

1995

# Gender, Waking Personality, and Sexual Behavior in Dreams

Jeffery W. Willis

*Eastern Illinois University*

This research is a product of the graduate program in [Psychology](#) at Eastern Illinois University. [Find out more](#) about the program.

---

## Recommended Citation

Willis, Jeffery W., "Gender, Waking Personality, and Sexual Behavior in Dreams" (1995). *Masters Theses*. 1884.  
<https://thekeep.eiu.edu/theses/1884>

This is brought to you for free and open access by the Student Theses & Publications at The Keep. It has been accepted for inclusion in Masters Theses by an authorized administrator of The Keep. For more information, please contact [tabruns@eiu.edu](mailto:tabruns@eiu.edu).

# THESIS REPRODUCTION CERTIFICATE

TO: Graduate Degree Candidates (who have written formal theses)

SUBJECT: Permission to Reproduce Theses

The University Library is receiving a number of requests from other institutions asking permission to reproduce dissertations for inclusion in their library holdings. Although no copyright laws are involved, we feel that professional courtesy demands that permission be obtained from the author before we allow theses to be copied.

PLEASE SIGN ONE OF THE FOLLOWING STATEMENTS:

Booth Library of Eastern Illinois University has my permission to lend my thesis to a reputable college or university for the purpose of copying it for inclusion in that institution's library or research holdings.

NOVEMBER 16, 1995  
Date

I respectfully request Booth Library of Eastern Illinois University not allow my thesis to be reproduced because:

\_\_\_\_\_  
Author

\_\_\_\_\_  
Date

Gender, Waking Personality, and Sexual

Behavior in Dreams

(TITLE)

BY

Jeffery W. Willis

**THESIS**

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF

Master of Arts

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY  
CHARLESTON, ILLINOIS

1995

YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING  
THIS PART OF THE GRADUATE DEGREE CITED ABOVE

11/16-95  
DATE

11/16/95  
DATE

Gender, Waking Personality, and Sexual

Behavior in Dreams

Jeffery W. Willis

Eastern Illinois University

## Abstract

This study explores sexual arousal and behavior in dreams and their relationship with waking personality. Over 2400 college students were administered a Dreaming Style Questionnaire (DSQ) (Gruber, 1988) and Form A of the 16 Personality Factor Questionnaire (16PF) (Cattell, Eber, and Tatsuoka, 1970) to examine personality trait differences between high sexuality dreamers and low sexuality dreamers. Although both men and women report frequent sexual content in their dreams, it was found that men incorporate sex into their dreams more often than did women. T-tests identified significant gender differences ( $p < .0001$ ) for each of the three DSQ items explored indicating that: men reported higher scores for overall dream sexuality, self-initiated sexual activity, feelings of sexual arousal, and other-initiated sexual activity in dreams, than did women. The exploration of sexuality and behavior in dreams was also undertaken by comparing personality traits of individuals reporting high dream sexuality with individuals reporting low dream sexuality. Discriminant analyses identified significant differences ( $P < .0001$ ) on seven of the 16 primary scales and four of the nine composite scales of the 16PF for men. Significant differences were also found for women ( $p < .0001$ ) on five of the 16 primary scales and five of the nine composite scales of the 16PF.

When looking at feelings of sexual arousal in dreams (apart from sexual behavior) significant differences ( $p < .01$ ) were found on four of the 16 primary scales and four of the nine composite scales of the 16PF for men. Men reporting high sexual arousal in dreams were found to score higher on personality variables that are characteristic of individuals described as hard-driving, independent and higher on anxiety. In regards to women, significant differences ( $p < .0001$ ) were found on four of the 16 primary scales and five of the nine composite scales of the 16PF. Women reporting high feelings of sexual arousal in dreams were found to score higher on personality variables that are characteristic of individuals described as self-sufficient, independent, and assertive.

The current study indicates that relationships between waking personality and dreams about sex clearly exist. Furthermore, these relationships, along with the prevalence of sexual content in dreams, suggest that some important or necessary function is served by sexual dreams-- however, it remains unclear to what this function may be. In fact, differences between findings for men and women indicate that sexual dreams may occur for different reasons and serve different functions for women than for men.

## Acknowledgments

I would like to thank Dr. Russell Gruber whose ideas, help, and access to his data helped stimulate this research. I would also like to thank Dr. William Kirk and Dr. Julia Jorgensen as my committee members. In addition, I would like to recognize Pam Gutowski, Bill Peters, and Dr. Fred Yaffe for the assistance they provided me during my thesis process. Special thanks to all of my friends and roommates at EIU and home for their support and faith that someday I will finish graduate school and leave Charleston. Finally, I would like to give a loving thanks to my parents and family for the emotional and financial support they gave me that made this and so many other accomplishments possible.

## Table of Contents

Abstract . . . . .	2
Acknowledgments . . . . .	4
List of Tables . . . . .	6
Introduction . . . . .	8
Method . . . . .	30
Results . . . . .	34
Discussion . . . . .	48
Suggestions for Future Research . . . . .	63
References . . . . .	64
Appendices	
A: The Dreaming Style Questionnaire . . . . .	73
B: Description of 16PF Scales . . . . .	81
C: Frequency Distribution for Dream Sexuality Scale . . . . .	94
D: Means, Standard Deviations, & Univariate Fs for Dream Sexuality Scores . . . . .	96
E: Means, Standard Deviations, & Univariate Fs for DSQ Item 49 . . . . .	99



## List of Tables

Table 1 . . . . .	33
Correlation Coefficients Between DSQ	
Items 48, 49, and 50	
Table 2 . . . . .	35
Frequency Distributions For Men and Women	
on DSQ Items 48, 49, and 50 (Likert Scale 0-6)	
Table 3 . . . . .	38
T-test of Gender Differences Between Men	
and Women for DSQ Items 48, 49, and 50	
Table 4 . . . . .	41
T-test of Gender Differences for Men and	
Women in Sum of DSQ Items 48, 49, and 50	
Table 5 . . . . .	44
Comparison of Male Low and High Sexuality	
Dreamers	
Table 6 . . . . .	45
Comparison of Female Low and High	
Sexuality Dreamers	
Table 7 . . . . .	46
Comparison of Males Reporting Low Verses	
High Sexual Arousal in Dreams (DSQ Item 49)	
Table 8 . . . . .	47
Comparison of Females Reporting Low Verses	
High Sexual Arousal in Dreams (DSQ Item 49)	

Table 9 . . . . .	49
-------------------	----

Classification Results for Male Subjects  
for Sum of DSQ Items 48, 49, and 50

Table 10 . . . . .	50
--------------------	----

Classification Results for Female Subjects  
for Sum of DSQ Items 48, 49, and 50

Table 11 . . . . .	51
--------------------	----

Classification Results for Male Subjects  
for DSQ Item 49 (Feelings of Sexual Arousal)

Table 12 . . . . .	52
--------------------	----

Classification Results for Female Subjects  
for DSQ Item 49 (Feelings of Sexual Arousal)

## Gender, Waking Personality, and Sexual Behavior in Dreams

According to Sigmund Freud, dreams are wish fulfillments that attempt to discharge built-up instinctual drives, most often sexual in nature. In fact he claims that "repressed infantile sexual wishes provide the most frequent and strongest motive forces for the construction of dreams" (Freud, 1952, p. 71), adding that "most of the dreams of adults are traced back by analysis to erotic wishes" (p. 70). Of course we must keep in mind that Freud's theory arose from his work in late 19th century Vienna, half a century before the discovery of REM sleep, and while it may in fact have been true at that time, it is not likely to accurately reflect the function of dreams in contemporary America. However, it is clear that sexual content, wishes, or drives do play a significant role in the dreaming process. Several researchers have found sexual activity to be a particularly common theme in dreams (De Martino, 1953; Delaney, 1994; Husband, 1936; Hall and Van de Castle, 1966; Kinsey, Pomeroy, Martin, & Gebhard, 1953; Wilson, 1975; Narotra, 1983). In addition, the occurrence of cyclical periods of physiological sexual arousal during sleep, in both men and women, is well documented (Fisher, 1966; Furman, 1982; LaBerge, Greenleaf, and Kedzierski, 1983). This indicates that as Freud claimed, it is very likely that there is indeed a link between sexuality and dreaming, and

that an exploration of this link may shed light on the nature of dreaming processes and functions.

One way to approach the relationship between dreaming and sex is through an exploration of individual differences in sexual content or arousal in dreams and waking personality. Taking this into consideration, this investigation will examine personality factors and gender differences in relationship to sexual behavior in dreams. The following sections provide background for this study by reviewing literature on the relationship between waking life and dreaming; physiology and sexual arousal in dreams; gender differences in dream content; waking sexual attitudes and gender; and sexual dreams and waking personality.

#### The Relationship Between Waking Life and Dreaming

Before we directly address the relationship between dreams, sex, and waking personality it is helpful to briefly review more general issues regarding the relationship between waking life and dreaming. Two prominent theories characterizing the relationship between waking life and dreaming have been referred to as continuity and compensation. The continuity hypothesis suggests that dreams and waking life parallel one another. This is said to occur when events, behaviors, or emotions that occur in waking life are reflected in dreams. Conversely, compensation is said to occur when events, behaviors, and emotions that are not currently present in waking life are

represented and developed in the dream state. A study by Foulkes, Pivik, Steadman, Spear, and Symonds (1967) found a compensatory relationship between waking life and dreaming style for boys, in reaction to movies viewed before they went to sleep. Several other studies (Wood, 1962; Bokert, 1965; Hauri, 1968) found compensatory relationships in dreams following certain presleep conditions, such as physical exercise and social isolation. Robbins and Tanck (1980) reported a compensatory relationship between sexual gratification and sexual symbolism in dreams. They concluded that individuals with relatively low levels of sexual gratification in waking life used more sexual symbolism in their dreams. On the other hand, continuity between waking life and dreaming has also been observed in several studies. The effects of stress on dreams has shown a continuous relationship in studies by Breger, Hunter, and Lane (1971) and Sirois-Berliss and DeKoninck (1982). In these studies presleep stress was incorporated into subject's dreams. After extensive investigation of the continuity between dreaming and waking life, Corriere, Karle, Woldenberg, and Hart (1980) stated that "dream life parallels waking life, dreams try to resolve inadequately experienced waking events" (p. 84).

In an attempt to identify specific relationships between waking life and dreaming, researchers have identified certain dreaming styles. Lang and O'Connor

(1984) present evidence showing "that characteristic traits of the person do correspond to certain modes of dreaming" (p. 214). In their study they identified three dreaming styles labeled personal avoidance, eroticism, and adventuresomeness. The emotion of fear is common for individuals with a personal avoidance dreaming style. In addition, the dream content of these individuals usually consists of strange dream characters and places and fear of separation from others. The eroticism dreaming style appears to be associated with dream content involving sexual activity, romance, ecstasy, feelings of well-being, and achievements. Common themes distinguishing the adventuresomeness dreaming style are risk-taking, problem solving, adventure, and travel. In another study, Gruber (1985) identified vulnerable and assertive dreaming styles. The assertive dreaming style, which he characterized as healthy, is related to emotional well-being, increased self-confidence, and conflict resolution. In fact, he noted that an assertive dreaming style and well adjusted waking functioning may be closely related. On the other hand, the vulnerable dreaming style was found to reflect emotional difficulties, insecurity, neuroticism, and apprehensiveness. In addition, Gruber also identifies an eroticism dimension characterized by high levels of reported sexual behavior and arousal in dreams.

Also addressing the relationship between waking life and dreaming, researchers have explored various forms of psychopathology and dreaming. Beck (1967) presented findings linking waking life and dream content in severely depressed patients. These patients were more likely to be represented in their dreams as incompetent, unfortunate, injured, disappointed, ugly, or punished. Along similar lines, Webb and Cartwright (1978) reported that depressed subject's dreams were characterized by turning aggression inward, reduced activity level, and low mood tone.

Lang and O'Connor (1984) identified several associations between waking psychopathology and dream content. The dream content for subjects with elevated neuroticism scores tended to consist of negative emotions, neurotic fears, dwelling on past events, being chased, loneliness, hatred, and themes of personal failure. They state that "this implies that neurotic individuals are unable to escape their preoccupation with everyday worries in their dreams" (p. 215). This study also reported common characteristics for subjects with elevated psychoticism scores. Subjects in this category tended to experience dreams involving unfamiliar dream characters, symbolic meaning, exciting events, and low social activity.

Further support for a relationship between waking life and dreaming comes from studies exploring nightmare sufferers. In 1977, Kales, Caldwell, Charney, Russek,

Davis, and Healey, reported finding that frequent nightmare sufferers had greater stress levels and elevated Minnesota Multiphasic Personality Inventory (MMPI) scores on the schizophrenia, depression, and psychopathic deviate scales. In a more recent study, Berquier and Ashton (1992) reported that persons who experience frequent nightmares scored higher on the Eysenck Personality Questionnaire Neuroticism scale and on 8 MMPI clinical scales including the Schizophrenia, Psychasthenia, Paranoia, Psychopathic Deviate, Hypochondriasis, Hysteria, Depression, and Hypomania scales. They conclude that "adults who report frequent nightmares also evince symptoms similar to psychopathological groups" (p. 248). In a study on inpatient nightmare sufferers with psychotic disorders, Hersen (1971) found a relationship between nightmare frequency and having a fear of death, poorer sense of reality, prejudicial attitudes, and being emotionally restricted. In addition, Cooper and Hartman (1986) reported findings associating nightmare sufferers with tendencies to have difficulties with integration of affect, poor delay of gratification, vulnerability, and feelings of being overwhelmed.

