper and get angry?	Yes	No
13. Do you often do things on the spur of the moment?	Yes	No
14. Do you often worry about things you should not have done or said?	Yes	No
15. Generally do you prefer reading to meeting people?	Yes	No
16. Are your feelings rather easily hurt?	Yes	No
17. Do you like going out a lot?	Yes	No
18. Do you occasionally have thoughts and ideas that you would not like other people to know about?	Yes	No
19. Are you sometimes bubbling over with energy and sometimes very sluggish?	Yes	No
20. Do you prefer to have few but special friends?	Yes	No
21. Do you daydream a lot?	Yes	No
22. When people shout at you, do you shout back?	Yes	No
23. Are you often troubled about feelings of guilt?	Yes	No
24. Are all your habits good and desirable ones?	Yes	No
25. Can you usually let yourself go and enjoy yourself a lot at a gay party?	Yes	No
26. Would you call yourself tense or "highly-strung"?	Yes	No
27. Do other people think of you as being very lively?	Yes	No
28. After you have done something important, do you often come away feeling you could have done better?	Yes	No
29. Are you mostly quiet when you are with other people?	Yes	No
30. Do you sometimes gossip?	Yes	No
31. Do ideas run through your head so that you cannot sleep?	Yes	No
32. If there is something you want to know about, would you rather look it up in a book than talk to someone about it?	Yes	No
33. Do you get palpitations or thumping in your heart?	Yes	No
34. Do you like the kind of work that you need to pay close attention to?	Yes	No
35. Do you get attacks of shaking or trembling?	Yes	No
36. Would you always declare everything at the customs, even if you knew that you could never be found out?	Yes	No
37. Do you hate being with a crowd who play jokes on one another?	Yes	No
38. Are you an irritable person?	Yes	No
39. Do you like doing things in which you have to act quickly?	Yes	No
40. Do you worry about awful things that might happen?	Yes	No
41. Are you slow and unhurried in the way you move?	Yes	No
42. Have you ever been late for an appointment or work?	Yes	No
43. Do you have many nightmares?	Yes	No
44. Do you like talking to people so much that you would never miss a chance of talking to a stranger?	Yes	No
45. Are you troubled by aches and pains?	Yes	No
46. Would you be very unhappy if you could not see lots of people most of the time?	Yes	No
47. Would you call yourself a nervous person?	Yes	No
48. Of all the people you know are there some whom you definitely do not like?	Yes	No
49. Would you say you were fairly self-confident?	Yes	No
50. Are you easily hurt when people find fault with you or your work?	Yes	No
51. Do you find it hard to really enjoy yourself at a lively party?	Yes	No
52. Are you troubled with feelings of inferiority?	Yes	No
53. Can you easily get some life into a rather dull party?	Yes	No
54. Do you sometimes talk about things you know nothing about?	Yes	No
55. Do you worry about your health?	Yes	No
56. Do you like playing pranks on others?	Yes	No
57. Do you suffer from sleeplessness?	Yes	No

PLEASE CHECK TO SEE THAT YOU HAVE ANSWERED ALL THE QUESTIONS.

SELF-EVALUATION QUESTIONNAIRE

Developed by C. D. Spielberger, R. L. Gorsuch and R. Lushene

STAI FORM X-1

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *feel* right now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I feel calm	①	②	③	④
2. I feel secure	①	②	③	④
3. I am tense	①	②	③	④
4. I am regretful	①	②	③	④
5. I feel at ease	①	②	③	④
6. I feel upset	①	②	③	④
7. I am presently worrying over possible misfortunes	①	②	③	④
8. I feel rested	①	②	③	④
9. I feel anxious	①	②	③	④
10. I feel comfortable	①	②	③	④
11. I feel self-confident	①	②	③	④
12. I feel nervous	①	②	③	④
13. I am jittery	①	②	③	④
14. I feel "high strung"	①	②	③	④
15. I am relaxed	①	②	③	④
16. I feel content	①	②	③	④
17. I am worried	①	②	③	④
18. I feel over-excited and rattled	①	②	③	④
19. I feel joyful	①	②	③	④
20. I feel pleasant	①	②	③	④

SELF-EVALUATION QUESTIONNAIRE

STAI FORM X-2

NAME _____ DATE _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21. I feel pleasant	①	②	③	④
22. I tire quickly	①	②	③	④
23. I feel like crying	①	②	③	④
24. I wish I could be as happy as others seem to be	①	②	③	④
25. I am losing out on things because I can't make up my mind soon enough	①	②	③	④
26. I feel rested	①	②	③	④
27. I am "calm, cool, and collected"	①	②	③	④
28. I feel that difficulties are piling up so that I cannot overcome them	①	②	③	④
29. I worry too much over something that really doesn't matter	①	②	③	④
30. I am happy	①	②	③	④
31. I am inclined to take things hard	①	②	③	④
32. I lack self-confidence	①	②	③	④
33. I feel secure	①	②	③	④
34. I try to avoid facing a crisis or difficulty	①	②	③	④
35. I feel blue	①	②	③	④
36. I am content	①	②	③	④
37. Some unimportant thought runs through my mind and bothers me	①	②	③	④
38. I take disappointments so keenly that I can't put them out of my mind	①	②	③	④
39. I am a steady person	①	②	③	④
40. I get in a state of tension or turmoil as I think over my recent concerns and interests	①	②	③	④

Symptom Check-List 90-R

(Derogatis, 1976)

BELOW IS A LIST OF PROBLEMS AND COMPLAINTS THAT PEOPLE SOMETIMES HAVE. READ EACH ONE CAREFULLY AND SELECT ONE OF THE NUMBERED RESPONSES THAT BEST DESCRIBES, 'HOW MUCH HAVE I BEEN BOTHERED BY THIS IN THE PAST MONTH, INCLUDING TODAY?' CIRCLE THE APPROPRIATE NUMBER AT THE RIGHT OF THE ITEM. PLEASE DO NOT SKIP ANY ITEM.

RESPONSE CHOICES:
0 NOT AT ALL
1 A LITTLE BIT
2 MODERATELY
3 QUITE A BIT
4 EXTREMELY

HOW MUCH HAVE YOU BEEN BOTHERED BY:						HOW MUCH HAVE YOU BEEN BOTHERED BY:					
1. HEADACHES	0	1	2	3	4	25. FEELING AFRAID TO GO OUT OF YOUR HOUSE ALONE	0	1	2	3	4
2. NERVOUSNESS OR SHAKINESS INSIDE	0	1	2	3	4	26. BLAMING YOURSELF FOR THINGS	0	1	2	3	4
3. REPEATED UNPLEASANT THOUGHTS THAT WON'T LEAVE YOUR MIND	0	1	2	3	4	27. PAINS IN LOWER BACK	0	1	2	3	4
4. FAINTNESS OR DIZZINESS	0	1	2	3	4	28. FEELING BLOCKED IN GETTING THINGS DONE	0	1	2	3	4
5. LOSS OF SEXUAL INTEREST OR PLEASURE	0	1	2	3	4	29. FEELING LONELY	0	1	2	3	4
6. FEELING CRITICAL OF OTHERS	0	1	2	3	4	30. FEELING BLUE	0	1	2	3	4
7. THE IDEA THAT SOMEONE CAN CONTROL YOUR THOUGHTS	0	1	2	3	4	31. WORRYING TOO MUCH ABOUT THINGS	0	1	2	3	4
8. FEELING OTHERS ARE TO BLAME FOR MOST OF YOUR TROUBLES	0	1	2	3	4	32. FEELING NO INTEREST IN THINGS	0	1	2	3	4
9. TROUBLE REMEMBERING THINGS	0	1	2	3	4	33. FEELING FEARFUL	0	1	2	3	4
10. BEING WORRIED ABOUT SLOPPINESS OR CARELESSNESS	0	1	2	3	4	34. YOUR FEELINGS BEING EASILY HURT	0	1	2	3	4
11. FEELING EASILY ANNOYED OR IRRITATED	0	1	2	3	4	35. OTHER PEOPLE BEING AWARE OF YOUR PRIVATE THOUGHTS	0	1	2	3	4
12. PAINS IN HEART OR CHEST	0	1	2	3	4	36. FEELING OTHERS DO NOT UNDERSTAND YOU	0	1	2	3	4
13. FEELING AFRAID IN OPEN SPACES OR ON THE STREETS	0	1	2	3	4	37. FEELING OTHERS ARE UNFRIENDLY OR DISLIKE YOU	0	1	2	3	4
14. FEELING LOW IN ENERGY OR SLOWED DOWN	0	1	2	3	4	38. DOING THINGS VERY SLOWLY TO INSURE CORRECTNESS	0	1	2	3	4
15. THOUGHTS OF ENDING YOUR LIFE	0	1	2	3	4	39. YOUR HEART IS POUNDING OR RACING	0	1	2	3	4
16. HEARING VOICES THAT OTHER PEOPLE DO NOT HEAR	0	1	2	3	4	40. NAUSEA OR UPSET STOMACH	0	1	2	3	4
17. TREMBLING	0	1	2	3	4	41. FEELING INFERIOR TO OTHERS	0	1	2	3	4
18. FEELING THAT MOST PEOPLE CANNOT BE TRUSTED	0	1	2	3	4	42. SORENESS IN YOUR MUSCLES	0	1	2	3	4
19. POOR APPETITE	0	1	2	3	4	43. FEELING YOU'RE BEING WATCHED/TALKED ABOUT	0	1	2	3	4
20. CRYING EASILY	0	1	2	3	4	44. TROUBLE FALLING ASLEEP	0	1	2	3	4
21. FEELING SHY OR UNEASY WITH THE OPPOSITE SEX	0	1	2	3	4	45. HAVING TO CHECK AND DOUBLE-CHECK WHAT YOU DO	0	1	2	3	4
22. FEELINGS OF BEING TRAPPED OR CAUGHT	0	1	2	3	4	46. DIFFICULTY MAKING DECISIONS	0	1	2	3	4
23. SUDDENLY AFRAID OR SCARED FOR NO REASON	0	1	2	3	4	47. FEELING AFRAID TO USE BUSES, SUBWAYS OR TRAINS	0	1	2	3	4
24. TEMPER OUTBURSTS THAT YOU COULD NOT CONTROL	0	1	2	3	4	48. TROUBLE GETTING YOUR BREATH	0	1	2	3	4