In contrast to findings of waking difficulties associated with nightmares, a number of studies have linked lucid dreaming (the ability to know one is dreaming while in a dream) with positive waking attributes. Specifically,



lucid dreamers have been hypothesized to show greater psychological differentiation (Gackenbach, Heilman, LaBerge, & Boyt, 1985), increased capacity for self-observation (Olgivie, Hunt, Tyson, Lucescu, & Jenkins, 1982), emphasis on self-reflectivity (Tholey, 1983), greater ability to access contents of the unconscious (Palmer, 1979), and well developed ability to differentiate internal from external aspects of perception (Gruber, 1985).

#### Physiology And Sexual Arousal In Dreams

As the relationship between waking life and dreaming has come under exploration, so too has the role played by physiology and sexual arousal in dreams. Work by Masters and Johnson on the sexual response cycle led researchers to experimentally view the relationship between physiology and sexual activity. Thus, the opportunity to explore sexual arousal in dreams, with a physiological basis, became opened to extensive research.

In this regard, Fisher (1966) studied physiological arousal in young men by awakening the subjects from sleep, at different points in the erection cycle (degree of penile tumescence measured with a mercury strain gauge), and recording the content of their dreams. Fisher reported that there is sometimes a relationship between dream content and erections, but not always. Along similar lines, LaBerge, Greenleaf, and Kedzierski (1983) studied physiological responses to dreamed sexual activity during lucid REM sleep.

Throughout the dreams numerous physiological measures were recorded and the results from a female subject indicated "that the experience of orgasm in a lucid dream is associated with a specific pattern of physiological activity that (1) is comparable to waking orgasmic patterns and (2) is significantly different from autonomic activity during REM sleep not accompanied by reports of orgasm" (p. 455). Correspondingly, Furman (1982) reported a stronger relationship for sexual dream content, than for dysphoric content, in relationship to vaginal blood flow fluctuations during REM sleep.

Kinsey, Pomeroy, and Martin (1948) thoroughly examined sexual behavior in the human male. As a result of studying more than 5000 adult men, in regard to nocturnal emissions, they reported that about 83 percent of all men experience orgasm as the product of nocturnal dreams at some time in their lives. Along similar lines, Kinsey, Pomeroy, Martin, and Gebhard (1953) reported that only 37 percent of women experience orgasm in dreams at some time in their lives. After reviewing these two studies, Garfield (1974) noted that the percentage of orgasms in dreams is comparable to waking life orgasms, with respect that men experience orgasms at much higher rates than women. The factors responsible for the occurrence of orgasms in dreams have not yet been determined, however, it has been suggested that

individuals who explore and discuss sexual issues may have a greater chance of experiencing this (Delaney, 1994).

When focusing on the relationship between reproductive physiology and dream content, a number of authors explore dreaming at different phases of the menstrual cycle.

Swanson and Foulkes (1968) claimed that individuals reported similar dream content, such as dream sexuality, during the same phase, menses, of the menstrual cycle.

Correspondingly, Van de Castle (1968) reported that dream activity was similar in content throughout the menstrual cycle. Van de Castle also noted that the dream content changed during different phases of the menstrual cycle, such as the social roles the dreamers engaged in during the phases. In 1973, Garfield documented a longitudinal dream record of herself and identified a basic pattern of dream recall during different stages of the menstrual cycle.

Further support for a relationship between reproductive physiology and dream activity comes from studies exploring dreams during pregnancy. When comparing dream content of non-pregnant college students with pregnant women, Van de Castle and Kinder (1968) reported that the dreams of pregnant women revealed themes of pregnancy-related concerns, deformity of the unborn child, and being physically and sexually unattractive. In another study, Winget and Kapp (1972) found that the anxiety level in women's dreams, during pregnancy, was directly related to

the duration of labor. They reported that high levels of anxiety in dreams resulted in a shorter length of labor and a lower anxiety endured prolonged labor. They postulated that dealing with the crisis of childbirth (high anxiety) in dreams enables women to deal with it better in waking life (shorter labor length).

We do not have a definite explanation as to why sexual arousal occurs in dreams. Some hypotheses attempting to explain this suggest that sexual arousal occurs in dreams as a result of, dream content (Delaney, 1994; Fisher, 1966; Furman, 1982; Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953; LaBerge, Greenleaf, & Kezierski, 1983); hormonal changes (Swanson & Foulkes, 1968; Van de Castle, 1968; Van de castle & Kinder 1968); or the possibility that glandular (seminal vesicles and/or prostate glands) pressures induce nocturnal orgasms in men, however data on this hypothesis are lacking (Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953).

#### Gender Differences In Dream Content

Before exploring gender differences in relationship to sexual behavior in dreams it may be helpful to first examine what is known of gender differences in dream content. This allows us to better understand the interplay between waking, dreaming, gender, and sex. Over the past several decades,

extensive research has shown that gender differences in dream content do exist.

In this regard, Brenneis (1970) reported that female subjects viewed dream affect as more pleasant and realistic than did male subjects. Along these lines, R. L. Munroe, R. H. Munroe, Brasher, Severin, Schweickart, and Moore (1985) found that women revealed more emotions in dreams than did men. Robbins and Tanck (1988) reported that women more frequently contemplated their dreams and discussed them with others. They postulated that these results may be related to the notion that women pay more attention to their emotional life. In a similar context, Husband (1936) reported that women's dreams are more vivid, emotional, relationship oriented, and intimate than men's dreams. Furthermore, Pagel and Vann (1992) stated that women "report more frequent dream effects on their waking behavior" (p. 234). They indicated that emotions, decision making, and relationships are effected by dreams more for women than men.

Further exploring gender differences in dream content, Hall and Van de Castle (1966), Hall (1984), and Kramer, Kinney, & Scharf (1983) reported that men have a significantly higher percentage of male dream characters than do women. Munroe et al. (1985) claimed that frequency of certain dream settings also differ, with men dreaming more of outdoor settings, and women dreaming more of indoor

settings. Brenneis (1970) also reported that women dreamed about indoor settings significantly more than did men.

Researchers have also addressed gender differences in aggression in dreams. Hall and Van de Castle (1966) reported that men dreamed more frequently about physical aggression than women. In support of this, Gregor (1981) claimed that men's dreams contained more incidences of aggression than women's dreams. In contrast, Kramer, Kinney, and Scharf (1983) found no significant differences in aggression differentiating men from women. They concluded that "the sexual revolution of the past two decades has indeed had some psychological impact in altering some of the traditional differences, such as the expression of aggression ..." (p. 1). Along similar lines, Cramer (1986) explored waking fantasies of college men and reported that the expression of aggression toward women has been largely reduced. Cramer also claimed that this is a result of increased female strength.

Although little research has been done on changes in dream content and sex differences in dream content over a period of time, one study compared dream content and sex differences from groups of subjects at different periods of time. Hall, Domhoff, Blick, and Weesner (1982) compared dreams of college students that were collected in 1950 and 1980. In regard to the 40 comparisons analyzed in this study, the authors reported that there has been little

change in what college students dreamed about over the 30 year period. In the first part of this study the authors examined the comparisons of the men from 1950 with men from 1980 and the women from 1950 with women from 1980. They identified six differences in dream content for male comparisons and three for female comparisons. In regard to familiarity of dream characters, both men and women had a higher proportion of familiar dream characters in 1980 than they did in 1950. Men and women in 1980 had lower proportions of total friendliness with dream characters and references to clothing than the men and women in 1950. In addition, the men in 1980 reported lower proportions of friendliness with both male and unfamiliar characters than did the men in 1950. Furthermore, men in 1980 had lower proportions of dreams with at least one sexual encounter than did the men in 1950. In the second part of the study they examined gender differences in dream content between men and women in 1950 and again in 1980. The results indicated that gender differences in "... the content categories used in this study had remained the same in dreams collected from college students in 1950 and 1980" (p. 193).

#### Waking Sexual Attitudes and Gender

Another important issue to address, when exploring personality factors and gender differences in relationship to sexual behavior in dreams, is waking sexual attitudes and

gender. This may provide us with a basis for comparison of dream findings.

The literature on gender differences in waking sexual attitudes supports the notion that women differ from men with respect to sexual behaviors and attitudes. In this regard, several studies have found gender differences in reasons given for engaging in sexual intercourse. Brown and Auerback (1981), Hatfield, Sprecher, Pillemer, Greenberger, and Wexler (1988), Leigh (1989), and McBride and Ender (1977) reported that men were more concerned with pleasing one's partner, releasing sexual tension, and physical gratification, whereas women desired intimacy, emotional expression, and love during sexual intercourse. O'Sullivan and Byers (1992) and Peplau, Rubin, and Hill (1977) found that men more frequently initiated sexual activity than did women. Specifically, Peplau et al. (1977) reported that men tend to encourage sexual intercourse and women limit sexual intimacy. The women in this study indicated, more often than men, that love was an essential requirement for sexual intercourse.

Further support for gender differences in waking sexual attitudes comes from studies investigating sexual permissiveness. Along these lines, S. Hendrick, C. Hendrick, M. Slapion-Foote, and F. Foote (1985) and Oliver and Hyde (1993) both reported that men were moderately permissive (more permissive, self-centered physical



orientation to sex, and control- and power-oriented) in their sexual attitudes, whereas women were moderately conservative (responsible, conventional, and idealistic). Similarly, Calfin, Carroll, and Schmidt (1993) and Oliver and Hyde (1993) reported that more women disapproved of premarital sex than did men. In addition, Reiss, Anderson, and Sponaugle (1980) and Oliver and Hyde (1993) identified men as having more liberal standards about extramarital sexual permissiveness. In this regard, Smith, Resick, and Kilpatrick (1980) concluded that "women had more liberal attitudes toward their sex roles [attitudes towards the rights and roles of women in society] while men had more liberal sexual attitudes and behavior" (p. 359).

Although a number of researchers have identified gender differences in sexual attitudes, several studies have presented evidence that these differences are becoming smaller over the years. Robinson and Jedlicka (1982) identified a continual increase in reported premarital sexual activity and heavy petting behavior among both men and women over the years of 1965 to 1980. However, this increase was much greater for women than men (e.g., in 1965 65.1% of men and 28.7% of women engaged in premarital sexual activity, whereas in 1980 77.4% of men and 63.5% of women did), thereby showing a decrease in gender differences over the years. Along similar lines, Hildebrand and Abramowitz (1984) studied men and women from 1969 to 1981 and reported

that "the proportion of men engaging in premarital intercourse increased 14 percentage points over the duration of the study (from 56% to 70%), whereas the proportion for women increased 20 points (41% to 61%)" (p. 536). It can be observed from these studies that women are narrowing the gap with men in both sexual attitudes and behaviors. In a more recent study, Dunn, Knight, and Glascoff (1992) reported an increase in incidence of premarital intercourse, from the years 1973 to 1988, for both men and women. This appears to show that, in general, attitudes expressed towards premarital sex have become more permissive. They further indicated that men continued more often to report having casual intercourse with one or more persons, while women were more likely to report intercourse with one individual in a meaningful relationship.

Further support for changes in gender differences over the past few decades comes from an extensive review by Oliver and Hyde (1993). They examined 177 studies of gender differences in sexual attitudes and behaviors. Their results indicated that men had greater acceptance of premarital and extramarital intercourse, more sexual partners, more intercourse incidences, and greater sexual permissiveness than did women. In regard to premarital and extramarital intercourse, a change from large gender differences (during the 1960s) to smaller gender differences (during the 1980s) was identified, however men continued to hold more

permissive attitudes than women. In terms of intercourse incidence and number of sexual partners, a corresponding change occurred from moderate-to-large gender differences (1960s) to smaller gender differences (1980s). Sexual permissiveness did not significantly change over time indicating that it has remained fairly constant. Although researchers do not account for whether it is the media, sexual revolution, more relaxed social standards, or any other specific reason, gender differences in sexual attitudes do in fact appear to have become smaller over time in contemporary America.

#### Sexual Dreams and Waking Personality

We will now explore findings directly linking sexual dreams with waking personality. A number of researchers have studied sexual dreams, examining prevalence, content, gender differences, and relationship to waking life.

When looking at the frequency of sexual dreams, Narotra (1983) found that about 76% of the dreams consisted of sexual content. Of the 225 dreams self-recorded from 15 subjects in dream diaries he stated "there was not even a single individual who dreamed less than 60% sexual dreams" (p. 17). No gender differences were found. On the other hand, several authors have found that men differ from women in the incidence of sexual content in dreams. De Martino (1953), Hall and Van de Castle (1966), Husband (1936), Kinsey, Pomeroy, Martin, and Gebhard (1953), and Wilson

(1975) reported that men experienced sexual dreams more often than did women. Specifically, Wilson (1975) found that 77% of men reported at least seldomly dreaming about sex (when asked how often the subjects dreamed about sex), whereas women reported a lower frequency of 55%. The study was conducted in early 1970 and included 2,486 adults from 48 states. The subjects were given 25-item self-administered questionnaires and face-to-face interviews including 90 questions dealing with nudity, sexual intercourse, oral-genital activity, and homosexual relations.