RESPONSE CHOICES:
0 NOT AT ALL
1 A LITTLE BIT
2 MODERATELY
3 QUITE A BIT
4 EXTREMELY

HOW MUCH HAVE YOU BEEN BOTHERED BY:						HOW MUCH HAVE YOU BEEN BOTHERED BY:					
49. HOT OR COLD SPELLS	0	1	2	3	4	74. GETTING INTO FREQUENT ARGUMENTS	0	1	2	3	4
50. AVOIDING THINGS,PLACES OR ACTIVITIES THAT SCARE YOU	0	1	2	3	4	75. FEELING NERVOUS WHEN YOU ARE LEFT ALONE	0	1	2	3	4
51. YOUR MIND GOING BLANK	0	1	2	3	4	76. OTHERS DON'T GIVE YOU PROPER CREDIT FOR YOUR ACHIEVEMENTS	0	1	2	3	4
52. NUMBNESS OR TINGLING IN PARTS OF YOUR BODY	0	1	2	3	4	77. FEELING LONELY EVEN WHEN YOU ARE WITH PEOPLE	0	1	2	3	4
53. A LUMP IN YOUR THROAT	0	1	2	3	4	78. FEELING SO RESTLESS YOU CANNOT SIT STILL	0	1	2	3	4
54. FEELING HOPELESS ABOUT THE FUTURE	0	1	2	3	4	79. FEELINGS OF WORTHLESSNESS	0	1	2	3	4
55. TROUBLE CONCENTRATING	0	1	2	3	4	80. FEELING THAT SOMETHING BAD IS GOING TO HAPPEN TO YOU	0	1	2	3	4
56. FEELING WEAK IN PARTS OF YOUR BODY	0	1	2	3	4	81. SHOUTING OR THROWING THINGS	0	1	2	3	4
57. FEELING TENSE OR KEYED UP	0	1	2	3	4	82. FEELING AFRAID YOU WILL FAINT IN PUBLIC	0	1	2	3	4
58. HEAVY FEELINGS IN YOUR ARMS OR LEGS	0	1	2	3	4	83. FEELING PEOPLE WILL TAKE ADVANTAGE OF YOU IF YOU LET THEM	0	1	2	3	4
59. THOUGHTS OF DEATH OR DYING	0	1	2	3	4	84. HAVING THOUGHTS ABOUT SEX THAT BOTHER YOU ALOT	0	1	2	3	4
60. OVEREATING	0	1	2	3	4	85. THE IDEA THAT YOU SHOULD BE PUNISHED FOR YOUR SINS	0	1	2	3	4
61. FEELING UNEASY WHEN PEOPLE WATCH OR TALK ABOUT YOU	0	1	2	3	4	86. THOUGHTS AND IMAGES OF A FRIGHTENING NATURE	0	1	2	3	4
62. HAVING THOUGHTS THAT ARE NOT YOUR OWN	0	1	2	3	4	87. THE IDEA THAT SOMETHING SERIOUS IS WRONG WITH YOUR BODY	0	1	2	3	4
63. HAVING URGES TO INJURE OR HARM SOMEONE	0	1	2	3	4	88. NEVER FEELING CLOSE TO ANOTHER PERSON	0	1	2	3	4
64. AWAKENING IN THE EARLY MORNING	0	1	2	3	4	89. FEELINGS OF GUILT	0	1	2	3	4
65. REPEATING THE SAME ACTIONS: TOUCHING,COUNTING,WASHING	0	1	2	3	4	90. THE IDEA THAT SOMETHING IS WRONG WITH YOUR MIND	0	1	2	3	4
66. SLEEP THAT IS RESTLESS AND DISTURBED	0	1	2	3	4						
67. HAVING URGES TO BREAK OR SMASH THINGS	0	1	2	3	4						
68. HAVING IDEAS OR BELIEFS THAT OTHERS DO NOT SHARE	0	1	2	3	4						
69. FEELING VERY SELF-CONSCIOUS WITH/AROUND OTHERS	0	1	2	3	4						
70. FEELING UNEASY IN CROWDS, AS WHEN SHOPPING,AT MOVIES	0	1	2	3	4						
71. FEELING EVERYTHING IS AN EFFORT	0	1	2	3	4						
72. OCCASIONS OF PANIC OR TERROR	0	1	2	3	4						
73. FEELING UNCOMFORTABLE ABOUT EATING OR DRINKING IN PUBLIC	0	1	2	3	4						

THANK YOU.

The Adjective Check List

by

HARRISON G. GOUGH, Ph.D.

University of California (Berkeley)

Name ..... Age ..... Sex .....

Date ..... Other .....

DIRECTIONS: This booklet contains a list of adjectives. Please read them quickly and put an **X** in the box beside each one you would consider to be self-descriptive. Do not worry about duplications, contradictions, and so forth. Work quickly and do not spend too much time on any one adjective. Try to be frank, and check those adjectives which describe you as you really are, not as you would like to be.

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- ☐ absent-minded 1
- ☐ active 2
- ☐ adaptable 3
- ☐ adventurous 4
- ☐ affected 5
- ☐ affectionate 6
- ☐ aggressive 7
- ☐ alert 8
- ☐ aloof 9
- ☐ ambitious 10
- ☐ anxious 11
- ☐ apathetic 12
- ☐ appreciative 13
- ☐ argumentative 14
- ☐ arrogant 15
- ☐ artistic 16
- ☐ assertive 17
- ☐ attractive 18
- ☐ autocratic 19
- ☐ awkward 20
- ☐ bitter 21
- ☐ blustery 22
- ☐ boastful 23
- ☐ bossy 24
- ☐ calm 25
- ☐ capable 26
- ☐ careless 27
- ☐ cautious 28
- ☐ changeable 29
- ☐ charming 30
- ☐ cheerful 31
- ☐ civilized 32
- ☐ clear-thinking 33
- ☐ clever 34
- ☐ coarse 35
- ☐ cold 36
- ☐ commonplace 37
- ☐ complaining 38
- ☐ complicated 39
- ☐ conceited 40
- ☐ confident 41
- ☐ confused 42
- ☐ conscientious 43
- ☐ conservative 44
- ☐ considerate 45
- ☐ contented 46
- ☐ conventional 47
- ☐ cool 48
- ☐ cooperative 49
- ☐ courageous 50
- ☐ cowardly 51
- ☐ cruel 52
- ☐ curious 53
- ☐ cynical 54
- ☐ daring 55
- ☐ deceitful 56
- ☐ defensive 57
- ☐ deliberate 58
- ☐ demanding 59
- ☐ dependable 60
- ☐ dependent 61
- ☐ despondent 62
- ☐ determined 63
- ☐ dignified 64
- ☐ discreet 65
- ☐ disorderly 66
- ☐ dissatisfied 67
- ☐ distractible 68
- ☐ distrustful 69
- ☐ dominant 70
- ☐ dreamy 71
- ☐ dull 72
- ☐ easy going 73
- ☐ effeminate 74
- ☐ efficient 75
- ☐ egotistical 76
- ☐ emotional 77
- ☐ energetic 78
- ☐ enterprising 79
- ☐ enthusiastic 80
- ☐ evasive 81
- ☐ excitable 82
- ☐ fair-minded 83
- ☐ fault-finding 84
- ☐ fearful 85
- ☐ feminine 86
- ☐ fickle 87
- ☐ flirtatious 88
- ☐ foolish 89
- ☐ forceful 90
- ☐ foresighted 91
- ☐ forgetful 92
- ☐ forgiving 93
- ☐ formal 94
- ☐ frank 95
- ☐ friendly 96
- ☐ frivolous 97
- ☐ fussy 98
- ☐ generous 99
- ☐ gentle 100
- ☐ gloomy 101
- ☐ good-looking 102
- ☐ good-natured 103
- ☐ greedy 104
- ☐ handsome 105
- ☐ hard-headed 106
- ☐ hard-hearted 107
- ☐ hasty 108
- ☐ headstrong 109
- ☐ healthy 110
- ☐ helpful 111
- ☐ high-strung 112
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- ☐ hostile 114
- ☐ humorous 115
- ☐ hurried 116
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- ☐ impatient 120
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- ☐ leisurely 142
- ☐ logical 143
- ☐ loud 144
- ☐ loyal 145
- ☐ mannerly 146
- ☐ masculine 147
- ☐ mature 148
- ☐ meek 149
- ☐ methodical 150

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- ☐ mild 151
- ☐ mischievous 152
- ☐ moderate 153
- ☐ modest 154
- ☐ moody 155
- ☐ nagging 156
- ☐ natural 157
- ☐ nervous 158
- ☐ noisy 159
- ☐ obliging 160
- ☐ obnoxious 161
- ☐ opinionated 162
- ☐ opportunistic 163
- ☐ optimistic 164
- ☐ organized 165
- ☐ original 166
- ☐ outgoing 167
- ☐ outspoken 168
- ☐ painstaking 169
- ☐ patient 170
- ☐ peaceable 171
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- ☐ persevering 173
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- ☐ pessimistic 175
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- ☐ quick 190
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- ☐ quitting 192
- ☐ rational 193
- ☐ rattlebrained 194
- ☐ realistic 195
- ☐ reasonable 196
- ☐ rebellious 197
- ☐ reckless 198
- ☐ reflective 199
- ☐ relaxed 200
- ☐ reliable 201
- ☐ resentful 202
- ☐ reserved 203
- ☐ resourceful 204
- ☐ responsible 205
- ☐ restless 206
- ☐ retiring 207
- ☐ rigid 208
- ☐ robust 209
- ☐ rude 210
- ☐ sarcastic 211
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- ☐ self-confident 213
- ☐ self-controlled 214
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- ☐ sentimental 221
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- ☐ shallow 225
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- ☐ show-off 228
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- ☐ simple 232
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- ☐ slow 235
- ☐ sly 236
- ☐ smug 237
- ☐ snobbish 238
- ☐ sociable 239
- ☐ soft-hearted 240
- ☐ sophisticated 241
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- ☐ spontaneous 244
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- ☐ suggestible 254
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- ☐ thrifty 267
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- ☐ tolerant 269
- ☐ touchy 270
- ☐ tough 271
- ☐ trusting 272
- ☐ unaffected 273
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- ☐ unassuming 275
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- ☐ undependable 277
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- ☐ unexcitable 280
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- ☐ uninhibited 282
- ☐ unintelligent 283
- ☐ unkind 284
- ☐ unrealistic 285
- ☐ unscrupulous 286
- ☐ unselfish 287
- ☐ unstable 288
- ☐ vindictive 289
- ☐ versatile 290
- ☐ warm 291
- ☐ wary 292
- ☐ weak 293
- ☐ whiny 294
- ☐ wholesome 295
- ☐ wise 296
- ☐ withdrawn 297
- ☐ witty 298
- ☐ worrying 299
- ☐ zany 300

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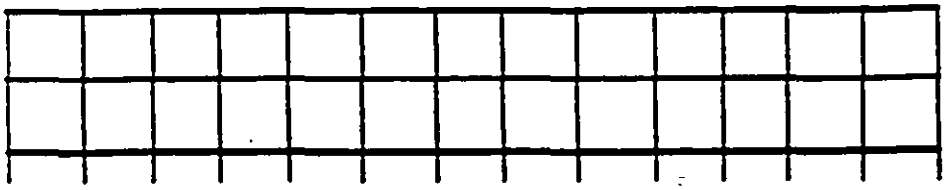

Beck Depression Inventory

(Beck, et.al., 1969)

EACH ITEM IN THIS QUESTIONNAIRE IS MADE UP OF 4-6 STATEMENTS. BEFORE RESPONDING PLEASE READ ALL THE STATEMENTS IN EACH GROUP. THEN, PLEASE CHOOSE THE ONE STATEMENT OF THE GROUP THAT BEST DESCRIBES THE WAY YOU FEEL TODAY (AT PRESENT).

1. i. I DO NOT FEEL SAD.
   ii. I FEEL BLUE OR SAD.
   iii. I AM BLUE OR SAD ALL OF THE TIME AND CAN'T SNAP OUT OF IT.
   iv. I AM SO SAD OR UNHAPPY THAT IT IS QUITE PAINFUL.
   v. I AM SO SAD OR UNHAPPY THAT I CAN'T STAND IT.

2. i. I AM NOT PARTICULARLY PESSIMISTIC OR DISCOURAGED ABOUT THE FUTURE.
   ii. I FEEL DISCOURAGED ABOUT THE FUTURE.
   iii. I FEEL I HAVE NOTHING TO LOOK FORWARD TO.
   iv. I FEEL THAT I WON'T EVER GET OVER MY TROUBLES.
   v. I FEEL THAT THE FUTURE IS HOPELESS AND THAT THINGS CANNOT IMPROVE.

3. i. I DO NOT FEEL LIKE A FAILURE.
   ii. I FEEL I HAVE FAILED MORE THAN THE AVERAGE PERSON.
   iii. I FEEL I HAVE ACCOMPLISHED VERY LITTLE THAT IS WORTHWHILE OR MEANINGFUL.
   iv. AS I LOOK BACK ON MY LIFE ALL I CAN SEE ARE A LOT OF FAILURES.
   v. I FEEL I AM A COMPLETE FAILURE AS A PERSON (PARENT,INDIVIDUAL,HUSBAND,WIFE).

4. i. I AM NOT PARTICULARLY DISSATISFIED
   ii. I FEEL BORED MOST OF THE TIME.
   iii. I DON'T ENJOY THINGS THE WAY I USED TO.
   iv. I DON'T GET SATISFACTION OUT OF ANYTHING ANYMORE.
   v. I AM DISSATISFIED WITH EVERYTHING.