When discussing sexual dreams, the plethora of information presented by Delaney (1994), in her recent book Sexual Dreams, merits considerable attention. The information contained in this book comes from Dr. Gayle Delaney's clients and students (of the Delaney and Flowers Dream Center) accumulated over nearly 20 years, as well as from several other researchers which are named in the acknowledgments section of the book. After years of exploring and researching dreams Delaney has developed several theories of dreams. She suggested that "our dreams tell a story in pictures about how we feel about our sexuality and about our sexual relationships" (p. 7). Given this, women's favorite sexual dreams tend to consist of the greatest lover of their life, romance and emotional connection over explicit sexual acts, feeling loved in ways

they have never experienced in waking life, taking a more active role in lovemaking, long lasting love affairs, and orgasmic lovemaking. Similarly, Husband (1936) reported that more women dream about the individual they are involved with (boyfriend) and in relation to the love affair than did men. On the other hand, according to Delaney (1994), men's favorite sexual dreams usually involve being with women who are easily "turned on", women who are willing and eager to participate in sexual activity, sex in public, being seduced by older women, being sexually dominated, and experiencing nocturnal orgasms. Continuing with waking life and sexual dreams, Delaney postulates that "dreams about your sexual relationships may focus on your physically sexual activities, or they may deal with the emotional, interpersonal, or intrapersonal aspects of those relationships" (p. 115). She suggests that sexual dreams are related to waking relationships in regard to emerging problems, loss of sexual interest, co-dependent relationships in regard to couples being dependent upon each other to an unhealthy extent, competition for control, insecurity, or jealousy.

Kramer (1972) suggests that dreams can shed light on the psychology of the dreamer and their current emotional life. He states that, in particular, a sexual dream "is a vehicle for the expression of attributes or problems of the dreamer, which permeate much if not all of his life" (p.

27). Robbins and Tanck (1980) asked 87 undergraduate students to keep a dream log for a period of nine consecutive nights and administered a questionnaire to indirectly assess sexual gratification and anxiety state (tension). Sexual gratification was indirectly assessed by means of questionnaire data. The subjects were separated into groups in regard to the number of dates they had the previous month and by their response to having a satisfying affectional relationship. Results from this study indicated that individuals with relatively low levels of sexual gratification in waking life tended to use more sexual symbolism in their dreams, whereas those reporting relatively high levels of sexual gratification used less sexual symbolism in their dreams. Sexual symbolism was measured using a condensed version of the list "Freud (1900) provided ... on dreams symbols that may stand for sexuality" (p.51). Another finding from this study that warrants attention was the correlation between anxiety and sexual symbolism in dreams. Subjects reporting a higher level of current tension utilized higher levels of sexual symbolism in their dreams.

Further support linking sexual dreams and waking personality comes from studies exploring personality traits. Henton (1976) administered a 25-item anxiety scale and a structured questionnaire (regarding nocturnal orgasms in women) to 1000 female volunteer students to examine if

sexual excitement during sleeping hours was associated with anxiety. Analyses from this study found a positive relationship between women reporting sexual excitement during sleep and a high degree of waking anxiety. In a similar study, Robbins, Tanck, and Houshi (1985) asked 123 undergraduate men and women to record, in a dream diary, any dreams they remembered as soon as they awakened in the morning over a 10 day period. In order to explore the relationship between sexual symbolism in dreams and anxiety, the authors included a question in the dream diary which asked about the subject's anxious feelings each day. Results from this study indicated that individuals with higher levels of anxiety reported more sexual symbolism (significant at  $p < .01$ ) and manifest sexual content (significant at  $p < .05$ ) in their dreams than individuals with lower levels of anxiety. These results replicated previous findings of several other authors.

Adelson (1960) also examined sexual dreams and waking personality traits by comparing dream reports from creative and noncreative women. The dreams explored in this study were collected from the 10 least and most imaginative female college students enrolled in a creative writing course. Dream sexuality was one of the many differences found. Adelson reported that creative women's dreams were more sexually active than the non creative women's dreams,

therefore suggesting a link between sexual dreams and creativity.

Exploring the dreams of sexual abuse victims enables us to see how traumatic sexual experiences in waking life may become incorporated into dreams. As a result of reviewing studies on survivors of sexual abuse and several years of working with many sexual abuse victims, through dream therapy, Delaney (1994) has observed many aspects of sexual abuse. Many of the sexually abused women Delaney worked with reported waking feelings of fear, anxiety, shame, and problems with trust and intimacy. She found several common images in the dreams of her sexually abused clients. Included here are dreams of "abused or neglected little animals" (p. 168), witnessing abuse or being chased, sexually intrusive parents, and being held hostage or prisoner.

This review indicates that there are few studies attempting to look at waking personality and differences in dream sexuality. The purpose of this exploration is to compare personality trait differences distinguishing individuals reporting high dream sexuality from individuals reporting low dream sexuality. Gender differences will also be examined with expectations that men will initiate sexual activity more often in dreams, have stronger feelings of sexual arousal in dreams, and have more dreams in which other dream characters initiate sexual activity with them



than will women. It is hoped that this will help us to more clearly understand the relationship between dreaming and waking personality, the relationship between sex and dreams, and the function of dreaming.

### Method

#### Subjects

The present investigation used data collected as part of a larger study exploring the relationship between dreaming style and waking personality. Data was collected over a three year period, from 1990-1993, from students enrolled in psychology courses at three midwestern universities. A total of 2,423 students (946 men and 1,477 women) were surveyed. Students volunteered to participate in order to fulfill course requirements.

#### Measures

The subjects were administered a revised version of the Dreaming Style Questionnaire (Gruber, 1988) along with a number of other measures including Form A of the 16 Personality Factor Questionnaire (Cattell, Eber, & Tatsuoka, 1970). The Dreaming Style Questionnaire (DSQ), consisting of 63 Likert scale items, was designed to provide a survey of specific styles and components representative of dreaming experience (see Appendix A). Information on test-retest reliability, construct validity, and factor structure are provided in Gruber (1988). Demographic information and three items relating to dream sexuality were used in this study.

The items were numbers 48 ("I often initiate sexual activity in my dreams"), 49 ("I feel strong feelings of sexual arousal in my dreams"), and 50 ("Other dream characters often initiate sexual activity with me in my dreams"). The subjects answered the questions on a seven point scale (0-6) ranging from "not at all like me" to "very much like me."

The 16 Personality Factor Questionnaire (16PF) was used as a measure of waking personality. The 16PF was utilized because of its ability to measure a wide range of predominantly independent, enduring personality traits and because the test-retest reliabilities and construct validities are considered to be exceptionally high (Cattell et al., 1970). Form A, consisting of 187 multiple choice items, was used. The 16 primary and 9 composite scales were scored. Descriptions of the primary and composite scale are presented in Appendix B.

### Procedure

The measures were administered in a classroom setting to groups of between 20 and 50 subjects. The DSQ was administered first, assuring consistent conditions for all subjects. The subjects were assured that all responses would be completely confidential. They were encouraged to answer each question as openly and honestly as possible and to take as much time as was needed. In regard to the DSQ, subjects were instructed to answer the questions as they actually remember their dream experiences. They were asked

not to answer questions as they feel in waking life or how they may wish their dreams to be, but rather as they actually recall their dreams.

This study used data from subjects who completed both the DSQ and the 16PF. Differences in overall group sizes vary slightly due to the rare occurrence of subjects not having completed data for all items. Three hundred subjects (151 men and 149 women) reported recalling dreams once a month or less (a score of 4, 5, or 6 on question 57 of the DSQ). These subjects were removed from analysis, due to difficulties low dream recallers could be expected to encounter when responding to the DSQ which may potentially distort results. This will help remove subjects who report no sexual dreams when actually these subjects may just be unable to recall dreams, sexual or not. As a result of removing low dream recallers, 795 male and 1,328 female subjects were used in the data analysis.

Following removal of low dream recallers from the data, three two-tailed t-tests were used to examine gender differences for each of the three DSQ items.

The next step of organizing data was to construct groups for examination of waking personality correlates. Correlation coefficients were run on the three DSQ items and ranged from a low of .68 to a high of .78 (see Table 1), indicating that they were highly correlated. Therefore, the subject's scores on each item were summed forming an overall

Table 1

Correlation Coefficients Between DSQ items 48, 49, and 50

---

DSQ Items		Correlation Coefficients		
		<hr/>		
		Combined Men and Women	Men	Women
Item 48 with 49		.78	.74	.78
Item 48 with 50		.69	.69	.68
Item 49 with 50		.76	.75	.76

---

dream sexuality scale. Men and women were analyzed separately. The subjects were then divided into three groups: a low dream sexuality group, a moderate dream sexuality group, and a high dream sexuality group. Discriminant analysis procedures were performed comparing the low and high dream sexuality groups on the 16 primary personality traits and nine composite scales measured by the 16PF. In order to examine personality trait differences between individuals reporting low and high feelings of sexual arousal in dreams, discriminant analysis procedures were also conducted separately for DSQ item 49.

### Results

#### Analysis of Gender Differences for DSQ

##### Items 48, 49, and 50

The purpose of this phase of analysis involved exploring gender differences in dream sexuality for each of the three DSQ items. The frequency distributions for men and women on each of the DSQ items can be found in Table 2. Significant gender differences were found for each of the t-tests performed on the DSQ items (see Table 3). Results indicated that men reported higher scores for self-initiated sexual activity, feelings of sexual arousal, and other-initiated sexual activity than did women for DSQ items 48, 49, and 50 respectively.

The 16PF scales are bipolar, with extreme scores indicating a strong representation of the personality

Table 2

Frequency Distributions for Men and Women on DSQ Items 48, 49, and 50 (Likert Scale 0-6)

Frequency Distribution for DSQ Item 48 (Self-Initiated Sexual Activity)

Score Percent	Frequency	Valid Percent	Cumulative
Men (N = 795)			
0	24	3.0	3.0
1	52	6.5	9.6
2	84	10.6	20.1
3	155	19.5	39.6
4	188	23.6	63.3
5	171	21.5	84.8
6	118	14.8	99.6
Women (N = 1328)			
0	118	8.9	8.9
1	190	14.3	23.2
2	204	15.4	38.6
3	262	19.7	58.3
4	266	20.0	78.3
5	172	13.0	91.3
6	111	8.4	99.6

(continued)

Table 2 (cont.)

---

Frequency Distribution for DSQ Item 49 (Feelings of Sexual Arousal)

---



---

Score Percent	Frequency	Valid Percent	Cumulative
------------------	-----------	---------------	------------

---

## Men (N = 791)

0	31	3.9	3.9
1	55	7.0	10.9
2	102	12.9	23.8
3	153	19.3	43.1
4	177	22.4	65.5
5	164	20.7	86.2
6	106	13.4	99.6

## Women (N = 1323)

0	131	9.9	9.9
1	202	15.3	25.2
2	192	14.5	39.7
3	253	19.1	58.8
4	241	18.2	77.0
5	193	14.6	91.6
6	104	7.9	99.5

---

(continued)

Table 2 (cont.)

---

Frequency Distribution for DSQ Item 50 (Other Initiated Sexual Activity)

---



---

Score Percent	Frequency	Valid Percent	Cumulative
------------------	-----------	---------------	------------

---

## Men (N = 793)

0	31	3.9	3.9
1	60	7.6	11.5
2	90	11.3	22.8
3	161	20.3	43.1
4	184	23.2	66.3
5	164	20.7	87.0
6	98	12.4	99.4

## Women (N = 1328)

0	111	8.4	8.4
1	159	12.0	20.3
2	200	15.1	35.4
3	249	18.8	54.1
4	289	21.8	75.9
5	223	16.8	92.7
6	90	6.8	99.5

---



Table 3

T-tests of Differences Between Men and Women for DSO Items 48, 49, and 50


---

Item 48 (Self-Initiated Sexual Activity)			
	Valid Cases (N)	Mean	SD
<hr/>			
Men	795	3.80	1.58
Women	1328	3.02	1.76

---

Mean Difference = .78  
 t-value = 10.50,  $p < .001$

Item 49 (Feelings of Sexual Arousal)			
	Valid Cases (N)	Mean	SD
<hr/>			
Men	791	3.67	1.62
Women	1323	2.99	1.80

---

Mean Difference = .68  
 t-value = 8.97,  $p < .001$

Item 50 (Other Initiated Sexual Activity)			
	Valid Cases (N)	Mean	SD
<hr/>			
Men	793	3.66	1.62
Women	1328	3.14	1.73

---

Mean Difference = .52  
 t-value = 6.94,  $p < .001$

characteristics identified by the scales. Since we are examining differences between group mean scale scores and not individual profiles, the personality characteristics identified as significant discriminators should be seen as representing trends or tendencies in the described direction, rather than definitive descriptions of group members. The discriminant functions reported invariably represent small differences in scale scores and often account for only a small proportion of total variance. Another caution considered when analyzing the personality data involves the interpretation of the individual scales. Although designed to represent specific personality dimensions, interpretation of the scales may vary to some extent, depending on the overall profile and on what aspects of the dimensions are attended to. Therefore a skilled 16PF interpreter is called on to make subtle judgments concerning the meaning of individual scales within a given profile. Appendix B provides a description of the individual scales. For a more thorough understanding of the profile interpretation procedure, refer to the Handbook for the 16PF (Cattell, Eber, & Tatsuoka, 1970) or to A Guide to Clinical Uses of the 16PF (Karson & O'Dell, 1976). One further note regarding the 16PF involves the composite scales. Since these variables are linear combinations of the primary scales, the two sets of variables were analyzed separately.

### Discriminant Analysis

Due to the large group sizes and the use of multiple discriminant procedures, a probability level of .01 was used to determine significance. In addition, any discriminant function canonical correlation coefficient (the square of which represents the amount of variance in the function accounted for by group membership) of less than .15, even if statistically significant, was considered to be of marginal meaning when discussing results. Although the results are highly significant, the canonical correlation suggests that minimal variance is accounted for.

Individual variables were considered to be meaningful discriminators if they appeared on the discriminant function. In addition, variables with a total structure coefficient (the product moment correlation between the individual variables and the discriminant function) above .30 and a univariate F significant at  $p < .05$  was required for a variable to be considered as a discriminator.

### Group Formation for data Analysis

Men and women were analyzed separately. A t-test was performed on the overall dream sexuality scale and results indicated that men scored significantly higher than women (see Table 4). The subjects were then divided into three groups: a low dream sexuality group, a moderate dream sexuality group, and a high dream sexuality group. In order to assure a clear distinction between low and high dream

Table 4

T-Test of Differences Between Men and Women for the Sum of  
DSQ Items 48, 49, and 50

	Number of Cases (N)	Mean	SD
Men	789	11.14	4.35
Women	1321	9.15	4.82

Mean Difference = 1.98  
t-value = 9.73,  $p < .001$

sexuality groups the moderate group, consisting of about 50%, were excluded from analysis. Since the DSQ uses a likert scale, which measures scores in whole numbers, we were not able to divide subjects exactly into groups of 25%, 50%, and 25% for low, moderate, and high dream sexuality groups respectively. Appendix C lists the frequency distributions for the overall dream sexuality scales of both men and women. The low dream sexuality groups consisted of 24.8% (men) and 23.8% (women) and the high dream sexuality groups included 24.7% (men) and 26.1% (women).

In order to explore feelings of sexual arousal, in isolation from sexual behavior, item 49 was analyzed separately. Men and women were analyzed separately. In this phase of analysis the subject's scores on item 49 were divided into three groups: a low sexual arousal group, a moderate sexual arousal group, and a high sexual arousal group. Again, the moderate groups consisting of about 50% were excluded from analysis. The low sexual arousal groups consisted of 23.8% (men) and 25.2% (women) and the high sexual arousal groups included 34.5% (men) and 23.0% (women) (see Table 2).

#### Analysis of Primary and Secondary Scales

The principle task of this phase of analysis involved identifying the waking personality variables that are characteristic of low and high dream sexuality and dream sexual arousal. Discriminant analysis procedures were

employed to determine the waking personality variables that discriminate between the low dream sexuality groups and the high dream sexuality groups; men and women were analyzed separately.

Of the four discriminant analysis procedures performed, comparing two male and two female low dream sexuality groups with two male and two female high dream sexuality groups, all were significant at the  $p < .01$  level. Means, standard deviations, and initial (step 0) significant levels of univariate F's for groups of male and female low and high sexuality dreamers are presented in Appendices D and E. Tables 5 and 6 present the significant personality variables for each dream sexuality group and Tables 7 and 8 present the significant personality variables for each sexual arousal group. Variables are presented in order of importance, as determined by the magnitude of their total structure coefficients. Variables actually appearing on the discriminant function are marked with an asterisk. The descriptors representing the opposite poles of the 16PF scales have been placed under the groups they actually describe. Negative and positive correlations should be interpreted according to their absolute values. Therefore, negative correlations do not indicate the reverse of the trait specified.

The ability of the discriminant function, comprised of weighted 16PF scale scores, to categorize low and high dream

Table 5

Comparison of Male Low and High Sexuality Dreamers

16PF Scale	Low Dream Sexuality (N = 184)	High Dream Sexuality (N = 179)	TSC
Primary Scales ( $p < .0001$ ; C.C. = .25)			
L *	Trusting	Suspicious	.73
E *	Submissive	Dominant	.72
Q <sub>4</sub>	Relaxed	Tense	.47
C	Emotionally Stable	Affected by Feelings	-.39
Q <sub>1</sub>	Conservative	Experimenting	.35
O	Self-Assured	Apprehensive	.31
H	Shy	Bold	.30
Secondary Scales ( $p < .0001$ ; C.C. = .26)			
Q <sub>II</sub> *	Low Anxiety	High Anxiety	.72
Q <sub>I</sub> *	Introversion	Extraversion	.45
Q <sub>VI</sub>	Neuroticism	Adjustment	.32
Q <sub>IX</sub>	High Achievement	Low Achievement	-.32

\* Variables on the Discriminant Function

Note: C.C. = Canonical CorrelationNote: TSC = Total Structure Coefficient

Table 6

Comparison of Female Low and High Sexuality Dreamers

16PF Scale	Low Dream Sexuality (N = 283)	High Dream Sexuality (N = 309)	TSC
Primary Scales ( $p < .0001$ ; C.C. = .27)			
E *	Submissive	Dominant	-.75
Q <sub>3</sub> *	Controlled	Undis. Self-Conflict	.56
L	Trusting	Suspicious	-.47
C *	Emotionally Stable	Affected by Feelings	.46
Q <sub>4</sub>	Relaxed	Tense	-.38
Secondary Scales ( $p < .0001$ ; C.C. = .24)			
Q <sub>IV</sub> *	Subduedness	Independence	.79
Q <sub>V</sub>	High Control	Low Control	-.48
Q <sub>VIII</sub>	Low Creativity	High Creativity	.48
Q <sub>II</sub>	Low Anxiety	High Anxiety	.37
Q <sub>VII</sub> *	High Leadership	Low Leadership	-.30

\* Variables on the Discriminant Function

Note: C.C. = Canonical CorrelationNote: TSC = Total Structure Coefficient



Table 7

Comparison of Males Reporting Low Verses High Sexual Arousal  
in Dreams (DSQ Item 49)

16PF Scale	Low Sexual Arousal in Dreams (N = 174)	High Sexual Arousal in Dreams (N = 254)	TSC
Primary Scales ( $p < .003$ ; C.C. = .15)			
Q <sub>4</sub> *	Relaxed	Tense	1.00
O	Self-Assured	Apprehensive	.56
L	Trusting	Suspicious	.40
C	Emotionally Stable	Affected by Feelings	-.33
Secondary Scales ( $p < .001$ ; C.C. = .18)			
Q <sub>II</sub> *	Low Anxiety	High Anxiety	.74
Q <sub>IV</sub> *	Subduedness	Independence	.58
Q <sub>VIII</sub>	Low Creativity	High Creativity	.35
Q <sub>VI</sub>	Neuroticism	Adjustment	.35

\* Variables on the Discriminant Function

Note: C.C. = Canonical Correlation

Note: TSC = Total Structure Coefficient

Table 8

Comparison of Females Reporting Low verses High Sexual Arousal in Dreams (DSQ Item 49)

16PF Scale	Low Sexual Arousal in Dreams (N = 300)	High Sexual Arousal in Dreams (N = 270)	TSC
Primary Scales ( $p < .0001$ ; C.C. = .27)			
E *	Submissive	Dominant	-.64
C *	Emotionally Stable	Affected by Feelings	.43
Q <sub>2</sub> *	Group-Oriented	Self-Sufficient	-.39
L	Trusting	Suspicious	-.34
Secondary Scales ( $p < .0001$ ; C.C. = .22)			
Q <sub>VIII</sub> *	Low Creativity	High Creativity	.72
Q <sub>IV</sub> *	Subduedness	Independence	.71
Q <sub>V</sub>	High Control	Low Control	-.40
Q <sub>VII</sub> *	High Leadership	Low Leadership	-.38
Q <sub>II</sub>	Low Anxiety	High Anxiety	.38

\* Variables on the Discriminant Function

Note: C.C. = Canonical Correlation

Note: TSC = Total Structure Coefficient

sexuality subjects was moderately high (see Tables 9 and 10). For the male overall dream sexuality group, the percent of correctly classified subjects using the 16PF primary scales was 60.33% with the secondary scales classifying 60.06% correctly. The female overall dream sexuality group correctly classified 61.99% and 60.47% of the subjects for the primary and secondary scales respectively. The ability of the discriminant function, comprised of weighted 16PF scale scores, to categorize subjects reporting low and high feelings of sexual arousal in dreams was also moderately high (see Tables 11 and 12). Classification results for male subjects for DSQ item 49 (feelings of sexual arousal) was 53.50% for the primary scales and 57.94% for the secondary scales. On the primary and secondary scales 59.82% of female subjects for DSQ item 49 were correctly classified.

#### Discussion

In concurrence with previous research the current study found that gender differences in dream sexuality do appear to exist. Men scored significantly higher than did women on all three Dreaming Style Questionnaire (DSQ) items examined, indicating that: men report initiating sexual activity in dreams more often than women; men report more feelings of sexual arousal in dreams than do women; and men more often have dreams in which other dream characters initiate sexual activity with them. In addition, after combining the three

Table 9

Classification Results for Male Subjects for Sum of DSO  
Items 48, 49, and 50

Actual Group	Number of Cases	Predicted Group	
		Low Dream Sexuality	High Dream Sexuality

16PF Primary Scales

Low Dream Sexuality	184	112 60.9%	72 39.1%
High Dream Sexuality	179	72 40.2%	107 59.8%
Ungrouped Cases	377	211 56.0%	166 44.0%

Percent of grouped cases correctly classified 60.33%

16PF Secondary Scales

Low Dream Sexuality	184	109 59.2%	75 40.8%
High Dream Sexuality	179	70 39.1%	109 60.9%
Ungrouped Cases	377	197 52.3%	180 47.7%

Percent of grouped cases correctly classified 60.06%

Table 10

Classification Results for Female Subjects for Sum of DSQ  
Items 48, 49, and 50

Actual Group	Number of Cases	Predicted Group	
		Low Dream Sexuality	High Dream Sexuality
16PF Primary Scales			
Low Dream Sexuality	283	176 62.2%	107 37.8%
High Dream Sexuality	309	118 38.2%	191 61.8%
Ungrouped Cases	589	300 50.9%	289 49.1%
Percent of grouped cases correctly classified 61.99%			
16PF Secondary Scales			
Low Dream Sexuality	283	175 61.8%	108 38.2%
High Dream Sexuality	309	126 40.8%	183 59.2%
Ungrouped Cases	589	290 49.2%	299 50.8%
Percent of grouped cases correctly classified 60.47%			

Table 11

Classification Results for Male Subjects for DSQ Item 49  
(Feelings of Sexual Arousal)

Actual Group	Number of Cases	Predicted Group	
		Low Dream Sexuality	High Dream Sexuality
16PF Primary Scales			
Low Dream Sexuality	174	108 62.1%	66 37.9%
High Dream Sexuality	254	133 52.4%	121 47.6%
Ungrouped Cases	312	184 59.0%	128 41.0%

Percent of grouped cases correctly classified 53.50%

16PF Secondary Scales			
Low Dream Sexuality	174	100 57.5%	74 42.5%
High Dream Sexuality	254	106 41.7%	148 58.3%
Ungrouped Cases	312	174 55.8%	138 44.2%

Percent of grouped cases correctly classified 57.94%

Table 12

Classification Results for Female Subjects for DSO Item 49  
(Feelings of Sexual Arousal)

Actual Group	Number of Cases	Predicted Group	
		Low Dream Sexuality	High Dream Sexuality

16PF Primary Scales

Low Dream Sexuality	300	179 59.7%	121 40.3%
High Dream Sexuality	270	108 40.0%	162 60.0%
Ungrouped Cases	611	317 51.9%	294 48.1%

Percent of grouped cases correctly classified 59.82%

16PF Secondary Scales

Low Dream Sexuality	300	177 59.0%	123 41.0%
High Dream Sexuality	270	106 39.3%	164 60.7%
Ungrouped Cases	611	310 50.7%	301 49.3%

Percent of grouped cases correctly classified 59.82%

DSQ items, the results indicate that men score higher on overall dream sexuality than do women.

As men clearly initiate sexual activity in waking life more often than women (O'Sullivan & Byers, 1992; Peplau, Rubin, & Hill, 1977), our findings support the continuity hypothesis suggesting that, at least in regard to initiating sexual activity (DSQ item 48), dreams and waking life parallel one another (Breger, Hunter, & Lane, 1971; Corriere, Karle, Woldenberg, & Hart, 1980; Sirois-Berliss & Dekoninck, 1982). However, on DSQ item 50 (other dream characters often initiate sexual activity with me in my dreams), men scored higher than women, while research shows that in waking life men do not experience this as frequently as women. Therefore, these results appear to support the compensation hypothesis for DSQ item 50. Of course the higher score for men on item 50 may also be a result of men's overall higher incidence of reporting all sexual behaviors. On the other hand, men may have scored higher than women in compliance with Freud's wish fulfillments hypothesis.

Current results confirm previous claims regarding the very high frequency of sexual behavior in dreams for both men and women. For each DSQ item, scores on the likert scale from zero through two are in the "not at all like me" direction, a score of three represents a neutral score, and scores from four through six are in the "very much like me"



direction. For DSQ item 48 (I often initiate sexual activity in my dreams), 20.1% of men scored in the "not at all like me" direction and 60.4% scored in the "very much like me" direction. Clearly a large percentage of men report frequently initiating sexual activity in dreams. For item 49 (I feel strong feelings of sexual arousal in my dreams), 23.8% of men scored in the "not at all like me" direction and 56.9% scored in the "very much like me" direction, indicating a large percentage of men often have feelings of sexual arousal in their dreams. For item 50 (Other dream characters often initiate sexual activity with me in my dreams), 22.8% of men scored in the "not at all like me" direction and 56.9% scored in the "very much like me" direction, indicating that they often have dreams of other dream characters initiating sexual activity. Taken together, these results suggest that a large percentage of men frequently incorporate sex into their dreams.