5. i. I DON'T FEEL PARTICULARLY GUILTY.
   ii. I FEEL BAD OR UNWORTHY A GOOD PART OF THE TIME.
   iii. I FEEL QUITE GUILTY.
   iv. I FEEL BAD OR UNWORTHY PRACTICALLY ALL THE TIME NOW.
   v. I FEEL AS THOUGH I AM VERY BAD OR WORTHLESS.

6. i. I DON'T FEEL THAT I AM BEING PUNISHED.
   ii. I HAVE A FEELING THAT SOMETHING VERY BAD MAY HAPPEN TO ME.
   iii. I FEEL THAT I AM BEING PUNISHED OR WILL BE PUNISHED.
   v. I FEEL I DESERVE TO BE PUNISHED.

7. i. I DON'T FEEL DISAPPOINTED IN MYSELF.
   ii. I AM DISAPPOINTED IN MYSELF.
   iii. I DON'T LIKE MYSELF.
   iv. I AM DISGUSTED WITH MYSELF.
   v. I HATE MYSELF.

8. i. I DON'T FEEL I AM ANY WORSE THAN ANYONE ELSE.
   ii. I AM VERY CRITICAL OF MYSELF FOR MY WEAKNESSES OR MISTAKES.
   iii. I BLAME MYSELF FOR EVERYTHING THAT GOES WRONG.
   iv. I FEEL I HAVE MANY BAD FAULTS.

9. i. I DON'T HAVE ANY THOUGHTS OF HARMING MYSELF.
   ii. I HAVE THOUGHTS OF HARMING MYSELF ON OCCASION BUT WOULD NOT CARRY THEM OUT.
   iii. I FEEL I WOULD BE BETTER OFF DEAD.
   iv. I HAVE DEFINITE PLANS ABOUT COMMITTING SUICIDE
   v. I FEEL MY FAMILY WOULD BE BETTER OFF IF I WERE DEAD.
   vi. I WOULD KILL MYSELF IF I COULD.

10. i. I DO NOT CRY ANY MORE THAN USUAL.
    ii. I CRY MORE NOW THAN I USED TO.
    iii. I FEEL IRRITATED ALL THE TIME.
    iv. I USED TO BE ABLE TO CRY BUT NOW CANNOT CRY AT ALL EVEN THOUGH I WANT TO.

11.i. I AM NO MORE IRRITATED NOW THAN I EVER AM.
ii. I GET ANNOYED OR IRRITATED MORE NOW THAN I USED TO.
iii. I FEEL IRRITATED ALL THE TIME.
iv. I DON'T GET IRRITATED AT ALL AT THE THINGS THAT USED TO IRRITATE ME.

12.i. I HAVE NOT LOST INTEREST IN OTHER PEOPLE.
ii. I AM LESS INTERESTED IN OTHER PEOPLE NOW THAN I USED TO BE.
iii. I HAVE LOST MOST OF MY INTEREST IN OTHER PEOPLE AND HAVE LITTLE FEELING FOR THEM.
iv. I HAVE LOST ALL MY INTEREST IN OTHER PEOPLE AND DON'T CARE ABOUT THEM AT ALL.

13.i. I MAKE DECISIONS ABOUT AS WELL AS EVER.
ii. I TRY TO PUT OFF MAKING DECISIONS.
iii. I HAVE GREAT DIFFICULTY IN MAKING DECISIONS.
iv. I CAN'T MAKE DECISIONS AT ALL ANY MORE.

14.i. I DON'T FEEL I LOOK ANY WORSE THAN I USED TO.
ii. I AM WORRIED THAT I AM LOOKING OLD OR UNATTRACTIVE.
iii. I FEEL THERE ARE PERMANENT CHANGES IN MY APPEARANCE, THAT MAKE ME LOOK UNATTRACTIVE.
iv. I FEEL I AM UGLY OR REPULSIVE LOOKING.

15.i. I CAN WORK ABOUT AS WELL AS BEFORE.
ii. IT TAKES EXTRA EFFORT TO GET STARTED AT DOING SOMETHING.
iii. I DON'T WORK AS WELL AS I USED TO.
iv. I HAVE TO PUSH MYSELF VERY HARD TO DO ANYTHING.
v. I CAN'T DO ANYTHING AT ALL.

16.i. I CAN SLEEP AS WELL AS USUAL.
ii. I WAKE UP MORE TIRED IN THE MORNING THAN USUAL.
iii. I WAKE UP 1-2 HOURS EARLIER THAN USUAL AND FIND IT HARD TO GET BACK TO SLEEP.
iv. I WAKE UP EARLY EVERY MORNING AND CANNOT GET MORE THAN 5 HOURS OF SLEEP.
v. IT TAKES ME 1-2 HOURS LONGER THAN USUAL TO GET TO SLEEP AT NIGHT.
vi. IT TAKES A LONG TIME TO FALL ASLEEP AT NIGHT AND I CANNOT GET MORE THAN 5 HOURS SLEEP.

17.i. I DON'T GET ANY MORE TIRED THAN USUAL.
ii. I GET TIRED MORE EASILY THAN I USED TO.
iii. I GET TIRED FROM DOING ANYTHING.
iv. I GET TOO TIRED TO DO ANYTHING.

18.i. MY APPETITE IS NOT WORSE (LESS) THAN USUAL.
ii. MY APPETITE IS NOT AS GOOD AS IT USED TO BE.
iii. MY APPETITE IS MUCH WORSE NOW.
iv. I HAVE NO APPETITE AT ALL ANY MORE.

19.i. I HAVE NOT LOST MUCH WEIGHT, IF ANY, LATELY.
ii. I HAVE RECENTLY LOST 5-10 POUNDS.
iii. I HAVE RECENTLY LOST 10-15 POUNDS.
iv. I HAVE RECENTLY LOST MORE THAN 15 POUNDS.

20.i. I AM NO MORE CONCERNED ABOUT MY HEALTH THAN USUAL.
ii. I AM CONCERNED ABOUT ACHES AND PAINS, OR UPSET STOMACH, OR CONSTIPATION.
iii. I AM SO CONCERNED WITH HOW OR WHAT I FEEL THAT IT IS HARD TO THINK OF MUCH ELSE.
iv. I AM COMPLETELY ABSORBED WITH WHAT I AM FEELING INSIDE (PHYSICALLY).

21.i. I HAVE NOT NOTICED ANY RECENT CHANGE IN MY INTEREST IN SEX.
ii. I AM LESS INTERESTED IN SEX THAN I USED TO BE.
iii. I AM MUCH LESS INTERESTED IN SEX NOW THAN I USED TO BE.
iv. I HAVE LOST INTEREST IN SEX COMPLETELY.

THANK YOU.

Paykel Life-Events Inventory

(Paykel, Uhlenluth, 1972)

LISTED BELOW ARE EVENTS THAT OCCUR IN PEOPLES' LIVES. PLEASE CIRCLE THE NUMBER OF EACH EVENT THAT HAS OCCURRED IN YOUR LIFE DURING THE LAST 6 MONTHS.

1. DEATH OF YOUR CHILD
2. DEATH OF YOUR SPOUSE OR COMMON LAW PARTNER
3. JAIL SENTENCE
4. DEATH OF A CLOSE FAMILY MEMBER (IN YOUR IMMEDIATE FAMILY)
5. YOUR PARTNER HAS AN EXTRAMARITAL AFFAIR
6. MAJOR FINANCIAL DIFFICULTIES (VERY HEAVY DEBTS, BANKRUPTCY)
7. BUSINESS FAILURE
8. FIRED
9. MISCARRIAGE OR STILLBIRTH
10. DIVORCE
11. MARITAL SEPARATION OR SEPARATION FROM RELATIONSHIP PARTNER
12. COURT APPEARANCE FOR SERIOUS LEGAL PROBLEM
13. UNWANTED PREGNANCY
14. MAJOR ILLNESS OF FAMILY MEMBER
15. UNEMPLOYED FOR AT LEAST ONE MONTH
16. DEATH OF A CLOSE FRIEND
17. DEMOTION AT YOUR PLACE OF WORK
18. MAJOR PERSONAL ILLNESS
19. YOU BEGIN AN EXTRAMARITAL AFFAIR
20. LOSS OF A PERSONALLY VALUABLE OBJECT
21. YOU BECOME INVOLVED IN A LAWSUIT
22. ACADEMIC FAILURE (IMPORTANT EXAM OR COURSE OR DEGREE PROGRAM)
23. CHILD MARRIED (NOT APPROVED BY YOU)
24. BREAK ENGAGEMENT
25. INCREASED ARGUMENTS WITH SPOUSE OR RELATIONSHIP PARTNER
26. INCREASED ARGUMENTS WITH FAMILY MEMBER
27. INCREASED ARGUMENTS WITH FIANCE
28. TAKE A LOAN
29. TROUBLES WITH BOSS OR CO-WORKER
30. ARGUMENT WITH NON-RESIDENT FAMILY MEMBER
31. MOVE TO ANOTHER COUNTRY
32. YOU EXPERIENCE MENOPAUSE
33. MODERATE FINANCIAL DIFFICULTIES
34. SEPARATION FROM A SIGNIFICANT PERSON (CLOSE FRIEND OR RELATIVE)
35. TAKE IMPORTANT EXAMINATION
36. MARITAL OR RELATIONSHIP SEPARATION NOT DUE TO ARGUMENT
37. CHANGE IN WORK HOURS
38. NEW PERSON IN HOUSEHOLD
39. RETIREMENT
40. CHANGE IN WORK CONDITIONS
41. CHANGE IN LINE OF WORK (OCCUPATIONAL CHANGE)
42. CEASE STEADY DATING
43. MOVE TO ANOTHER CITY
44. CHANGE OF SCHOOLS
45. CEASE EDUCATION
46. CHILD LEAVES (MOVES AWAY FROM) HOME
47. MARITAL RECONCILIATION
48. MINOR LEGAL VIOLATION
49. BIRTH OF LIVE CHILD
50. WIFE OR RELATIONSHIP PARTNER BECOMES PREGNANT
51. MARRIAGE
52. PROMOTION
53. MINOR PERSONAL ILLNESS
54. MOVE WITHIN THE SAME CITY OR GENERAL AREA
55. BIRTH OF YOUR CHILD OR ADOPTION (FATHER)
56. BEGIN EDUCATION
57. CHILD BECOMES ENGAGED
58. YOU BECOME ENGAGED
59. WANTED PREGNANCY
60. CHILD MARRIED (YOU APPROVE)

Appendix IV

Dream Record Card (Study 2)

DREAM RECORD CARD

DATE:
TIME: **T.E.S.W.:**
DREAM:

Please describe briefly as many of the following aspects of this dream as you can recall:

Setting:

Dream Characters:

Non-Human Dream Characters:

Central Theme of this Dream:

Primary Feeling (Emotion) in this Dream: Fear, Happiness, Puzzlement, Excitement, Apprehension, Embarassment, Sexual Arousal, Other (Please Specify)_____

Intensity of this Feeling: Intense, Strong, Moderate, Weak, Very Weak

Time Frame of this Dream: Past, Present, Future, Mixed, Uncertain (Indeterminate)

Do You Appear/ Are You Present in this Dream? Yes, No, Uncertain

How Old Do You Seem To Be in this Dream? Current Age, Younger (Please Specify), Older (Specify)

How Complete Is Your Recollection of this Dream? Whole, Mostly, Half, Partial, Fragmentary

How Clear Is Your Recollection of this Dream? Very Clear, Clear, Somewhat Clear, Unclear, Very Unclear

If Applicable, How Similar Is This Dream To Your Recurrent Dream? Identical, Very Similar, Similar, Vaguely Similar, Not At All Similar

Appendix V
Other Statistical Results

Study 2

PRD Group vs. RD Group
Results from ANCOVAs

Measures of Well-Being	*F(1, 24)*	*p*
Neuroticism (EPI)	25.44	<.001
Trait Anxiety (STAI)	4.79	<.05
Depression (BDI)	7.61	<.05
General Symptom Index (SCL-90)	4.57	<.05
Life Events (LEI)	19.30	<.001
Personal Adjustment (ACL)	11.47	<.005
Measures of Dream Content		
Friendly/Aggressive interactions	10.66	<.005
Positive/Negative Affect	5.96	<.05
Success/Failure	15.13	<.001
Anxiety	4.09	=.054
Hostility In	5.46	<.05
Hostility Out	3.71	=.066
Hostility Total	9.76	<.01
Archetypality	4.98	<.05

NRD Group vs. RD Group
Results from ANCOVAs

Measures of Well-Being	*F(1, 28)*	*p*
Neuroticism (EPI)	9.74	<.005
Trait Anxiety (STAI)	7.23	<.05
Depression (BDI)	10.62	<.005
General Symptom Index (SCL-90)	10.76	<.005
Life Events (LEI)	19.28	<.001
Personal Adjustment (ACL)	4.82	<.05
Measures of Dream Content		
Friendly/Aggressive interactions	7.67	<.001
Positive/Negative Affect	18.95	<.001
Success/Failure	5.33	<.05
Anxiety	6.90	<.05
Hostility In	5.21	<.05
Hostility Out	4.10	=.052
Hostility Total	9.16	<.01
Archetypality	2.22	<.15

Study 2 continued...