While women had significantly lower percentages than men, they also report frequent sexual content in their dreams. For item 48 (self-initiated sexual activity), 38.6% of women scored in the "not at all like me" direction and 41.7% scored in the "very much like me" direction. In regard to item 49 (feelings of sexual arousal), 39.7% of women scored in the "not at all like me" direction and 41.2% scored in the "very much like me" direction. Here, as with item 48, the percentages of women in the low and high

directions are very similar. These results indicate that there is not much difference between the number of women frequently reporting feelings of sexual arousal and initiation of sexual activity in dreams and the number of women rarely reporting this. For item 50 (other-initiated sexual activity), 35.4% of women scored in the "not at all like me" direction and 45.9% scored in the "very much like me" direction. The somewhat higher percent of women in the "very much like me" direction, for item 50, indicates that a higher number of women have dreams of other dream characters initiating sexual activity than report not having these dreams. Previous research has shown that women tend to be more conservative than men in waking sexual behavior. When looking at this, together with results from item 50, our findings support the continuity hypothesis for women in this particular area of behavior.

Consistent with previous findings, when the results for women are compared with men, for each item, it appears that women do not incorporate sex into dreams as often as do men (DeMartino, 1953; Hall & Van de Castle, 1966; Husband, 1936; Kinsey, Pomeroy, Martin, & Gebhard, 1953; Wilson, 1975). Clearly these differences between men and women can be related to waking sexual attitudes. Previous research has shown that, although differences are becoming smaller, men are still found to be more permissive in waking sexual behavior than women.

The significant differences between group means are small, however they represent trends in the described directions. Turning to the 16PF waking personality variables, the current study found the following differences between low dream sexuality and high dream sexuality groups (DSQ items 48, 49, and 50 combined). Male low sexuality dreamers were found to be, in order of importance, trusting (L), submissive (E), lower on anxiety ( $Q_{II}$ ), relaxed ( $Q_4$ ), introverted ( $Q_I$ ), emotionally stable (C), conservative ( $Q_1$ ), higher on neuroticism ( $Q_{VI}$ ), higher on achievement ( $Q_{IX}$ ), self-assured (O), and shy (H). Conversely, male high sexuality dreamers were found to be suspicious (L), dominant (E), higher on anxiety ( $Q_{II}$ ), tense ( $Q_4$ ), extroverted ( $Q_I$ ), affected by feelings (C), experimenting ( $Q_1$ ), well-adjusted ( $Q_{VI}$ ), lower on achievement ( $Q_{IX}$ ), apprehensive (O), and bold (H). Female low sexuality dreamers were described as, in order of importance, subdued ( $Q_{IV}$ ), submissive (E), controlled ( $Q_3$ ), higher on control ( $Q_V$ ), lower on creativity ( $Q_{VIII}$ ), trusting (L), emotionally stable (C), relaxed ( $Q_4$ ), lower on anxiety ( $Q_{II}$ ), and higher on leadership ( $Q_{VII}$ ). Female high sexuality dreamers were described as independent ( $Q_{IV}$ ), dominant (E), careless of social rules ( $Q_3$ ), lower on control ( $Q_V$ ), higher on creativity ( $Q_{VIII}$ ), suspicious (L), affected by feelings (C), tense ( $Q_4$ ), higher on anxiety ( $Q_{II}$ ), and lower on leadership ( $Q_{VII}$ ). Overall, low sexuality dreamer and high sexuality dreamer trait description

correspondence between male and female subjects is moderately low; concurring on only 5 of 16 descriptions [trusting verses suspicious (L), submissive verses dominant (E), relaxed verses tense ( $Q_4$ ), emotionally stable verses affected by feelings (C), and low anxiety verses high anxiety ( $Q_{II}$ )].

As indicated by the above trait descriptions, high sexuality male dreamers seem to score higher on personality variables that fit a profile typical of individuals described as self-opinionated and skeptical [suspicious (L)], assertive and aggressive [dominant (E)], and higher on anxiety ( $Q_{II}$ ). This confirms previous findings linking high anxiety with high sexuality male dreamers (Robbins & Tanck, 1980; Robbins, Tanck, & Houshi, 1985). On the other hand, low sexuality male dreamers appear to fit a profile more typical of individuals described as accepting [trusting (L)], accommodating and conforming [submissive (E)], and satisfied, having a low drive, and unfrustrated [low anxiety ( $Q_{II}$ ) and relaxed ( $Q_4$ )].

In regard to female subjects, high sexuality dreamers appear to score higher on personality variables typical of individuals described as assertive and aggressive [independence ( $Q_{IV}$ ) and dominant (E)], careless of social rules and nonconforming [undisciplined self-conflict ( $Q_3$ ) and low control ( $Q_v$ )], and self-sufficient and experimenting [high creativity ( $Q_{VII}$ )]. Consistent with earlier findings,

high anxiety was also found to correspond with high sexuality female dreamers (Henton, 1976; Robbins & Tanck, 1980; Robbins, Tanck, & Houshi, 1985). On the other hand, low sexuality female dreamers seem to fit a profile more typical of individuals described as passive and accommodating [subdued ( $Q_{IV}$ ) and submissive (E)], having a high regard for social reputation and well-controlled [controlled ( $Q_3$ ) and high control ( $Q_V$ )], and tough-minded and practical [low creativity ( $Q_{VII}$ )].

Furthermore, current findings, in line with a previous report (Adelson, 1960), found a correspondence between high creativity during waking and high sexuality female dreamers. Adelson explored several differences between creative and non-creative college women and found that creative women's dreams were more sexually active than the non-creative women's dreams. Current findings support this link between sexual dreams and creativity. These findings also provide evidence that the relationship between waking personality and dreams can be reliably measured and is replicatable.

This study suggests that sexual behavior in dreams has not changed much during the past three or four decades. Men and women continue to have frequent sexual dreams. In addition, current findings, in correspondence with previous research, found that men continue to experience sexual dreams more often than women (DeMartino, 1953; Hall and Van de Castle, 1966; Husband, 1936; Kinsey, Pomeroy, Martin, &

Gebhard, 1953; Wilson, 1975). Although we anticipated that dreams may have shown women to be considerably more liberal than in the past, perhaps even more apparently than measures of waking attitudes, this does not seem to be the case. In fact, dreams of women appear to show less change in sexual attitudes over time than in waking measures. This may suggest that underlying attitudes, as represented in dreams, have not changed at the rate that overt waking attitudes suggest.

Within the current study, the 16PF waking personality variables found the following differences between low sexual arousal and high sexual arousal dreamers (DSQ item 49). Males reporting low sexual arousal in dreams were found to be, in order of importance, relaxed ( $Q_4$ ), lower on anxiety ( $Q_{II}$ ), subdued ( $Q_{IV}$ ), self-assured (O), trusting (L), lower on creativity ( $Q_{VIII}$ ), higher on neuroticism ( $Q_{VI}$ ), and emotionally stable (C). Conversely, males reporting high sexual arousal in dreams were described as tense ( $Q_4$ ), higher on anxiety ( $Q_{II}$ ), independent ( $Q_{IV}$ ), apprehensive (O), suspicious (L), higher on creativity ( $Q_{VIII}$ ), well-adjusted ( $Q_{VI}$ ), and affected by feelings (C). Females reporting low sexual arousal in dreams were described as lower on creativity ( $Q_{VIII}$ ), subdued ( $Q_{IV}$ ), submissive (E), emotionally stable (C), higher on control ( $Q_V$ ), group-oriented ( $Q_2$ ), higher on leadership ( $Q_{VII}$ ), lower on anxiety ( $Q_{II}$ ), and trusting (L). Females reporting high sexual arousal in

dreams were described as higher on creativity ( $Q_{VIII}$ ), independent ( $Q_{IV}$ ), dominant (E), affected by feelings (C), lower on control ( $Q_V$ ), self-sufficient ( $Q_2$ ), lower on leadership ( $Q_{VII}$ ), higher on anxiety ( $Q_{II}$ ), and suspicious (L). Overall, low sexual arousal dreamer and high sexual arousal dreamer trait description correspondence between male and female subjects is moderately low; concurring on only 5 of 12 descriptions [emotionally stable verses affected by feelings (C), trusting verses suspicious (L), low creativity verses high creativity ( $Q_{VIII}$ ), subduedness verses independence ( $Q_{IV}$ ), and low anxiety verses high anxiety ( $Q_{II}$ )].

As indicated by the above trait descriptions, men reporting high sexual arousal in dreams appear to score higher on personality variables that are characteristic of individuals described as hard-driving and restless [tense ( $Q_4$ )], higher on anxiety ( $Q_{II}$ ), and independent, daring, and incisive [independence ( $Q_{IV}$ )]. On the other hand, men reporting low sexual arousal in dreams seem to fit a profile more typical of individuals described as satisfied and having a low drive [relaxed ( $Q_4$ ) and low anxiety ( $Q_{II}$ )] and passive [subduedness ( $Q_{IV}$ )]. The trait descriptor "tense ( $Q_4$ )", accounting for the most variance in discriminating high from low arousal male dreamers, is described as related to "undischarged drive", individuals "unable to remain inactive", or "frustrated". Notably, this is consistent

with Freud's beliefs about sexual dreams (Freud, 1952). Freud claimed that sexual dreams were a form of safety valve that allowed for the discharge of built-up instinctual, particularly sexual, drives. Our finding that men who report more sexual arousal in dreams are characterized by undischarged drive, directly supports this contention. However, while Freud in 1890s Vienna saw this dream function occur in a disguised, symbolic fashion-- in 1990s America we see undisguised sexual behavior incorporated directly into dreaming.

In regard to female subjects, women reporting high sexual arousal in dreams score higher on personality variables that are characteristic of individuals described as self-sufficient and experimenting [high creativity ( $Q_{VIII}$ )] , independent, daring, and incisive [independence ( $Q_{IV}$ )], and assertive [dominant (E)]. Women reporting low sexual arousal in dreams appear to fit a profile more characteristic of individuals described as tough-minded and practical [low creativity ( $Q_{VIII}$ )] and passive and accommodating [subduedness ( $Q_{IV}$ ) and submissive (E)]. Here, Freud's theory of "drive discharge" does not seem to fit. This may indicate that Freud's theories are more implicable to men than women.

When comparing the waking personality profiles of men and women corresponding to levels of dream sexuality, there are several apparent differences. Male and female high



sexuality dreamers exhibit assertiveness; however, men are more self-opinionated, skeptical, and anxious, whereas women are self-sufficient, nonconforming, and careless of social rules. As for low sexuality dreamers, men are uncompetitive and satisfied, whereas women are passive, controlled, and tough-minded. According to sexual attitudes discussed earlier, women are generally more conservative than men, therefore, it makes sense that female high sexuality dreamers would be assertive and careless of social rules, as is the case here. Similarly, it may be expected that female and male low sexuality dreamers would be passive and uncompetitive, respectively, which is also apparent in this study.

The current study indicates that relationships between waking personality and dreams about sex clearly exist. Furthermore, these relationships, along with the prevalence of sexual content in dreams, suggest that some important or necessary function is served by sexual dreams-- however, it remains unclear as to what this function may be. In fact, differences between findings for men and women indicate that sexual dreams may occur for different reasons and serve different functions for women than for men.

The present study enabled us to determine frequency of sexual arousal and behavior in dreams, as well as to develop personality profiles characteristic of high and low sexuality dreamers. Current findings lend support to both

the continuity and compensation hypotheses of dreaming, as well as to previous findings of gender differences in dream sexuality and sexual arousal in dreams.

### Suggestions for Future Research

In order to increase the generalizability of the results future research should include a more diverse population. For instance, the addition of older subjects may increase the probability for individuals to experience sexual dreams since, as indicated in previous research, many people do not experience sexual dreams until later in life.

Another area of focus for future research is the addition of new measures. Administering a dream diary several weeks before the subjects complete the DSQ may enable subjects to remember their dreams more effectively. The development of a waking sexual behavior questionnaire should also be a focus for future research. If the subjects were asked variations of DSQ items 48, 49 and 50 in regard to waking life behavior (for example, question 48 could be "I often initiate sexual activity in waking life") we may clarify the relationship between waking sexuality and dreaming.

## References

- Adelson, J. (1960). Creativity and the dream. Merrill Palmer Quarterly, 6, 92-97.
- Beck, A. (1967). Depression: Clinical, experimental, and theoretical aspects. New York: Harper and Row.
- Berquier, A., & Ashton, R. (1992). Characteristics of the frequent nightmare sufferer. Journal of Abnormal Psychology, 101, 246-250.
- Bokert, E. (1965). The effects of thirst and related auditory stimulation on dream reports. Paper presented to the association for the Psychophysiological Study of Sleep, Washington, DC.
- Breger, L., Hunter, J., & Lane, R. W. (1971). The effects of stress on dreams. Psychological Issues, 7, 1-210.
- Brenneis, B. (1970). Male and female ego modalities in manifest dream content. Journal of Abnormal Psychology, 76, 434-442.
- Brown, M., & Auerback, A. (1981). Communication patterns in initiation of marital sex. Medical Aspects of Human Sexuality, 15, 101-117.
- Calfin, M. S., Carroll, J. L., & Schmidt, J., Jr. (1993). Viewing music videotapes before taking a test of premarital sexual attitudes. Psychological Reports, 72, 475-481.

- Cattell, R. B., Eber, H. W., & Tatsuoka, M. M. (1970).  
Handbook for the 16PF. Champaign, IL: Institute for  
Personality and Ability Testing.
- Cooper, S., & Hartman, E. (1986). Hostility levels of  
lifetime nightmare sufferers: A test of a clinical  
hypothesis. Psychoanalytical Psychology, 3, 373-377.
- Corriere, R., Karle, W., Woldenberg, L., & Hart, J. (1980).  
Dreaming & waking. Culver City, California: Peace Press.
- Cramer, P. (1986). Fantasies of college men: Then and now.  
The Psychoanalytic Review, 73, 163-174.
- De Martino, M. F. (1953). Sex differences in the dreams of  
southern college students. Journal of Clinical  
Psychology, 9, 199-201.
- Delaney, G. (1994). Sexual Dreams. New York: Fawcett  
Columbine.
- Dunn, P. C., Knight, S. M., & Glascoff, M. A. (1992).  
Gender-specific changes in students' sexual behaviors and  
attitudes at a southeastern university between 1973 and  
1988. College Health, 41, 99-104.
- Fisher, C. (1966). Dreaming and Sexuality. In R. M.  
Lowenstein, L. M. Newman, M. Schur, & A. J. Solnit  
(Eds.), Psychoanalysis-A general psychology (pp.  
537-569). New York: International Universities Press,  
INC.