NRD Group vs. PRD Group
Results from ANCOVAs

Measures of Well-Being	*F(1, 25)*	*p*
Neuroticism (EPI)	0.68	>.05
Trait Anxiety (STAI)	0.07	>.05
Depression (BDI)	0.02	>.05
General Symptom Index (SCL-90)	1.27	>.05
Life Events (LEI)	0.35	>.05
Personal Adjustment (ACL)	4.67	<.05
Measures of Dream Content		
Friendly/Aggressive interactions	0.35	>.05
Positive/Negative Affect	0.62	>.05
Success/Failure	2.00	>.05
Anxiety	0.08	>.05
Hostility In	0.44	>.05
Hostility Out	0.05	>.05
Hostility Total	0.22	>.05
Archetypality	0.01	>.05

Study 5

1-Way ANOVAs on Mean Nightmare and Bad Dream Frequency Data for Male (M) versus Female (F) Subjects.

Nightmares

Reporting Method	M (n=17)	F (n=67)	*F(1,78)*	*p*
12 Month* ÷ 12	1.45 (SD=.89)	1.71 (SD=1.14)	.77	>.05
1 Month*	1.04 (SD=.94)	1.78 (SD=1.62)	3.88	>.05
Daily Log[a]	2.42 (SD=2.02)	2.37 (SD=2.07)	.007	>.05

Bad Dreams

Reporting Method	M (n=17)	F (n=67)	*F(1,78)*	*p*
12 Month* ÷ 12	3.20 (SD=1.75)	3.66 (SD=2.03)	.74	>.05
1 Month*	3.47 (SD=1.87)	3.73 (SD=2.84)	.12	>.05
Daily Log[a]	3.88 (SD=2.36)	4.84 (SD=2.80)	1.71	>.05

* = retrospective estimates
a = 4-week dream log

DREAM RECORD SHEET

DATE:
TIME:

DREAM:

Please describe the following aspects of this dream:

The overall feeling (emotion) in this dream: Positive Negative Neutral

Intensity of this feeling: Intense Strong Moderate Weak Very Weak

How complete is your recollection of this dream?
Whole Mostly Half Partial Fragmentary

How vivid is your recollection of this dream?
Very Vivid Vivid Somewhat Vivid Not Vivid Very Unclear

If applicable, how similar is this dream to your recurrent dream?
Identical Very Similar Similar Vaguely Similar Not at all Similar

In this dream, did you ever realize that you were in fact dreaming (e.g., did you ever tell yourself during the dream "I know I'm dreaming right now and that I'm actually in bed sleeping")? Yes No

Appendix VII

French Version of Test Materials

Questionnaire Sur Les Rêves et le Sommeil

Nom: Code du Participant:
Sexe:
Age:
Marié: ____ Céibataire: ____
Niveau d'education (Diplôme obtenus):
Adresse:

No. tél.:

Consignes: S.V.P. répondez aux questions suivantes aussi honnêtement que vous le pouvez. Ces questions sont nécessaire vu que plusieurs facteurs peuvent influencer vos rêves. Les réponses et l'information que vous nous confiez demeuront confidentielles. Toutes vos réponses seront codées et seul le chercheur principal y aura accès. Si vous ne pouvez pas répondre à une question auriez-vous l'obligeance de nous indiquer pourquoi. Ceci nous aidera grandement à développer de futurs questionnaires. Merci.

1. En moyenne, de combien de rêves vous souvenez-vous par semaine: _____

2. Lorsque vous vous levez le matin, vous souvenezvous d'avoir eu
   1 2 3 4 plus que 4 rêves la nuit précédente.

3. Lorsque vous vous réveillez, êtes-vous capable de vous rappeler généralement de vos rêves: Facilement Avec peu d'effort Avec un certain effort
   Avec beaucoup d'effort Avec énormément d'effort

4. Lorsque vous vous réveillez, vous souvenez-vous généralement de vos rêves:
   Entièrement Presqu'en totalité En partie(quelques bouts-manquent)
   En partie(plusieurs bouts manquent)

5. Cotez sur l'échelle suivante à quel point vous vous rappelez régulièrement de vos rêves? (c.a.d., Y'a-t-il des périodes où vous vous rappelez de beaucoup ou de peu de rêves.) Encerclez un chiffre:

   très régulièrement.....très irrégulièrement
   1 2 3 4 5

6. A quel point vos rêves sont-ils vifs? (encerclez un chiffre) (1) extrêmement vifs (2) très vifs (3) vifs (4) dans la moyenne (5) embrouillés (6) très embrouillés

7. Avez-vous déjà gardé un journal de vos rêves? Oui___ Non___
   Si oui, pour combien de temps? _____

8. Avez-vous déjà "travaillé" sur vos rêves? Oui___ Non___ Si oui, expliquez.

9. Avez-vous déjà pris part à une psychothérapie où les rêves jouaient un rôle important? Oui___ Non___ Si oui, quand et pour combien de temps? Quel genre de thérapie?

10. Etes-vous présentement suivi(e) en psychothérapie? _____
    Avec ou sans rêves? _____

11. Etes-vous suivi par un médecin à cause d'une condition médicale sérieuse?
Oui___ Non____ Si oui, décrivez brièvement.

12. Prenez- vous présentement des médicaments prescrits par un médecin?
Oui___ Non____

13. Fumez-vous présentement la cigarette? Oui___ Non____
Si oui, combien de cigarettes, approximativement, fumez-vous par jour?_____

14. Vous réveillez-vous à l'aide d'un réveil-matin? Oui____ Non____

15. En moyenne, combien de temps cela vous prend-t-il pour vous endormir?
(specifiez en minutes) _____

16. Combien de fois par semaine vous endormez-vous en dedans de 5 minutes? _____

17. Combien de fois par semaine vous endormez-vous après plus de 30 minutes? _____

18. A quel degré vous sentez-vous reposé le matin en vous levant?
(a) très (b) modérément (c) peu (d) pas du tout

19. Indiquez la fréquence de vos cauchemars (encerclez un seul choix)
Plus d'un par semaine Un par semaine Plus d'un par mois Un par mois
Un tous les trois quatre mois Un par année Un tous les deux à cinq ans Jamais

20. Estimez le nombre de cauchemars que vous avez eu au cours de la dernière année?_____

21. Lorsque vous avez un cauchemar, est-ce que les images ou les émotions que vous ressentez vous réveillent? Toujours Souvent Parfois Rarement Jamais

22. Vous arrive-t-il de voler dans vos rêves? Oui___ Non___

23. Avez-vous l'impression que certain thèmes sont récurrents dans vos rêves?
Oui___ Non___ Incertain____

24. Avez-vous déjà eu un rêve où vous étiez en chute libre (c'est un rêve ou il y a peu d'images et vous avez la sensation de tomber dans le vide. Le rêve se termine par un réveil soudain). Oui___ Non___ Incertain___

25. Vous êtes-vous déjà souvenus de goûts ou d'odeurs spécifiques provenant d'un rêve? Oui___ Non___ Si oui, spécifiez: goûts___ odeurs____ les deux____

26. Avez-vous déjà senti des douleurs physiques dans vos rêves? Oui___ Non____
Si oui, expliquez brièvement.

27. Vous est-il déjà arrivé de rêver à quelque chose auquel vous aviez déjà prévu de rêver? Oui___ Non___

28. Vous arrive-t-il d'exercer un contrôle sur vos rêves (pouvez-vous changer les scènes dans vos rêves ou commander différentes choses avec votre volonté)?
Oui___ Non___ Parfois____ Rarement_____ Jamais_____

29. Vous rappelez-vous déjà d'avoir essayé de lire un passage (d'un livre, note de cours, un texte, etc.) dans un ou plusieurs de vos rêves? Oui___ Non___
Si oui, avez-vous été capable de lire? Oui___ Non___ Parfois____

30. Avez-vous déjà eu un rêve lucide, c'est-a-dire un rêve ou il n'y a aucun doute que vous avez conscience que vous rêvez alors que vous dormez?
Oui___ Non____ Incertain____
Si oui: (i) Combien?_____ (nombre approximatif)
(ii) A quand remonte le plus récent? _____
(iii) Dans ce type de rêve, essayez-vous d'utiliser le fait que vous êtes lucides pour changer ou contrôler des aspects du rêve? Oui___ Non___
(iv) Si oui, estimatez dans quelle proportion vous êtes capables d'exercer un tel contrôle: 10% 25% 50% 75% Toujours

31. Si vous avez déjà eu un rêve lucide, spécifiez la fréquence à laquelle vous avez ce type de rêve: Une ou plus d'une fois par semaine Plus d'une fois par mois Une fois chaque quelque mois Une fois par année Moins qu'une fois par année

32. Si vous avez déjà eu un rêve lucide, s.v.p. décrivez-le ci-dessous.

34. Avez-vous déjà eu un rêve récurrent; c'est-à-dire que vous avez l'impression d'avoir déjà eu le même rêve.
Oui___ Non____ Incertain_____
(Si vous avez répondu 'non,' allez à la question #41. Si vous avez répondu 'oui,' s.v.p. répondez aux questions suivantes.)

34 (b). Est-ce que le contenu de votre rêve récurrent est: Toujours identique Souvent identique Parfois identique Rarement identique Jamais identique

34 (c). Est-ce que le thème de votre rêve récurrent est: Toujours identique Souvent identique Parfois identique Rarement identique Jamais identique

35. Pouvez-vous vous rappeler d'avoir eu un rêve récurrent: Dans votre jeunesse Pendant votre adolescence En tant qu'adulte Incertain Jamais

36. Au cours de la dernière année, avez-vous eu un rêve récurrent? Oui___ Non___

37. Au cour des derniers six mois, avez-vous eu un rêve récurrent? Oui___ Non___

38. Avez-vous présentement un rêve récurrent? Oui___ Non___

39. Si cela s'applique, sur une période de combien de temps votre rêve s'est-il répété:
Une semaine Un mois Plusieurs mois Une année
Plus qu'un année/s.v.p. specifiez

40. S.V.P. décrivez votre rêve récurrent. (Essayez d'inclure l'environnement dans lequel se passe le rêve, les gens ou les choses impliqués, la fin (s'il y en a une), ou tout autre détail que vous pensez important.)

Pour ce qui est des questions 41 à 51, s.v.p. indiquez la fréquence d'apparitions des sentiments suivants dans les rêves dont vous rappelez.

	toujours	souvent	parfois	rarement	jamais
41. Joie:	1	2	3	4	5
42. Peur:	1	2	3	4	5
43. Tristesse:	1	2	3	4	5
44. Sentiment d'être reposé:	1	2	3	4	5
45. Confusion:	1	2	3	4	5
46. Satisfaction:	1	2	3	4	5
47. Colère:	1	2	3	4	5
48. Frustration:	1	2	3	4	5
49. Excitation sexuelle:	1	2	3	4	5
50. Appréhension:	1	2	3	4	5
51. Embarassé/gêné:	1	2	3	4	5

52. Est-ce que vos rêves sont généralement (encerclez votre réponse):
Plaisants Déplaisants Les Deux Neutres

53. Dans vos rêves êtes-vous plus enclin à être:
Anxieux Calme Les Deux Incertain

54. Dans vos rêves êtes-vous plus enclin d'agir:
De Votre Plein Gré Contre Votre Gré Incertain

55. Dans vos rêves êtes-vous plus enclin à éprouver:
Du Succès Des Echecs Incertain

56. Dans vos rêves êtes-vous plus enclin à être: Chanceux/d'avoir de la bonne fortune
Malchnanceux/d'avoir de la mauvaise fortune Incertain

57. Indiquez votre expérience et votre intérêt pour la méditation. Cocher une une réponse seulement.

____ a. aucune expérience, aucun intérêt
____ b. aucune expérience, intérêt moyen
____ c. aucune expérience, très intéressé
____ d. un peu d'expérience (sans pratiquer présentement), aucun intérêt
____ e. un peu d'expérience (sans pratiquer présentement), intérêt moyen
____ f. un peu d'expérience (sans pratiquer présentement), très intéressé
____ g. je medite de facon reguliere. Si vous avez coché cette réponse indiquer:
i) depuis combien de temps méditez-vous (en mois) _____
ii) le temps moyen par jour que vous méditez _____

58. Les prochaines affirmations vont créer des images dans votre esprit. Cotez chacunes de ces images à l'aide de l'échelle suivante:

aucune image, je sais----------modérément claires----------claire et vives,
seulement que j'y pense et vives identique à la réalité
1 2 3 4 5 6 7

(i) Imaginez les sons ci-dessous et classifiez la vivacité et la clarté de ceux-ci à l'aide de l'échelle citée au no. 58. (c.a.d., donnez un numéro):

a. le ruisselement d'un cour d'eau dans une forêt____
b. un chien qui aboie____ c. les pleurs d'un bébé____ d. du verre que l'on casse____

(ii) Imaginez les actions suivantes et clasifiez la vivacité et la clarté de celles-ci à l'aide de l'échelle citée au no. 58. (c.a.d., donnez un numéro):

a. toucher votre épaule____ b. sauter à la corde sur un trottoir____
b. écrire à l'aide d'une plume____ d. se retourner dans le lit____

59. Est-ce que vous considérez que vos rêves ont généralement un sens ou qu'ils transmettent d'important messages? Oui____ Non___

60. Est-ce que vous discutez souvent de vos rêves avec votre famille ou vos amis(e)?
Très souvent Souvent Parfois Rarement Jamais

61. Quelle niveau d'attention portez-vous à vos rêves? (encerclez un numéro):

très peu.....beaucoup
1 2 3 4 5 6 7

62. Cotez le degré de signification que vous attachez à vos rêves (encerclez un numéro):

très peu.....beaucoup
1 2 3 4 5 6 7

63-a. Reculez dans le temps et essayer de décrire le rêve le plus ancien dont vous vous souvenez. A quel âge avez-vous eu ce rêve? (S.V.P. décrivez ce rêve le plus complètement possible.)

63-b. Souvenez-vous du rêve le plus vif que vous ayez eu, et si possible des événements que vous associez à ce rêve. (Décrivez le rêve en premier et par-après décrivez les événements. S.V.P. faites le tout le plus complètement possible.)

Social Desirability Scale
(Marlowe & Crown, 1964) v.f.

VOUS RETROUVEREZ CI-DESSOUS UNE LISTE D'ENONCES CONCERNANT DES ATTITUDES PERSONNELLES ET CERTAINS COMPORTEMENTS. INDIQUEZ PAR VRAI OU FAUX SI CHACUN DES ENONCES S'APPLIQUE A VOUS PERSONNELLEMENT.

1. Avant de voter j'étudie à fond les qualifications de tous les candidats..... V ou F
2. Je n'hésite jamais à faire un effort particulier pour aider quelqu'un en difficulté..... V ou F
3. Il m'est parfois difficile de continuer à travailler si l'on ne m'encourage pas..... V ou F
4. Je n'ai jamais profondément détesté quelqu'un..... V ou F
5. Je doute parfois de mes capacités pour réussir dans la vie. ..... V ou F
6. A l'occasion je deviens contrarié si l'on ne fait pas les choses à ma manière ..... V ou F
7. Je soigne toujours mon habillement..... V ou F
8. Lorsque je suis au restaurant mes manières à table sont identiques à celles que j'ai à la maison..... V ou F
9. Si je pouvais voir un film sans le payer et sans que personne ne le sache, je le ferais. ..... V ou F
10. Il m'est arrivé dans certaines occasions d'abandonner des projets parce que je croyais avoir peu d'habilrtés. ..... V ou F
11. J'aime potiner à l'occasion..... V ou F
12. J'ai parfois eu l'envie de m'élèver contre ceux détenant l'autorité même s'ils avaient raison. ..... V ou F
13. Peu importe à qui je parle, j'écoute toujours bien. ..... V ou F
14. Je me rappele d'avoir fait semblant d'être malade pour éviter de fair quelque chose..... V ou F
15. Dans certaines situations j'ai déjà profité de quelqu'un..... V ou F
16. Je suis toujours prêt à admettre que j'ai fait une erreur. ..... V ou F
17. J'essaie toujours de mettre en pratique ce que je prêche..... V ou F
18. Je ne trouve pas ça si difficile de m'entendre avec des gens bruyants et insupportables. ..... V ou F
19. J'essaie parfois de me venger plutôt que d'oublier ou de pardonner..... V ou F
20. Lorsque j'ignore quelque chose cela ne me fait rien de l'admettre..... V ou F
21. Je suis toujours courtois même avec les gens désagréables..... V ou F
22. J'ai parfois insisté que l'on fasse les chose à ma façon..... V ou F
23. Dans certaines situations j'ai eu envie de fracasser des pots. ..... V ou F
24. Jamais je n'oserais penser laisser quelqu'un d'autre se faire punir pour mes méfaits (ou mauvaises actions). ..... V ou F
25. Je ne suis jamais amer lorsque l'on me demande de retourner une faveur..... V ou F
26. Je n'ai jamais été contrarié par des gens exprimant des opinions contraires à la mienne. ..... V ou F
27. Je ne fais jamais de long voyage en auto sans vérifier le bon functionnement de ma voiture. ..... V ou F
28. A certains moments, j'ai été jaloux du bonheur d'autrui..... V ou F
29. Je n'ai presque jamais senti le besoin d'envoyer promener quelqu'un..... V ou F
30. Je suis parfois irrité par les gens qui me demandent des faveurs..... V ou F
31. Je n'ai jamais eu l'impression d'avoir été puni sans bonnes raisons..... V ou F
32. Je pense parfois que les gens qui ont des problèmes le méritent..... V ou F
33. Je n'ai jamais delibérément dit quelque chose pour blesser quelqu'un..... V ou F

Questionnaire d'évaluation personnelle SX-fs

A S T A

CONSIGNE: Voici un certain nombre d'énoncés que les gens ont l'habitude d'utiliser pour se décrire. Lisez chaque énoncé, puis encerclez le chiffre approprié à droite de l'exposé pour indiquer comment vous vous sentez en général. Il n'y a pas de bonnes ou de mauvaises réponses. Ne vous attardez pas trop sur chaque énoncé mais donnez la réponse qui vous semble décrire le mieux les sentiments que vous éprouvez de façon générale.

		PRESQUE JAMAIS	QUELQUEFOIS	SOUVENT	PRESQUE TOUJOURS
21.	Je me sens bien	1	2	3	4
22.	Je me fatigue rapidement	1	2	3	4
23.	Je me sens au bord des larmes	1	2	3	4
24.	Je souhaiterais être aussi heureux que les autres semblent l'être	1	2	3	4
25.	Je perds de belles occasions parce que je n'arrive pas à me décider assez rapidement.....	1	2	3	4
26.	Je me sens reposé	1	2	3	4
27.	Je suis calme, tranquille et en paix	1	2	3	4
28.	Je sens que les difficultés s'accumulent au point que je ne peux pas en venir à bout	1	2	3	4
29.	Je m'en fais trop pour des choses qui n'en valent pas vraiment la peine	1	2	3	4
30.	Je suis heureux	1	2	3	4
31.	Je suis porté à prendre mal les choses	1	2	3	4
32.	Je manque de confiance en moi	1	2	3	4
33.	Je me sens en sécurité	1	2	3	4
34.	J'essaie d'éviter de faire face à une crise ou une difficulté ...	1	2	3	4
35.	Je me sens mélancolique	1	2	3	4
36.	Je suis content	1	2	3	4
37.	Des idées sans importance me passent par la tête et me tracassent	1	2	3	4
38.	Je prends les désapointements tellement à coeur que je n'arrive pas à me les sortir de la tête	1	2	3	4
39.	Je suis une personne stable	1	2	3	4
40.	Je deviens tendu et bouleversé quand je songe à mes préoccupations actuelles	1	2	3	4

INVENTAIRE DE PERSONNALITÉ D'EYSENCK

par H. J. Eysenck et Sybil B. G. Eysenck

E. P. I. Forme A

NOM _____ PRÉNOM _____ AGE _____

PROFESSION _____ SEXE _____

N = ☐ E = ☐ L = ☐

Instructions :

Voici quelques questions concernant votre comportement, votre sensibilité, vos actes. A chaque question, vous pourrez répondre par "OUI" ou par "NON".

Efforcez-vous de décider si les réponses "OUI" ou "NON" représentent votre façon habituelle d'agir ou de sentir. Ensuite, mettez une croix dans le cercle de la colonne intitulée "OUI" ou "NON". Travaillez rapidement et ne passez pas trop de temps sur chaque question ; ce que nous voulons, c'est votre première réaction et non pas une réponse mûrement réfléchie. L'ensemble du questionnaire ne devrait pas prendre plus de quelques minutes. Assurez-vous de n'oublier aucune question.

Maintenant tournez la page et commencez. Travaillez rapidement et n'oubliez pas de répondre à toutes les questions. Il n'y a ni bonnes ni mauvaises réponses ; ce n'est pas un test d'intelligence ou d'aptitude, mais simplement une description de votre façon d'être.

LES ÉDITIONS DU CENTRE DE PSYCHOLOGIE APPLIQUÉE, 48, Avenue Victor-Hugo, 75783 PARIS CEDEX 16. Tél. 553-50-51.