- Foulkes, D., Pivik, T. Steadman, H. S., Spear, P. S., & Symonds, J. D. (1967). Dreams of the male child: An EEG study. Journal of Abnormal Psychology, 72, 457-467.
- Freud, S. (1952). On Dreams. New York: Norton. (Original work published 1901).
- Furman, B. (1982). REM mental content in relation to VBF (Vaginal Blood Flow) fluctuations. Dissertations Abstracts International, 43, 1297 B.
- Gackenbach, J., Heilman, N., LaBerge, S., & Boyt, S. (1985). The relationship between field independence and lucid dreaming ability. Journal of Mental Imagery, 9, 9-20.
- Garfield, P. (1973). Keeping a longitudinal dream record. Psychotherapy: Theory, research, and practice, 10, 223-228.
- Garfield, P. (1974). Creative Dreaming. New York: Ballantine Books.
- Gregor, T. (1981). A content analysis of Mehinaku dreams. Ethos, 9, 353-390.
- Gruber, R. E. (1985). Personality correlates of lucid dreamers and nightmare sufferers. Unpublished master's thesis, University of Cincinnati, Cincinnati, OH.
- Gruber, R. E. (1988). Dreaming style and waking personality. (Unpublished doctoral dissertation, University of Cincinnati). Dissertation Abstracts International, 50, 2B, 737. (University Microfilm No. AADS9-03, 593).

- Hall, C. S. (1984). A ubiquitous sex difference in dreams revisited. Journal of Personality and Social Psychology, 46, 1109-1117.
- Hall, C. S., Domhoff, G. W., Blick, K. A., & Weesner, K. E. (1982). The dreams of college men and women in 1950 and 1980: A comparison of dream contents and sex differences. Sleep, 5, 188-194.
- Hall, C. S., & Van de Castle, R. L. (1966). The content analysis of dreams. New York: Appleton-Century-Crofts.
- Hatfield, E., Sprecher, S., Pillemer, J. T., Greenberger, D., & Wexler, P. (1988). Gender differences in what is desired in the sexual relationship. Journal of Psychology and Human Sexuality, 1, 39-52.
- Hauri, P. (1968). Effects of evening activity on early night sleep. Psychophysiology, 4, 276.
- Hendrick, S., Hendrick, C., Slapion-Foote, M. J., & Foote, F. H. (1985). Gender differences in sexual attitudes. Journal of Personality and Social Psychology, 48, 1630-1642.
- Henton, C. L. (1976). Nocturnal orgasm in college women: Its relation to dreams and anxiety associated with sexual factors. The Journal of Genetic Psychology, 129, 245-251.
- Hersen, M. (1971). Personality characteristics of nightmare sufferers. The Journal of Nervous and Mental Diseases, 153, 27-31.

- Hildebrand, M., & Abramowitz, S. (1984). Sexuality on campus: Changes in attitudes and behaviors during the 1970s. Journal of College Student Personnel, 25, 534-538.
- Husband, R. W. (1936). Sex differences in dream contents. Journal of Abnormal and Social Psychology, 30, 513-521.
- Kales, A., Caldwell, A., Charney, D. S., Russek, E., Davis, R., & Healey, S. (1977). Clinical and psychological aspects of nightmare sufferers. Sleep Research, 6, 146.
- Karson, S., & O'Dell, J. W. (1976). A guide to the clinical use of the 16PF. Champaign, IL: IPAT.
- Kinsey, A. C., Pomeroy, W. B., & Martin, C. E. (1948). Sexual behavior in the human male. Philadelphia: W. B. Saunders Company.
- Kinsey, A. C., Pomeroy, W. B., Martin, C. E., & Gebhard, P. H. (1953). Sexual behavior in the human female. Philadelphia: W. B. Saunders Company.
- Kramer, M. (1972). Interpretation of sex dreams. Sexual Behavior, 2, 23-29.
- Kramer, M., Kinney, L., & Scharf, M. (1983). Sex differences in dreams. The Psychiatric Journal of the University of Ottawa, 8, 1-4.
- LaBerge, S., Greenleaf, W., & Kedzierski, B. (1983). Physiological responses to dreamed sexual activity during lucid REM sleep. Psychophysiology, 20, 454-455.

- Lang, R. J., & O'Connor, K. P. (1984). Personality, dream content, and dream coping style. Personality and Individual Differences, 5, 211-219.
- Leigh, B. C. (1989). Reasons for having and avoiding sex: Gender, sexual orientation, and relationship to sexual behavior. The Journal of Sex Research, 26, 199-209.
- McBride, M. C., & Ender, K. L. (1977). Sexual attitudes and sexual behavior among college students. Journal of College Student Personnel, 18, 183-187.
- Munroe, R. L., Munroe, R. H., Brasher, A., Severin, T., Schweickart, D., & Moore, R. S. (1985). Sex differences in East African dreams. The Journal of Social Psychology, 125, 405-406.
- Narotra, R. S. (1983). A study of dream analysis. Asian Journal of Psychology and Education, 11, 14-18.
- Olgivie, R. D., Hunt, H. T., Tyson, P. D., Lucescu, M. L., & Jenkins, D. B. (1982). Lucid dreaming and alpha activity: A preliminary report. Perceptual and Motor Skills, 55, 795-808.
- Oliver, M. B., & Hyde, J. S. (1993). Gender differences in sexuality: A meta-analysis. Psychological Bulletin, 114, 29-51.
- O'Sullivan, L. F., & Byers, E. S. (1992). College students' incorporation of initiator and restrictor roles in sexual dating interactions. The Journal of Sex Research, 29, 435-446.



- Pagel, J. F., & Vann, B. H. (1992). The effects of dreaming on awake behavior. Dreaming, 2, 229-237.
- Palmer, J. (1979). A community mail survey of psychic experiences. The Journal of the American Society for Psychical Research, 73, 221-251.
- Peplau, L. A., Rubin, Z., & Hill, C. T. (1977). Sexual intimacy in dating relationships. Journal of Social Issues, 33, 86-109.
- Reiss, I. L., Anderson, R., & Sponaugle, G. C. (1980). A multivariate model of the determinants of extramarital sexual permissiveness. Journal of Marriage and the Family, 42, 395-411.
- Robbins, P. R., & Tanck, R. H. (1980). Sexual gratification and sexual symbolism in dreams. Bulletin of the Menninger Clinic, 44, 49-58.
- Robbins, P. R., & Tanck, R. H. (1988). Interest in dreams and dream recall. Perceptual and Motor Skills, 66, 291-294.
- Robbins, P. R., Tanck, R. H., & Houshi, F. (1985). Anxiety and dream symbolism. Journal of Personality, 53, 17-22.
- Robinson, I. E., & Jedlicka, D. (1982). Change in sexual attitudes and behavior of college students from 1965 to 1980: A research note. Journal of Marriage and the Family, 44, 237-240.

- Sirois-Berliss, M., & Dekoninck, J. (1982). Menstrual stress and dreams: Adaptation or interference? The Psychiatric Journal of the University of Ottawa, 7, 77-86.
- Smith, A. D., Resick, P. A., & Kilpatrick, D. G. (1980). Relationships among gender, sex-role attitudes, sexual attitudes, thoughts, and behaviors. Psychological Reports, 46, 359-367.
- Swanson, E. M., & Foulkes, D. (1968). Dream content and the menstrual cycle. Psychophysiology, 4, 373-374.
- Tholey, P. (1983). Techniques for inducing and manipulating lucid dreams. Perceptual and Motor Skills, 57, 79-90.
- Van de Castle, R. L. (1968). Dreams and menstruation. Psychophysiology, 4, 374-375.
- Van de Castle, R. L., & Kinder, P. (1968). Dream content during pregnancy. Psychophysiology, 4, 375.
- Webb, W. B., & Cartwright, R. D. (1978). Sleep and dreams. Annual Review of Psychology, 29, 223-252.
- Wilson, W. C. (1975). The distribution of selected sexual attitudes and behaviors among the adult population of the United States. The Journal of Sex Research, 11, 46-64.
- Winget, C., & Kapp, F. (1972). The relationship of the manifest content of dreams to duration of childbirth in Primiparae. Psychosomatic Medicine, 34, 313-320.

Wood, P. B. (1962). Dreaming and Isolation. Unpublished  
doctoral dissertation, University of South Carolina,  
Columbia.

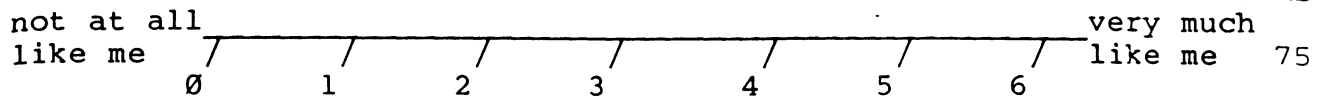
Appendix A

The Dreaming Style Questionnaire

## INSTRUCTIONS:

The following questions ask you to think about your dream experiences and rate them on a seven-point scale. The questions will be answered on a scale ranging from (0) = not at all like me through (6) = very much like me. Please think carefully about what you remember of your dreaming experiences and answer the questions by filling in the circle on the separate answer sheet which corresponds to the rating you've chosen. Be careful NOT to answer the questions as you WISH your dreams to be or how you feel while awake, but rather as you ACTUALLY remember them. All questions are to be answered on the separate answer sheet. Please do not write on the questionnaire itself.

Please read each question carefully. Take your time and answer the questions as thoughtfully and honestly as possible. Thank you for the contribution you have made to our knowledge of dreaming by filling out this questionnaire.



1. I often feel relaxed or at ease in my dreams.
2. I often feel happy or pleased in my dreams.
3. I have dreams in which I am successful at solving some problem.
4. I have dreams of finding valuables or money.
5. I have feeling of being accepted by others in my dreams.
6. My dreams are often made up of an orderly sequence of events or seem to have a basic theme.
7. My dreams seem to be a fairly direct representation of my waking life.
8. My dreams seem to be about everyday things that actually could happen in reality.
9. I am always an active participant or the central character in my dreams.
10. I try to learn things about myself from my dreams (feelings, conflicts, etc.).
11. When I am upset about something during the day it often shows up in my dreams.
12. I often feel afraid or terrified in my dreams.
13. I sometimes have dreams of being injured or hurt.
14. I have dreams where my self-image seems very negative (I am unattractive, incompetent or unfortunate).

not at all  
like me      0      1      2      3      4      5      6      very much  
like me

15. In my dreams things seem to happen to me that I can't control.
16. I seem to be or feel very vulnerable in my dreams.
17. I often have nightmares.
18. Characters in my dreams are often complete strangers.
19. My dreams most often seem to be taking place in settings which are completely unknown.
20. My dream settings seem unreal, bizarre, or wierd.
21. It is not important to me to recall my dreams.
22. My dreams are not affected by my evening mood.
23. My dreams have very little effect on my waking emotions.
24. I often feel fearless or brave in my dreams.
25. During a dream I have found that I possess super-human strength or abilities.
26. I have dreams where my self-image seems very positive (I am attractive, competent, or fortunate).
27. I find that while dreaming, I can do things to make my dreams turn out better.
28. In my dreams I feel that I can strongly influence what happens.

29. I feel that my dreams are bewildering and I can't imagine what they might be about.
30. My dreams seem very strange or distorted compared to waking life (filled with bizarre or impossible happenings).
31. My dreams seem to be about strange occurrences that could not actually happen in reality.
32. I seem to be an observer or bystander to events in my dreams.
33. I usually do not make an effort to understand my dreams.
34. My waking life seems to have little effect on the events in my dreams.
35. I often feel anxious or worried in my dreams.
36. I often feel sad or disappointed in my dreams.
37. I have dreams of being unsuccessful at solving some problems.
38. I have dreams of losing something valuable.
39. I have feelings of being rejected by others in my dreams.
40. Characters in my dreams are often well known to me.
41. My dreams most often seem to be taking place in settings which are very familiar.
42. My dream settings seem very close to real life.



not at all  
like me      0      1      2      3      4      5      6      very much  
like me

43. I make an effort to remember my dreams.
44. My mood before I go to sleep sometimes has an effect on what I dream.
45. My mood in the morning is sometimes affected by what I have dreamed.
46. I sometimes have dreams that seem to come true.
47. I have dreams which seem to occur again and again.
48. I often initiate sexual activity in my dreams.
49. I feel strong feelings of sexual arousal in dreams.
50. Other dream characters often initiate sexual activity with me in my dreams.
51. I have dreams in which I feel threatened by authority figures (policemen, teachers, supervisors).
52. Others are physically or verbally aggressive toward me in my dreams.
53. I am physically or verbally aggressive to others in my dreams.

CONTINUED ON NEXT PAGE

54. I have had nightmares \_\_\_\_\_.

0	1	2	3	4	5	6
/	/	/	/	/	/	/
once a week or more	once or twice a month	every few months	a few times a year	once a year or less	a few times in my life	never

55. Characters in my dreams are most often \_\_\_\_\_.

unfriendly							friendly
0	1	2	3	4	5	6	

56. My dreams most often seem to have \_\_\_\_\_.

very few characters							many characters
0	1	2	3	4	5	6	

57. I remember a dream \_\_\_\_\_.

0	1	2	3	4	5	6
/	/	/	/	/	/	/
once or more per night	almost every night	once a week or more	a few times a month	once a month or less	a few times a year	less than once a year

A "lucid dream" is a type of dream that while in progress a person realizes, "This is not really happening. It's only a dream." Here is a short example: "I was sitting and talking to my friend John...all of the sudden I realized this can't be...John is in California...I must be dreaming!! I knew it was a dream and that I was really asleep in bed, but the dream continued and I still talked to John even though I knew he was not real."

58. I often have lucid dreams..

not at all like me							very much like me
0	1	2	3	4	5	6	

59. I have "lucid dreams" \_\_\_\_.

80

0	1	2	3	4	5	6
once a week or more	once or twice a month	every few months	a few times a year	once a year or less	a few times in my life	never

60. Sex: Male - 0  
Female - 1

61. Age: 1 - 0-19  
2 - 20-21  
3 - 22-25  
4 - 26-30  
5 - 31-35  
6 - 36-40  
7 - over 40

62. Race: 1 - White  
2 - Black  
3 - Hispanic  
4 - Asian  
5 - Native American  
6 - Indian  
7 - Other

3. I am majoring in (or will probably major in) \_\_\_\_.

1 - Engineering  
2 - Natural Sciences  
3 - Social Science  
4 - Fine Arts or Music  
5 - Humanities  
6 - Business  
7 - Other

Appendix B

Description of 16PF Scales

## CAPSULE DESCRIPTIONS OF THE 16 PRIMARY PERSONALITY FACTORS

Low Score Direction	FACTOR A	High Score Direction
RESERVED, Detached, Critical, Cool, Impersonal	vs.	WARMHEARTED, Outgoing, Participating, Interested in People, Easy-going

(Sizothymia)

(Affectothymia)

People who score low (sten of 1 to 3) on Factor A tend to be stiff, cool, skeptical, and aloof. They like things rather than people, working alone, and avoiding compromises of viewpoints. They are likely to be precise and "rigid" in their way of doing things and in their personal standards. In many occupations, these are desirable traits. They may tend, at times, to be critical, obstructive, or hard.

People who score high (sten of 8 to 10) on Factor A tend to be goodnatured, easy-going, emotionally expressive, ready to cooperate, attentive to people, softhearted, kindly, adaptable. They like occupations dealing with people and socially impressive situations, and they readily form active groups. They are generous in personal relations, less afraid of criticism, better able to remember names of people.

## FACTOR B

LESS INTELLIGENT, Concrete-thinking	vs.	MORE INTELLIGENT, Abstract-thinking, Bright
--	-----	--

(Lower scholastic mental capacity)

(Higher scholastic mental capacity)

The person scoring low on Factor B tends to be slow to learn and grasp, dull, given to concrete and literal interpretation. This dullness may be simply a reflection of low intelligence, or it may represent poor functioning due to psychopathology.

The person who scores high on Factor B tends to be quick to grasp ideas, a fast learner, intelligent. There is some correlation with level of culture, and some with alertness. High scores contraindicate deterioration of mental functions in pathological conditions.

Taken from the Administrator's Manual for the 16PF, Copyright © 1972, 1979, 1986, 1991 by the Institute for Personality and Ability Testing, Inc. All rights reserved. Reproduced by permission.

## FACTOR C

AFFECTED BY FEELINGS,  
Emotionally Less Stable,  
Easily Upset, Changeable

vs.

EMOTIONALLY STABLE,  
Matures, Faces Reality,  
Calm, Patient

(Lower ego strength)

(Higher ego strength)

The person who scores low on Factor C tends to be low in frustration tolerance for unsatisfactory conditions, changeable and plastic, evading necessary reality demands, neurotically fatigued, fretful, easily annoyed and emotional, active in dissatisfaction, having neurotic symptoms (phobias, sleep disturbances, psychosomatic complaints, etc.). Low Factor C score is common to almost all forms of neurotic and some psychotic disorders.

The person who scores high on Factor C tends to be emotionally mature, stable, realistic about life, unruffled, possessing ego strength, better able to maintain solid group morale. This person may be making a resigned adjustment\* to unsolved emotional problems.

---

\*Shrewd clinical observers have pointed out that a good C level sometimes enables a person to achieve effective adjustment despite an underlying psychotic potential.

## FACTOR E

HUMBLE, Mild,  
Accommodating, Easily  
Led, Conforming

vs.

ASSERTIVE, Aggressive,  
Authoritative,  
Competitive, Stubborn

(Submissiveness)

(Dominance)

Individuals scoring low on Factor E tend to give way to others, to be docile, and to conform. They are often dependent, confessing, anxious for obsessional correctness. This passivity is part of many neurotic syndromes.

Individuals scoring high on Factor E are assertive, self-assured, and independent-minded. They tend to be austere, a law to themselves, hostile or extrapunitive, authoritarian (managing others), and disregarding of authority.

Taken from the Administrator's Manual for the 16PF,  
Copyright © 1972, 1979, 1986, 1991 by the Institute for  
Personality and Ability Testing, Inc. All rights reserved.  
Reproduced by permission.

## FACTOR F

SOBER, Prudent, Serious,  
Taciturn

vs.

HAPPY-GO-LUCKY,  
Impulsively Lively,  
Enthusiastic, Heedless

(Desurgency)

(Surgency)

Low scorers on Factor F tend to be restrained, reticent, and introspective. They are sometimes dour, pessimistic, unduly deliberate, and considered smug and primly correct by observers. They tend to be sober, dependable people.

High scorers on this trait tend to be cheerful, active, talkative, frank, expressive, effervescent, and carefree. They are frequently chosen as elected leaders. They may be impulsive and mercurial.

## FACTOR G

EXPEDIENT, Disregards  
Rules, Feels Few  
Obligations

vs.

CONSCIENTIOUS,  
Persevering, Proper,  
Moralistic, Rule-bound

(Weaker superego strength)

(Stronger superego strength)

People who score low on Factor G tend to be unsteady in purpose. They are often casual and lacking in effort for group undertakings and cultural demands. Their freedom from group influence may lead to antisocial acts, but at times makes them more effective, while their refusal to be bound by rules causes them to have less somatic upset from stress.

People who score high on Factor G tend to be exacting in character, dominated by sense of duty, persevering, responsible, planful, "fill the unforgiving minute." They are usually conscientious and moralistic, and they prefer hard-working people to witty companions. The inner "categorical imperative" of this essential superego (in the psychoanalytic sense) should be distinguished from the superficially similar "social ideal self" of  $Q_3+$ .

Taken from the Administrator's Manual for the 16PF,  
Copyright © 1972, 1979, 1986, 1991 by the Institute for  
Personality and Ability Testing, Inc. All rights reserved.  
Reproduced by permission.

SHY, Restrained, Threat-sensitive, Timid

FACTOR H  
vs. VENTURESOME, Socially bold, Uninhibited, Spontaneous

## (Threctia)

Individuals who score low on this trait tend to be shy, withdrawing, cautious, retiring, "wallflowers." They usually have inferiority feelings and tend to be slow and impeded in speech and in expressing themselves. They dislike occupations with personal contacts, prefer one or two close friends to large groups, and are given to keeping in contact with all that is going on around them.

## (Parmia)

Individuals who score high on Factor H are sociable, bold, ready to try new things, spontaneous, and abundant in emotional response. Their "thick-skinnedness" enables them to face wear and tear in dealing with people and grueling emotional situations, without fatigue. However, they can be careless of detail, ignore danger signals, and consume much time talking. They tend to be "pushy" and actively interested in the opposite sex.

TOUGH-MINDED, Self-reliant, Realistic, Non-sense

FACTOR I  
vs. TENDER-MINDED, Intuitive, Unrealistic, Sensitive

## (Harria)

People who score low on Factor I tend to be tough, realistic, "down-to-earth," independent, responsible, but skeptical of subjective, cultural elaborations. They are sometimes unmoved, hard cynical, smug. They tend to keep a group operating on a practical and realistic "no-nonsense" basis.

## (Premsia)

People who score high on Factor I tend to be emotionally sensitive, day-dreaming, artistically fastidious, and fanciful. They are sometimes demanding of attention and help, impatient, dependent, temperamental, and not very realistic. They dislike crude people and rough occupations. In a group, they often tend to slow up group performance and to upset group morale by undue fussiness.

Taken from the Administrator's Manual for the 16PF, Copyright © 1972, 1979, 1986, 1991 by the Institute for Personality and Ability Testing, Inc. All rights reserved. Reproduced by permission.



## FACTOR L

TRUSTING, Adaptable, Free  
of jealousy, Easy to Get  
on With

vs. SUSPICIOUS, Self-  
opinionated, Hard to Fool,  
Skeptical, Questioning

## (Alaxia)

The person who scores low on Factor L tends to be free of jealous tendencies, adaptable, cheerful, uncompetitive, concerned about others, a good team worker. They are open and tolerant and usually willing to take a chance with people.

## (Protension)

People who score high on Factor L tend to be mistrusting and doubtful. They are often involved in their own egos and are self-opinionated and interested in internal, mental life. Usually they are deliberate in their actions, unconcerned about other people, and poor team members.

N.B. This factor is not necessarily paranoia. In fact, the data on paranoid schizophrenics are not clear as to typical Factor L value to be expected for them.

## FACTOR M

PRACTICAL, Careful,  
Conventional, Regulated  
by External Realities

vs. IMAGINATIVE, Careless of  
Practical Matters,  
Unconventional, Absent-  
minded

## (Praxernia)

Low scorers on Factor M tend to be anxious to do the right things, attentive to practical matters, and subject to the dictation of what is obviously possible. They are concerned over detail, able to keep their heads in emergencies, but are sometimes unimaginative. In short, they are responsive to the outer, rather than the inner, world.

## (Autia)

High scorers on Factor M tend to be unconventional, unconcerned over everyday matters, self-motivated, imaginatively creative, concerned with "essentials," often absorbed in thought, and oblivious of particular people and physical realities. Their inner-directed interest sometimes lead to unrealistic situations accompanied by expressive outbursts. Their individuality tends to cause them to be rejected in group activities.

Taken from the Administrator's Manual for the 16PF,  
Copyright © 1972, 1979, 1986, 1991 by the Institute for  
Personality and Ability Testing, Inc. All rights reserved.  
Reproduced by permission.

## FACTOR N

FORTHRIGHT, Natural,  
Genuine, Unpretentious

vs. SHREWD, Calculating,  
Socially Alert, Insightful

(Artlessness)

(Shrewdness)

Individuals who score low on Factor N have a lot of natural warmth and a genuine liking for people, are uncomplicated and sentimental, and are unvarnished in their approach to people.

Individuals who score high on Factor N tend to be polished, experienced, and shrewd. Their approach to people and problems is usually perceptive, hardheaded, and efficient, an unsentimental approach to situations, an approach akin to cynicism.

## FACTOR O

UNPERTURBED, Self-  
assured, Confident,  
Secure, Self-satisfied

vs. APPREHENSIVE, Self-  
reproaching, Worrying,  
Troubled

(Untroubled adequacy)

(Guilt proneness)

Persons with low scores on Factor O tend to be unruffled, with unshakable nerve. They have a mature, unanxious confidence in themselves and their capacity to deal with things. They are resilient and secure, but to the point of being insensitive of when a group is not going along with them, so that they may evoke antipathies and distrust.

Persons with high scores on factor O have a strong sense of obligation and high expectations of themselves. They tend to worry and feel anxious and guilt-stricken over difficulties. Often they do not feel accepted in groups or free to participate. High Factor O score is very common in clinical groups of all types (see Handbook).

Taken from the Administrator's Manual for the 16PF,  
Copyright © 1972, 1979, 1986, 1991 by the Institute for  
Personality and Ability Testing, Inc. All rights reserved.  
Reproduced by permission.

FACTOR Q<sub>1</sub>

CONSERVATIVE, Respecting  
Established Ideas,  
Tolerant of Traditional  
Difficulties

vs. EXPERIMENTING, Liberal,  
Analytical, Likes  
Innovation

## (Conservatism)

Low scorers on Factor Q<sub>1</sub> are confident in what they have been taught to believe, and accept the "tried and true," despite inconsistencies, when something else might be better. They are cautious and compromising in regard to new ideas. Thus, they tend to oppose and postpone change, are inclined to go along with tradition, are more conservative in religion and politics, and tend not to be interested in analytical "intellectual" thought.

## (Radicalism)

High scorers on Factor Q<sub>1</sub> tend to be interested in intellectual matters and to have doubts on fundamental issues. They are skeptical and inquiring regarding ideas, either old or new. Usually they are more well informed, less inclined to moralize, more inclined to experiment in life generally, and more tolerant of inconvenience and change.

FACTOR Q<sub>2</sub>

GROUP ORIENTED, A  
"Joiner" and Sound  
Follower

vs. SELF-SUFFICIENT, Prefers  
Own Decision, Resourceful

## (Group adherence)

Individuals who score low on Factor Q<sub>2</sub> prefer to work and make decisions with other people and like and depend on social approval and admiration. They tend to go along with the group and may be lacking in individual resolution. They are not necessarily gregarious by choice; rather they might need group support.

## (Self-sufficiency)

Individuals who score high on Factor Q<sub>2</sub> are temperamentally independent, accustomed to going their own way, making decisions and taking action on their own. They discount public opinion, but are not necessarily dominant in their relations with others (see Factor E); in fact, they could be hesitant to ask others for help. They do not dislike people, but simply do not need their agreement or support.