E ○ N ○ L ○

FORME A

		OUI	NON
1.	Avez-vous souvent le désir d'éprouver des émotions intenses ?	○	○
2.	Avez-vous fréquemment besoin d'amis compréhensifs pour vous réconforter ?	○	○
3.	Etes-vous d'habitude insouciant ?	○	○
4.	Vous est-il très pénible d'essuyer un refus ?	○	○
5.	Prenez-vous le temps de réfléchir avant d'entreprendre quelque chose ?	○	○
6.	Si vous vous êtes engagé à faire une chose, tenez-vous toujours votre promesse, sans tenir compte des ennuis que cela pourrait vous causer ?	○	○
7.	Votre humeur passe-t-elle souvent par des hauts et des bas ?	○	○
8.	Agissez-vous et parlez-vous rapidement sans réfléchir ?	○	○
9.	Vous arrive-t-il parfois de vous sentir « malheureux » sans raison valable ?	○	○
10.	Etes-vous prêt à n'importe quoi par bravade ?	○	○
11.	Vous sentez-vous tout d'un coup timide quand vous voulez aborder une personne inconnue qui vous attire ?	○	○
12.	Vous arrive-t-il à l'occasion de perdre votre calme et de vous mettre en colère ?	○	○
13.	Agissez-vous souvent sous l'impulsion du moment ?	○	○
14.	Vous arrive-t-il souvent de vous tracasser à propos de choses que vous n'auriez pas dû faire ou dire ?	○	○
15.	Dans l'ensemble, préférez-vous la compagnie des livres plutôt que celle des gens ?	○	○
16.	Vous sentez-vous facilement froissé ?	○	○
17.	Aimez-vous beaucoup sortir ?	○	○
18.	Vous arrive-t-il d'avoir des pensées et des idées dont vous n'aimeriez pas qu'elles soient connues d'autres personnes ?	○	○
19.	Etes-vous tantôt débordant d'énergie, tantôt abattu ?	○	○
20.	Préférez-vous avoir des amis peu nombreux mais choisis ?	○	○
21	Avez-vous l'habitude de rêvasser ?	○	○
22.	Quand quelqu'un crie après vous, répondez-vous sur le même ton ?	○	○
23.	Eprouvez-vous souvent des sentiments de culpabilité ?	○	○
24.	Peut-on dire de *toutes* vos manières de vivre qu'elles sont bonnes et à citer en exemple ?	○	○
25.	Dans une fête, vous est-il généralement possible de vous laisser aller à vous amuser follement ?	○	○
26.	Pourriez-vous vous décrire comme « tendu » ou d'une « nervosité extrême » ?	○	○
27.	Est-ce qu'on vous considère comme une personne pleine de vie ?	○	○

		OUI	NON
28.	Après avoir réalisé quelque chose d'important, restez-vous sur l'impression que vous auriez pu mieux faire ?	○	○
29.	En général, quand vous êtes avec d'autres personnes, restez-vous silencieux la plupart du temps ?	○	○
30.	Vous arrive-t-il parfois de vous livrer à des commérages ?	○	○
31.	La nuit, avez-vous des pensées qui vous empêchent de dormir ?	○	○
32.	Si vous avez besoin d'un renseignement, préférez-vous le chercher dans un livre plutôt que de le demander à quelqu'un ?	○	○
33.	Avez-vous des palpitations ou des battements de cœur ?	○	○
34.	Aimez-vous un genre de travail qui nécessite beaucoup d'attention ?	○	○
35.	Avez-vous des accès de tremblements ou de frissons ?	○	○
36.	Seriez-vous toujours prêt à *tout* déclarer à la douane, même en sachant que vous ne seriez pas pris ?	○	○
37.	Détestez-vous vous trouver mêlé à un groupe de gens qui se font des farces ?	○	○
38.	Etes-vous facilement irrité ?	○	○
39.	Aimez-vous les situations dans lesquelles il faut agir vite ?	○	○
40.	Etes-vous tourmenté à l'idée de malheurs terribles qui pourraient vous arriver ?	○	○
41.	Etes-vous lent et nonchalant dans votre façon de vous déplacer ?	○	○
42.	Vous est-il jamais arrivé d'être en retard à un rendez-vous ou au travail ?	○	○
43.	Faites-vous beaucoup de cauchemars ?	○	○
44.	Aimez-vous parler à autrui au point d'adresser la parole à n'importe quelle personne inconnue ?	○	○
45.	Etes-vous dérangé par des maux et des douleurs ?	○	○
46.	Seriez-vous très malheureux si vous étiez privé d'une compagnie nombreuse la plupart du temps ?	○	○
47.	Vous considérez-vous comme une personne nerveuse ?	○	○
48.	Parmi tous les gens que vous connaissez, y en a-t-il qui vous soient franchement antipathiques ?	○	○
49.	Pensez-vous être passablement sûr de vous ?	○	○
50.	Etes-vous facilement vexé quand quelqu'un trouve à vous critiquer, vous-même ou votre travail ?	○	○
51.	Vous est-il difficile de vous amuser réellement dans une fête ?	○	○
52.	Eprouvez-vous souvent des sentiments d'infériorité ?	○	○
53.	Etes-vous capable sans peine de donner de l'entrain à une réunion plutôt ennuyeuse ?	○	○
54	Vous arrive-t-il quelquefois de parler de choses dont vous ignorez tout ?	○	○
55.	Vous faites-vous du souci à propos de votre santé ?	○	○
56.	Aimez-vous faire des farces aux autres ?	○	○
57.	Souffrez-vous d'insomnie ?	○	○

ASSUREZ-VOUS D'AVOIR RÉPONDU A TOUTES LES QUESTIONS, S'IL VOUS PLAIT

Symptom Check-List 90-R
(Derogatis, 1976) v.f.

Vous retrouverez ci-dessous une liste de problèmes ou de maladies. Lisez chacun des enoncés et encerclez le numéro qui correspond "à quel point vous avez été ennuyé par ces problèmes/maladies au cours du dernier mois (aujourd'hui inclus)." Encerclez le numéro qui correspond à comment vous vous êtes sentis. S.V.P. remplissez-les tous.

Choix de Réponses:
0 Pas du Tout
1 Un Peu
2 Modérément
3 Beaucoup
4 Extrêmement

A quel point avez-vous été ennuyé par:

1. Des maux de têtes 0 1 2 3 4
2. Des faiblesses ou de la nervosité 0 1 2 3 4
3. Des pensées désagréables répétitives que vous ne pouvez pas chasser de votre esprit 0 1 2 3 4
4. Des évanouissements ou des nausées 0 1 2 3 4
5. Une perte d'intérêt sexuel ou de plaisir sexuel 0 1 2 3 4
6. L'impression que vous critiquez les autres 0 1 2 3 4
7. L'impression que quelqu'un contrôle vos pensées 0 1 2 3 4
8. L'impression que les autres sont responsables de vos ennuis 0 1 2 3 4
9. Une difficulté à vous souvenir de choses courantes 0 1 2 3 4
10. La préoccupation de manquer de propreté ou d'être négligent 0 1 2 3 4
11. L'impression que vous êtes facilement ennuyable ou irritable 0 1 2 3 4
12. Des douleurs au coeur ou à la poitrine 0 1 2 3 4
13. Une peur d'être dans des espace ouverts ou sur la rue 0 1 2 3 4
14. La sensation que vous avez peu d'énergie ou que vous vous sentez au ralenti 0 1 2 3 4
15. Des idées d'en finir avec votre vie 0 1 2 3 4
16. Des voix que les autres n'entendent pas 0 1 2 3 4
17. Des tremblements 0 1 2 3 4
18. L'impression de ne pouvoir faire confiance à personne 0 1 2 3 4
19. Un manque d'appétit 0 1 2 3 4
20. Une tendance à pleurer facilement 0 1 2 3 4
21. La sensation d'être gêné ou inconfortable avec le sexe opposé 0 1 2 3 4
22. La sensation d'être pris au piège 0 1 2 3 4
23. L'impression d'avoir soudainement peur pour aucune raison 0 1 2 3 4
24. Des colères incontrôlables 0 1 2 3 4
25. La peur de quitter la maison seul 0 1 2 3 4

26. Le fait que vous vous blâmez pour tout et rien 0 1 2 3 4
27. Des douleurs dans le bas du dos 0 1 2 3 4
28. Le sentiment d'être bloqué face à des tâches que vous devez accomplir. 0 1 2 3 4
29. L'impression de vous sentir seul 0 1 2 3 4
30. L'impression de vous sentir triste 0 1 2 3 4
31. L'impression de vous inquiéter pour un rien 0 1 2 3 4
32. L'impression d'avoir aucun interêt pour les choses qui vous entourent 0 1 2 3 4
33. La sensation d'être craintif 0 1 2 3 4
34. L'impression que l'on peut facilement vous blesser émotivement 0 1 2 3 4
35. L'impression que certaines personnes connaissent vos pensées "privées" 0 1 2 3 4
36. L'impression que personne ne semble vous comprendre 0 1 2 3 4
37. L'impression de ne pas être apprécié ou aimé par les gens 0 1 2 3 4
38. Le fait que vous faites les choses très lentement pour vous assurer qu'elles sont bien faites 0 1 2 3 4
39. Votre coeur se débat 0 1 2 3 4
40. Des maux de ventre ou des nausées 0 1 2 3 4
41. L'impression de vous sentir inférieur aux autres 0 1 2 3 4
42. Des douleures musculaires 0 1 2 3 4
43. L'impression que l'on vous regarde/parle de vous 0 1 2 3 4
44. Une difficulté à vous endormir 0 1 2 3 4
45. Le fait que vous devez vérifier et revérifiez ce que vous faites 0 1 2 3 4
46. Une incapacité à prendre des décisions 0 1 2 3 4
47. Une peur de prendre l'autobus, le métro ou le train 0 1 2 3 4
48. Une incapacité de retrouver votre souffle 0 1 2 3 4
49. Des sueurs froides ou chaudes 0 1 2 3 4
50. Le fait que vous évitez des endroits qui vous font peur 0 1 2 3 4
51. Des blancs de mémoire 0 1 2 3 4
52. Des engourdissements ou des fourmillements dans certaines parties de votre corps 0 1 2 3 4
53. Le fait d'avoir un serrement de gorge 0 1 2 3 4
54. Un sentiment de désespoir face au future 0 1 2 3 4
55. Une difficulté à vous concentrer 0 1 2 3 4
56. Des faiblesses dans certaines parties de votre corps 0 1 2 3 4
57. Un sentiment de tension 0 1 2 3 4
58. Un sentiment que vos jambes et vos bras sont lourds 0 1 2 3 4

59. Des réflexions sur la mort ou sur la possibilité de mourir..... 0 1 2 3 4
60. De la suralimentation..... 0 1 2 3 4
61. Un sentiment d'inquiétude lorsque les gens vous regardent ou parlent de vous 0 1 2 3 4
62. Des pensées qui ne sont pas les vôtres 0 1 2 3 4
63. Un besoin soudain de blesser ou de faire mal à quelqu'un..... 0 1 2 3 4
64. Un réveil très tôt le matin..... 0 1 2 3 4
65. Une répétition des mêmes actions: toucher, compter, se laver..... 0 1 2 3 4
66. Un sommeil agité ou troublé..... 0 1 2 3 4
67. Un besoin soudain de fracasser ou de briser des objets 0 1 2 3 4
68. Des idées ou des croyance que personne d'autre ne partage 0 1 2 3 4
69. Un sentiment de timidité lorsque vous êtes avec les gens 0 1 2 3 4
70. Un sentiment d'inquiétude quand vous êtes dans une foule en train de magasiner ou au cinéma 0 1 2 3 4
71. L'impression que tout exige un effort 0 1 2 3 4
72. Des moments de panique ou de terreur 0 1 2 3 4
73. Un sentiment d'être mal à l'aise à manger ou boire en public..... 0 1 2 3 4
74. Des disputes fréquentes 0 1 2 3 4
75. Un sentiment de nervosité lorsque l'on vous laisse seul 0 1 2 3 4
76. Des gens qui ne reconnaissent pas vos accomplissements 0 1 2 3 4
77. Un sentiment de solitude même lorsque vous êtes avec des gens 0 1 2 3 4
78. L'impression que vous êtes si agité que vous êtes incapable de vous asseoir 0 1 2 3 4
79. Un sentiment d'inutilité (que vous êtes sans valeur)..... 0 1 2 3 4
80. Un sentiment que quelque chose de mauvais va vous arriver..... 0 1 2 3 4
81. Des cris ou par le fait que vous lancez des objects 0 1 2 3 4
82. L'impression que vous allez vous évanouir en public 0 1 2 3 4
83. Le sentiment que les gens vont abuser de vous si vous leur en donnez la chance..... 0 1 2 3 4
84. Des idées d'ordre sexuelles qui vous inquiètent..... 0 1 2 3 4
85. L'idée qu'on devrait vous punir pour vos pêchés..... 0 1 2 3 4
86. Des idées et des pensées effrayantes..... 0 1 2 3 4
87. L'idée que quelque chose ne va pas avec votre corps..... 0 1 2 3 4
88. L'impression que vous n'êtes pas proche de personne..... 0 1 2 3 4
89. Un sentiment de culpabilité 0 1 2 3 4
90. L'idée que quelque chose ne va pas avec votre esprit..... 0 1 2 3 4

Merci.

LISTE D'ADJECTIFS
(ACL)

Nom_____ Age_____ Sexe_____
(nom) (prénom)

Date_____ Autre_____

Instructions: La feuille suivante contient une liste de 300 adjectifs. Lisez-les rapidement et mettez un "X" devant chacun des adjectifs qui vous décrivent. Ne vous souciez pas des répétition et des contradictions. Travaillez rapidement et ne passez pas trop de temps sur un adjectif. Essayez d'être franc et marquez les adjectifs qui vous décrivent comme vous êtes, non comme vous aimeriez être.

Publiée en anglais sous le titre: the Adjective Check List par the Consulting Psychologists Press, 577 College Avenue, Palo Alto, California, U.S.A.

___ 1. distrait
___ 2. actif
___ 3. souple
___ 4. aventureux
___ 5. affecté
___ 6. affectueux
___ 7. agressif
___ 8. vif
___ 9. distant
___ 10. ambitieux
___ 11. anxieux
___ 12. apathique
___ 13. reconnaissant
___ 14. raisonneur
___ 15. arrogant
___ 16. artiste
___ 17. combatif
___ 18. attirant
___ 19. autoritaire
___ 20. maladroit
___ 21. amer
___ 22. hableur
___ 23. vantard
___ 24. directif
___ 25. calme
___ 26. capable
___ 27. négligent
___ 28. circonspect
___ 29. changeant
___ 30. charmant
___ 31. gai
___ 32. courtois
___ 33. lucide
___ 34. habile
___ 35. grossier
___ 36. froid
___ 37. ordinaire
___ 38. grognon
___ 39. compliqué
___ 40. vaniteux
___ 41. assuré
___ 42. confus
___ 43. consciencieux
___ 44. conservateur
___ 45. attentionné
___ 46. satisfait
___ 47. conventionnel
___ 48. un peu froid
___ 49. coopératif
___ 50. courageux
___ 51. lâche
___ 52. cruel
___ 53. curieux
___ 54. cynique
___ 55. audacieux
___ 56. fourbe
___ 57. sur la défensive
___ 58. pondéré
___ 59. exigeant
___ 60. sûr
___ 61. dépendant
___ 62. découragé
___ 63. résolu
___ 64. digne
___ 65. discret
___ 66. désordonné
___ 67. insatisfait
___ 68. inattentif
___ 69. méfiant
___ 70. dominateur
___ 71. rêveur
___ 72. terne
___ 73. insoucient
___ 74. efféminé
___ 75. efficace
___ 76. égotiste
___ 77. émotif
___ 78. énergique
___ 79. entreprenant
___ 80. enthousiaste
___ 81. fuyant
___ 82. excitable
___ 83. équitable
___ 84. critiqueur
___ 85. craintif
___ 86. féminin
___ 87. volage
___ 88. flirteur
___ 89. insensé
___ 90. vigoureux
___ 91. clairvoyant
___ 92. oublieux
___ 93. indulgent
___ 94. formaliste
___ 95. franc
___ 96. amical
___ 97. frivole
___ 98. tatillon
___ 99. généreux
___ 100. tendre
___ 101. mélancolique
___ 102. distingué
___ 103. débonnaire
___ 104. avide
___ 105. élégant
___ 106. têtu
___ 107. insensible
___ 108. précipité
___ 109. forte tête
___ 110. sain
___ 111. serviable
___ 112. survolté
___ 113. honnête
___ 114. hostile
___ 115. plein d'humour
___ 116. pressé
___ 117. idéaliste
___ 118. imaginatif
___ 119. immature
___ 120. emporté
___ 121. impulsif
___ 122. indépendant
___ 123. indifférent
___ 124. individualiste
___ 125. travailleur
___ 126. enfantin
___ 127. non conformiste
___ 128. ingénieux
___ 129. inhibé
___ 130. a l'esprit d'initiative
___ 131. perspicace
___ 132. intelligent
___ 133. s'interesse à peu de choses
___ 134. s'interesse à beaucoup de choses
___ 135. intolérant
___ 136. inventif
___ 137. irresponsable
___ 138. irritable
___ 139. jovial
___ 140. gentil
___ 141. paresseux
___ 142. flâneur
___ 143. logique
___ 144. bruyant
___ 145. loyal
___ 146. maniéré
___ 147. viril
___ 148. mûr
___ 149. soumis
___ 150. méthodique
___ 151. doux

___ 152. malicieux
___ 153. modéré
___ 154. modeste
___ 155. mousseade
___ 156. agaçant
___ 157. naturel
___ 158. nerveux
___ 159. tapageur
___ 160. complaisant
___ 161. odieux
___ 162. opiniatre
___ 163. opportuniste
___ 164. optimiste
___ 165. organisé
___ 166. original
___ 167. expansif
___ 168. direct
___ 169. soigneux
___ 170. patient
___ 171. paisible
___ 172. singulier
___ 173. persévérant
___ 174. tenace
___ 175. pessimiste
___ 176. prévoyant
___ 177. agréable
___ 178. bon vivant
___ 179. équilibré
___ 180. raffiné
___ 181. a l'esprit pratique
___ 182. louangeur
___ 183. précis
___ 184. a des préjugés
___ 185. préoccupé
___ 186. progressiste
___ 187. prude
___ 188. querelleur
___ 189. bizarre
___ 190. rapide
___ 191. tranquille
___ 192. inconstant
___ 193. rationnel
___ 194. écervelé
___ 195. réaliste
___ 196. raisonnable
___ 197. rebelle
___ 198. téméraire
___ 199. réfléchi
___ 200. décontracté
___ 201. digne de confiance
___ 202. rancunier
___ 203. réservé
___ 204. débrouillard
___ 205. responsable
___ 206. remuant
___ 207. effacé
___ 208. rigide
___ 209. robuste
___ 210. impoli
___ 211. sarcastique
___ 212. égocentrique
___ 213. sur de soi
___ 214. maître de soi
___ 215. altruiste
___ 216. geignard
___ 217. se culpabilise
___ 218. personnel
___ 219. égoiste
___ 220. sensible
___ 221. sentimental
___ 222. sérieux
___ 223. sévère
___ 224. sexy
___ 225. superficiel
___ 226. a l'esprit de répartie
___ 227. indolent
___ 228. poseur
___ 229. sagace
___ 230. pusillanime
___ 231. silencieux
___ 232. simple
___ 233. sincère
___ 234. négligé
___ 235. lent
___ 236. sournois
___ 237. suffisant
___ 238. prétentieux
___ 239. sociable
___ 240. a le coeur tendre
___ 241. sophistiqué
___ 242. prodigue
___ 243. mou
___ 244. spontané
___ 245. hardi
___ 246. stable
___ 247. solide
___ 248. austère
___ 249. avare
___ 250. flegmatique
___ 251. fort
___ 252. obstiné
___ 253. docile
___ 254. influençable
___ 255. boudeur
___ 256. superstitieux
___ 257. soupçonneux
___ 258. sympathique
___ 259. a du tact
___ 260. sans tact
___ 261. bavard
___ 262. capricieux
___ 263. tendu
___ 264. ingrat
___ 265. minutieux
___ 266. prévenant
___ 267. économe
___ 268. timide
___ 269. tolérant
___ 270. susceptible
___ 271. dur
___ 272. confiant
___ 273. sans affectation
___ 274. sans ambition
___ 275. sans prétention
___ 276. non conventionnel
___ 277. peu sûr
___ 278. compréhensif
___ 279. peu émotif
___ 280. impassible
___ 281. inamical
___ 282. sans complexe
___ 283. inintelligent
___ 284. désagréable
___ 285. peu réaliste
___ 286. sans scrupule
___ 287. désintéressé
___ 288. instable
___ 289. vindicatif
___ 290. versatile
___ 291. chaleureux
___ 292. placide
___ 293. faible
___ 294. pleurnicheur
___ 295. épanoui
___ 296. sage
___ 297. renfermé
___ 298. spirituel
___ 299. soucieux
___ 300. farfelu

No de sujet: _____

Sexe: _____

Age: _____

Ceci est un questionnaire contenant plusieurs groupes de phrases. Pour chacun des groupes:

1) lisez attentivement toutes les phrases;

2) placez un "X" dans la parenthèse à côté de la phrase qui décrit le mieux comment vous vous sentez dans le moment présent.

1. |_| Je ne me sens pas triste.
   |_| Je me sens morose ou triste.
   |_| Je suis morose ou triste tout le temps et je ne peux pas me remettre d'aplomb.
   |_| Je suis tellement triste ou malheureux(se) que cela me fait mal.
   |_| Je suis tellement triste ou malheureux(se) que je ne peux plus le supporter.

2. |_| Je ne suis pas particulièrement pessimiste ou découragé(e) à propos du futur.
   |_| Je me sens découragé(e) à propos du futur.
   |_| Je sens que je n'ai rien à attendre du futur.
   |_| Je sens que je n'arriverai jamais à surmonter mes difficultés.
   |_| Je sens que le futur est sans espoir et que les choses ne peuvent pas s'améliorer.

3. |_| Je ne sens pas que je suis un échec.
   |_| Je sens que j'ai échoué plus que la moyenne des gens.
   |_| Je sens que j'ai accompli très peu de choses qui aient de la valeur ou une signification quelconque.
   |_| Quand je pense à ma vie passée, je ne peux voir rien d'autre qu'un grand nombre d'échecs.
   |_| Je sens que je suis un échec complet en tant que personne (parent, mari, femme).

4. |_| Je ne suis pas particulièrement mécontent(e).
|_| Je me sens "tannée(e)" la plupart du temps.
|_| Je ne prends pas plaisir aux choses comme auparavant.
|_| Je n'obtiens plus de satisfaction de quoi que ce soit.
|_| Je suis mécontent(e) de tout.

5. |_| Je ne me sens pas particulièrement coupable.
|_| Je me sens souvent mauvais(e) ou indigne.
|_| Je me sens plutôt coupable.
|_| Je me sens mauvais(e) et indigne presque tout le temps.
|_| Je sens que je suis très mauvais(e) ou très indigne.

6. |_| Je n'ai pas l'impression d'être puni(e).
|_| J'ai l'impression que quelque chose de malheureux peut m'arriver.
|_| Je sens que je suis ou serai puni(e).
|_| Je sens que je mérite d'être puni(e).
|_| Je veux être puni(e).

7. |_| Je ne me sens pas déçu(e) de moi-même.
|_| Je suis déçu(e) de moi-même.
|_| Je ne m'aime pas.
|_| Je suis dégoûté(e) de moi-même.
|_| Je me hais.

8. |_| Je ne sens pas que je suis pire que les autres.
|_| Je me critique pour mes faiblesses et mes erreurs.
|_| Je me blâme pour mes fautes.
|_| Je me blâme pour tout ce qui arrive de mal.

9. |_| Je n'ai aucune idée de me faire du mal.
|_| J'ai des idées de me faire du mal mais je ne les mettrais pas à exécution.
|_| Je sens que je serais mieux mort(e).
|_| Je sens que ma famille serait mieux si j'étais mort(e).
|_| J'ai des plans bien définis pour un acte suicidaire.
|_| Je me tuerais si je le pouvais.

10. |_| Je ne pleure pas plus que d'habitude.
|_| Je pleure plus maintenant qu'auparavant.
|_| Je pleure tout le temps, maintenant. Je ne peux pas m'arrêter.
|_| Auparavant, j'étais capable de pleurer mais maintenant je ne peux pas pleurer du tout, même si je le veux.

11. |_| Je ne suis pas plus irrité(e) maintenant que je le suis d'habitude.
|_| Je deviens contrarié(e) ou irrité(e) plus facilement maintenant qu'en temps ordinaire.
|_| Je me sens irrité(e) tout le temps.
|_| Je ne suis plus irrité(e) du tout par les choses qui m'irritent habituellement.

12. |_| Je n'ai pas perdu intérêt aux autres.
|_| Je suis moins intéressé(e) aux autres maintenant qu'auparavant.
|_| J'ai perdu la plupart de mon intérêt pour les autres et j'ai peu de sentiment pour eux.
|_| J'ai perdu tout mon intérêt pour les autres et je ne me soucie pas d'eux du tout.

13. |_| Je prends des décisions aussi bien que jamais.
|_| J'essaie de remettre à plus tard mes décisions.
|_| J'ai beaucoup de difficultés à prendre des décisions.
|_| Je ne suis pas capable de prendre des décisions du tout.

14. |_| Je n'ai pas l'impression de paraître pire qu'auparavant.
|_| Je m'inquiète de paraître vieux (vieille) et sans attrait.
|_| Je sens qu'il y a des changements permanents dans mon apparence et que ces changements me font paraître sans attraits.
|_| Je me sens laid(e) et répugnant(e).

15. |_| Je peux travailler pratiquement aussi bien qu'avant.
|_| J'ai besoin de faire des efforts supplémentaires pour commencer à faire quelque chose.
|_| Je ne travaille pas aussi bien qu'avant.
|_| J'ai besoin de me pousser très fort pour faire quoi que ce soit.
|_| Je ne peux faire aucun travail.

16. |_| Je peux dormir aussi bien que d'habitude.
|_| Je me réveille plus fatigué(e) le matin que d'habitude.
|_| Je me réveille 1-2 heures plus tôt que d'habitude et j'ai de la difficulté à me rendormir.
|_| Je me réveille tôt chaque jour et je ne peux dormir plus de 5 heures.

17. |_| Je ne suis pas plus fatigué(e) que d'habitude.
|_| Je me fatigue plus facilement qu'avant.
|_| Je me fatigue à faire quoi que ce soit.
|_| Je suis trop fatigué(e) pour faire quoi que ce soit.

18. |_| Mon appétit est aussi bon que d'habitude.
|_| Mon appétit n'est pas aussi bon que d'habitude.
|_| Mon appétit est beaucoup moins bon maintenant.
|_| Je n'ai plus d'appétit du tout.

19. |_| Je n'ai pas perdu beaucoup de poids (si j'en ai vraiment perdu) dernièrement.
|_| J'ai perdu plus de 5 livres.
|_| J'ai perdu plus de 10 livres.
|_| J'ai perdu plus de 15 livres.

20. |_| Je ne suis pas plus préoccupé(e) de ma santé que d'habitude.
|_| Je suis préoccupé(e) par des maux et des douleurs, ou des problèmes de digestion ou de constipation.
|_| Je suis tellement préoccupé(e) par ce que je ressens ou comment je me sens qu'il est difficile pour moi de penser à autre chose.
|_| Je pense seulement à ce que je ressens ou comment je me sens.

21. |_| Je n'ai noté aucun changement récent dans mon intérêt pour le sexe.
|_| Je suis moins intéressé(e) par le sexe qu'auparavant.
|_| Je suis beaucoup moins intéressé(e) par le sexe maintenant.
|_| J'ai complètement perdu mon intérêt pour le sexe.

Paykel Life-Events Inventory
(Paykel & Uhlenluth, 1972) v.f.

Vous retrouverez ci-dessous des événements qui se produisent au cours d'une vie. S.V.P. encerclez les numéros des événements qui se sont produits dans votre vie au cours des six derniers mois.

1. Mort d'un de vos enfants
2. Mort de votre conjoint ou conjoint de fait
3. Condamnation à faire de la prison
4. Mort d'un membre de votre famille immédiate
5. Votre conjoint a une aventure amoureuse
6. Difficultés financières majeures (très grosses dettes, banqueroute)
7. Echec dans le monde des affaires
8. Mise à pied (perte d'emploi)
9. Fausse couche ou enfant mort à la naissance
10. Divorce
11. Séparation avec votre conjoint ou séparation de votre partenaire amoureux
12. Appelé à comparaître en cour à cause d'un problème légal sérieux
13. Grossesse non désirée
14. Maladie importante chez un membre de votre famille
15. Sans emploi pour une période d'au moins 1 mois
16. Mort d'un ami(e) intime
17. Rétrogradation au travail (perte d'échelon)
18. Personnellement atteint d'un maladie importante
19. Vous commencez à tromper votre conjoint
20. Perte d'un objet de grande valeur sentimentale
21. Vous devenez mêlé dans une poursuite judiciare
22. Echec scolaire (examen important/cours/diplôme)
23. Votre enfant se marie sans votre consentement
24. Rupture de vos fiançailles
25. Accroissement des disputes entre votre conjoint (ou conjoint de fait) et vous-même
26. Accroissement des disputes avec les membres de votre famille
27. Accroissement des disputes avec votre fiancé(e)
28. Faire un emprunt
29. Difficultés avec votre patron ou vos collègues de travail
30. Dispute avec un membre de votre famille qui ne réside pas chez vous
31. Déménagement dans un autre pays

32. Faire l'expérience de la ménopause
33. Difficultés financiaires modérées
34. Séparation d'une personne importante (ami(e) intime ou parent)
35. Passer un examen important
36. Séparation de votre conjoint (ou conjoint de fait) qui n'est pas reliée à des disputes
37. Changement au niveau de vos conditions de travail
38 Nouveau résident dans votre maison
39. Retraite
40. Changement au niveau de vos conditions de travail
41. Changement de branche (changement d'emplois)
42. Vous arrêtez de fréquenter votre petit(e) ami(e)
43. Déménagement dans une autre ville
44. Changer d'école
45. Arrêter d'étudier
46. Un de vos enfants quitte la maison (déménagement)
47. Réconciliation conjugale
48. Violation légale mineure
49. Naissance d'un enfant
50. Votre femme ou votre partenaire devient enceinte
51. Mariage
52. Promotion
53. Personnellement atteint d'une maladie d'ordre mineure
54. Déménagement à l'intérieur de la même ville
55. Naissance de votre enfant ou adoption (père)
56. Commencement de cours d'éducation
57. Un de vos enfants se fiance
58. Vous vous fiancez
59. Grossesse desirée
60. Un de vos enfants se marie avec votre consentement

Appendix VIII

Instruction Sheets (Study 4 & 5)

General Instructions

Dear participant:

Thank you very much for the time and interest you have given to our research project. You will find below some instructions and suggestions regarding the questionnaires, remembering and recording dreams, and what to do once you have completed the study. If you have any questions concerning these instructions, or any other aspect of this project, feel free to contact Jason Atlas at 285-1409 or Tony Zadra at 281-0921.

Confidentiality and Anonymity.

You will notice that you have been given several questionnaires. On the top right hand corner of the McGill Sleep/Dream questionnaire you will find a random alphanumerical code. This is your participant code. With the exception of the sleep/dream questionnaire, you need only identify yourself by this code. All materials that you submit will be filed under this numerical code. The confidentiality of your participation will be strictly maintained and your name and other identifying information will be known only to the director of this study, Antonio Zadra.

The Questionnaires.

Along with the McGill Sleep/Dream questionnaire, you will find an additional set of 8 questionnaires. Please complete them all to the best of your ability. The majority of these are quite straightforward and in yes/no or checklist format. **Note: It is of utmost importance that you fill out the McGill Sleep/Dream Questionnaire before you begin to record your dreams.**

Recalling Your Dreams.

The number of dreams an individual recalls varies enormously from time to time and from person to person. This is so despite the fact that people dream every night throughout their lives, each night experiencing between 3-6 dreams. Nowhere near this many dreams are remembered by the average individual.

Things that may enhance your dream recall include keeping pen and paper (i.e., the dream record form) at your bedside, where they are easily accessible during the night or upon awakening. You should take note of the fact that any distraction from the outside world can get in the way of remembering your dream images. When you first wake up in the morning, lie quietly with your eyes closed and concentrate on any images or feelings that come to you. Often, even if you don't remember a dream right away, parts of it will come back to you, if you keep your attention focused on inner imagery and avoid thinking about what you have to do that day.

Take enough time in the morning to complete the dream record form right away, even if all you remember is a vague image. If you don't write it down, the dream will fade rapidly and you will not be able to recall it later. Completing the dream record form in the morning will only take a few minutes of your time.

Do not worry if you do not remember a dream in the morning. There exists a wide range of dream recall: some people remember one or more dreams every morning while others may only remember one or two every few weeks. This is perfectly normal and to be expected.

Recording Your Dreams.

For each dream you remember, we would like you to make an entry on the dream record form. In the first column, indicate the date on which the dream took place. Next, if the dream you remember fits into one or more of the categories listed (i.e., lucid, bad dream, nightmare, flying) put a check (or an "x") in the appropriate column. The different dream categories are described below (as well as in the McGill Sleep/Dream Questionnaire).

Lucid Dreams (LC): Lucid dreams are those in which a person becomes aware of the fact that he or she is dreaming *while the dream is still ongoing*. An example of a lucid dream can be found in question #33 of the McGill Sleep/Dream Questionnaire.

Bad Dreams (BAD): Bad dreams are very disturbing dreams which, though being unpleasant, *do not cause you do awaken.*

Nightmares (NM): Nightmares are very disturbing dreams in which the unpleasant visual imagery and/or emotions *wake you up.*

Flying Dreams (FLY): Flying dreams are those in which the dreamer (not another dream character) engages in flying activities which would be "impossible" in waking life. These can range from simply hovering a few feet above the ground to flying "superman" style at great speeds and/or heights. Dreams in which you are in an airplane or helicopter are not true flying dreams, and should not be counted as such.

Then, complete the Emotion/Intensity column. This is a very important part of the reporting procedure, so we want you to be as careful and accurate as possible when you complete this part. In this column, we want you to report the primary feeling(s) that you actually remember experiencing in the dream. It is important that you remember what feeling(s) actually occurred during the dream and not the ideas or beliefs that you now have about what you should have been feeling in that kind of situation. You may use any adjective that appears to be appropriate to you to describe the feeling(s) you remember experiencing in your dreams. Some words which you may want to use include (but are not limited to) the following: anger, awe, sexual arousal, anxiety, fear, guilt, frustration, sadness, hatred, happiness, jealousy, embarrassment.

If you remember having experienced an emotion during the dream, then indicate the intensity of this emotion using the following 9-point scale

very weak.....average.....very intense
1 2 3 4 5 6 7 8 9

where 1 is very weak or negligible, 5 is average, and 9 is very intense. You may use any number from 1 to 9 inclusively.

If you remember having experienced more than one emotion during the dream, list these feelings (and corresponding intensity levels) in the order in which you remember having experienced them and separate them with a slash (e.g., sad-4 / anxious-7). If you do not remember having experienced any emotion(s) during your dream, simply write "none" or "neutral" in the emotion/intensity column. Once again, please note that it is important that your judgment (on both the type and intensity of emotion) be made based on the feeling(s) which **actually occurred** during the dream and not the ideas or beliefs that you now have about what you should have been feeling.

Record only one dream per row on the dream record form (each form has room for 30 dreams). If you remember more than one dream on a given day, fill out one row for each dream recalled. If you remember no dreams, just note the date and write "no dream recall" under "Comments." Sometimes, dreams that cannot be recalled upon awakening are remembered later on in the day. Record these dreams as well, including the relevant date. Should you also recall dreams from naps during the day, use the same procedure as above.

Please keep a record of your dreams on the dream record form for four (4) consecutive weeks (approximately 28-30 days).

In this study, you are not required to actually write down all of the dreams you remember as you would in a complete "dream journal." However, it would be helpful if you could provide us with a description of at least some of the dreams you remember during the study (the more the better). If you choose to provide us with written descriptions of some of your dreams, please record them on loose leaf paper and indicate the date and row number (1-30) from the dream record form to which this dream description corresponds to.

<u>Returning the Research Materials.</u>

Once you have completed the study, please return all the research materials (booklet, questionnaires, dream record forms, unused sheets, booklet, etc.) in the envelope provided to the secretary (Louise) in room W8/1 in the Stewart Biological Sciences Building (1205 Dr. Penfield Ave., between Peel and Mountain). W8/1 is the general psychology office and is located to the right of the elevators on the 8th floor.

Appendix IV

Dream Record Sheet (Study 4, Study 5)

	DATE	LC	BAD	NM	FLY	EMOTION-INTENSITY	COMMENTS
1							
2							
3							
4							
5							
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Note: LC=Lucid dream; BAD = Bad dream(does not wake you up); NM = Nightmare(wakes you up); FLY = Flying dream.