Taken from the Administrator's Manual for the 16PF,  
Copyright © 1972, 1979, 1986, 1991 by the Institute for  
Personality and Ability Testing, Inc. All rights reserved.  
Reproduced by permission.

FACTOR Q<sub>3</sub>

UNDISCIPLINED SELF-  
CONFLICT, Careless of  
Protocol, Follows Own  
Urges

(Low integration)

People who score low on Factor Q<sub>3</sub> will not be bothered with will control and have little regard for social demands. They are impetuous and not overly considerate, careful, or painstaking. They may feel maladjusted, and many maladjustments (especially the affective, but not the paranoid) shows Q<sub>3</sub>-.

CONTROLLED, Socially  
Precise, Following Self-  
image, Compulsive

(High self-concept control)

People who score high on Factor Q<sub>3</sub> tend to have strong control of their emotions and general behavior, are inclined to be socially aware and careful, and evidence what is commonly termed "self-respect" and high regard for social reputation. They sometimes tend, however, to be perfectionistic and obstinate. Effective leaders, and some paranoids, are high on Q<sub>3</sub>.

FACTOR Q<sub>4</sub>

RELAXED, Tranquil,  
Torpid, Unfrustrated

(Low ergic tension)

Individuals who score low on Factor Q<sub>4</sub> tend to be sedate, relaxed, composed, and satisfied (not frustrated). In some situations, their oversatisfaction can lead to laziness and low performance, in the sense that low motivation produces little trial and error. conversely, high tension level may disrupt school and work performance.

vs. TENSE, Frustrated, Driven,  
Restless, Overwrought

(High ergic tension)

Individuals who score high on Factor Q<sub>4</sub> tend to be tense, restless, fretful, impatient, and hard driving. They are often fatigued but unable to remain inactive. In groups they take a poor view of the degree of unity, orderliness, and leadership. Their frustration represents an excess of stimulated, but undischarged, drive.

Taken from the Administrator's Manual for the 16PF,  
Copyright © 1972, 1979, 1986, 1991 by the Institute for  
Personality and Ability Testing, Inc. All rights reserved.  
Reproduced by permission.

## DESCRIPTIONS OF SECOND ORDER FACTORS

Low Score Direction      FACTOR  $Q_I$       vs.      High Score Direction

## INTROVERSION

The person who scores low on Factor  $Q_I$  tends to be shy, self-sufficient, and inhibited in interpersonal contacts. This can either be a favorable or unfavorable finding, depending upon the particular situation in which the person is expected to function; e.g., introversion is a favorable predictor of precision workmanship.

## EXTRAVERSION

The person who scores high on this factor is a socially outgoing, uninhibited person, good at making and maintaining interpersonal contacts. This can be very favorable in situations that call for this type of temperament, e.g., salesmanship, but should not be considered necessarily favorable as a general predictor, e.g., of scholastic achievement.

FACTOR  $Q_{II}$ 

LOW ANXIETY (Adjustment)      vs.      HIGH ANXIETY

People who score low on this factor tend to be those whose lives are generally satisfying and those who are able to achieve those things that seem to them to be important. However, an extremely low score can mean lack of motivation for difficult tasks, as is generally shown in studies relating anxiety to achievement.

Those people who score high on this factor are high on anxiety as it is commonly understood. They need not be neurotic, since anxiety could be situational, but it is probable that there are some maladjustments, i.e., they are dissatisfied with the degree to which they are able to meet the demands of life and to achieve what they desire. Very high anxiety is generally disruptive of performance, and productive of physical disturbances.

Taken from the Administrator's Manual for the 16PF,  
Copyright © 1972, 1979, 1986, 1991 by the institute for  
Personality and Ability Testing, Inc. All rights reserved.  
Reproduced by permission.

Factor Q<sub>III</sub>TENDER-MINDED  
EMOTIONALITY

vs.

## TOUGH POISE

Individuals who score low on Factor Q<sub>III</sub> are likely to be troubled by pervasive emotionality, and may be of a discouraged, frustrated type. They are, however, sensitive to the subtleties of life, likely to be artistic and rather gentle. If they have problems, they often involve too much thought and consideration before action is taken.

Individuals who score high on this factor are likely to be enterprising, decisive, and resilient personalities. However, they are likely to miss the subtle relationships of life, and to orient their behavior too much toward the obvious. If they have difficulties, they are likely to involve rapid action with insufficient consideration and thought.

FACTOR Q<sub>IV</sub>

## SUBDUEDESS

vs.

## INDEPENDENCE

People who score low on Factor Q<sub>IV</sub> are group dependent, chastened, passive personalities. They are likely to desire and need support from other persons, and likely to orient their behavior toward persons who give such support.

People who score high on this factor tend to be aggressive, independent, daring, incisive people. They will seek those situations where such behavior is at least tolerated and possibly rewarded, and are likely to exhibit considerable initiative.

Clearly, the above descriptions are not only brief suggestions as to the nature of the factors, but they should be helpful to the reader of this MANUAL. More complete discussion and consideration of research findings can be found in the HANDBOOK and its bibliography. The HANDBOOK also contains descriptions of several methods by which personality factor patterns can be converted into predictive formulas, with examples of such formulas from research involving the prediction of socially important criteria.

Taken from the Administrator's Manual for the 16PF, Copyright © 1972, 1979, 1986, 1991 by the Institute for Personality and Ability Testing, Inc. All rights reserved. Reproduced by permission.

FACTOR Q<sub>V</sub>

## LOW CONTROL

People who score low on this factor typically do not act according to others values or out of a sense of duty. They tend to be nonconformists who do not hesitate to bend rules, or who develop their own set of rules whenever it is expedient to do so. These are flexible people, yet because they tend to follow their own impulses, they may not be self-disciplined as some situations may require. Further, they may be perceived as unreliable at times, because the rules by which they operate may not be clear to others.

## vs. HIGH CONTROL

People who score high on this factor typically have strong super-ego controls; that is, they have internalized the rules of the milieu in which they function. Hence, they tend to conform to expectations that others have of them or expectations that they have of themselves. They are quite reliable because they do not bend the rules; however, they may be so controlled as to be perceived by others as rigid or moralistic.

FACTOR Q<sub>VI</sub>

## NEUROTICISM

People who score low on this composite have traits that indicate the possibility of neurotic maladjustment. They tend to be apprehensive and emotionally reactive. Beyond these anxiety-related traits, however, low scorers are typically self-effacing and sensitive. This combination of attributes makes it likely that a person who gets a low score would find it difficult to cope with daily life.

## vs.

## ADJUSTMENT

People who score high on this composite tend to be well adjusted. They are typically self-confident and assertive; they are relaxed, adaptive, and flexible. Thus, they would be expected to have little difficulty in coping with daily life. For more detail on neuroticism, see the Handbook for the 16PF.

Taken from the Administrators Manual for the 16PF, Copyright © 1972, 1979, 1986, 1991 by the Institute for Personality and Ability Testing, Inc. All rights reserved. Reproduced by permission.

FACTOR Q<sub>VII</sub>

## LOW LEADERSHIP

vs.

## HIGH LEADERSHIP

People who get a low score on this composite tend to lack the attributes typically found in good leaders. Low scorers usually are not good at asserting themselves. They tend to shy away from conflict, and may also lack the self-control needed to meet deadlines and group productivity goals.

People who get a high score on this composite tend to have the traits that are expected of leaders. These people are usually sociable, relaxed, assertive, and self-assured. Overall, they would have the emotional maturity needed to resolve conflicts while maintaining an emphasis on getting things done.

FACTOR Q<sub>VIII</sub>

## LOW CREATIVITY

vs.

## HIGH CREATIVITY

People who score low on this scale are tough-minded and practical. They tend to be strict to tried-and-true ways of doing things rather than trying new ways. They would not spend time generating new ideas, but would want workable, practical solutions. These people would be better at implementing a solution than coming up with one.

People who score high on this scale are imaginative and experimenting. Creative people are usually self-sufficient; often, though not necessarily, they are rather serious and not outgoing preferring to spend time in thought rather than with people. Sometimes high scorers are so imaginative that they cannot see the practical limitations on implementing a creative idea.

Taken from the Administrators Manual for the 16PF, Copyright © 1972, 1979, 1986, 1991 by the Institute for Personality and Ability Testing, Inc. All rights reserved. Reproduced by permission.



Appendix C

Frequency Distribution for Dream Sexuality Score (Sum of  
Scores for DSQ Items 48, 49, & 50 Using Likert Scale Scores  
0-6)

---

Sum of Scores	Frequency	Valid Percent	Cumulative Percent
---------------	-----------	---------------	--------------------

---

## Male Subjects (N = 789)

.00	12	1.5	1.5
1.00	9	1.1	2.7
2.00	4	.5	3.2
3.00	27	3.4	6.6
4.00	11	1.4	8.0
5.00	24	3.0	11.0
6.00	32	4.1	15.1
7.00	41	5.2	20.3
8.00	36	4.6	24.8
9.00	72	9.1	34.0
10.00	61	7.7	41.7
11.00	54	6.8	48.5
12.00	100	12.7	61.2
13.00	57	7.2	68.4
14.00	54	6.8	75.3
15.00	71	9.0	84.3
16.00	34	4.3	88.6
17.00	28	3.5	92.1
18.00	59	7.5	99.6

## Female Subjects (N = 1321)

0.00	59	4.5	4.5
1.00	31	2.3	6.8
2.00	48	3.6	10.4
3.00	75	5.7	16.1
4.00	62	4.7	20.8
5.00	40	3.0	23.8
6.00	92	7.0	30.8
7.00	68	5.1	36.0
8.00	79	6.0	41.9
9.00	115	8.7	50.6
10.00	101	7.6	58.3
11.00	81	6.1	64.4
12.00	125	9.5	73.9
13.00	94	7.1	81.0
14.00	59	4.5	85.5
15.00	81	6.1	91.6
16.00	34	2.6	94.2
17.00	23	1.7	95.9
18.00	48	3.6	99.5

---

Note: Low Recallers (once a month or less) have been removed

Appendix D

Means, Standard Deviations, and Univariate F for Groups of  
Male and Female Low and High Sexuality Dreamers

Means, Standard Deviations, and Univariate F for Men for  
Dream Sexuality Scores (Sum of DSO Items 48, 49, and 50)

Sexuality	Low Dream Sexuality Significance		High dream of		
16PF Scale F	M	SD	M	SD	Univariate
Primary Scales					
A	4.88	2.05	5.13	1.79	.201
B	5.23	2.15	5.14	1.97	.664
C	5.02	2.07	4.61	1.90	.051
E	5.88	2.18	6.68	2.09	.0004
F	5.70	2.41	6.21	2.08	.030
G	5.11	1.96	5.03	1.92	.692
H	5.34	2.23	5.84	1.94	.023
I	5.71	2.12	5.70	1.94	.969
L	6.05	2.18	6.87	2.08	.0003
M	4.52	2.03	4.37	1.80	.464
N	5.72	2.30	5.66	1.99	.797
O	5.69	2.17	6.35	1.90	.002
Q <sub>1</sub>	5.75	2.26	6.01	2.12	.257
Q <sub>2</sub>	6.09	2.13	5.96	1.92	.537
Q <sub>3</sub>	5.38	2.11	5.08	1.83	.154
Q <sub>4</sub>	5.89	2.22	6.64	1.93	.0006
Secondary Scales					
Q <sub>I</sub>	5.12	2.14	5.60	1.82	.021
Q <sub>II</sub>	5.94	1.82	6.62	1.66	.0002
Q <sub>III</sub>	5.91	2.13	5.96	1.81	.808
Q <sub>IV</sub>	5.88	2.37	6.63	2.25	.002
Q <sub>V</sub>	5.17	2.09	4.97	1.90	.340
Q <sub>VI</sub>	5.73	1.81	5.98	1.68	.174
Q <sub>VII</sub>	5.33	1.83	5.23	1.55	.574
Q <sub>VIII</sub>	5.70	2.22	5.61	1.73	.670
Q <sub>IX</sub>	4.96	2.11	4.49	1.84	.026

(Continued)

## Appendix D (cont.)

Means, Standard Deviations, and Univariate F for Women for  
Dream Sexuality Scores (Sum of DSO Items 48, 49, and 50)

Sexuality	Low Dream Sexuality Significance				High Dream
16PF Scale F	M	SD	M	SD	of Univariate
Primary Scales					
A	5.35	2.06	5.24	2.17	.527
B	5.00	1.93	5.02	1.99	.938
C	4.80	2.05	4.29	1.87	.002
E	5.82	2.02	6.71	2.09	
.0000003					
F	5.99	2.43	6.20	2.28	.274
G	5.77	2.01	5.51	1.95	.121
H	5.61	2.14	5.88	2.19	.127
I	5.24	2.20	5.28	2.10	.830
L	6.58	2.03	6.86	1.99	.082
M	3.82	1.76	4.20	1.94	.013
N	6.16	2.07	5.66	2.15	.004
O	6.44	2.25	6.52	2.11	.658
Q <sub>1</sub>	5.89	1.76	6.26	1.70	.009
Q <sub>2</sub>	5.59	1.80	5.90	1.90	.043
Q <sub>3</sub>	5.83	1.92	5.22	1.89	.0001
Q <sub>4</sub>	6.48	2.27	6.91	1.97	.014
Secondary Scales					
Q <sub>I</sub>	5.64	2.11	5.66	2.09	.891
Q <sub>II</sub>	6.44	2.04	6.84	1.77	.011
Q <sub>III</sub>	6.85	1.92	7.13	2.02	.086
Q <sub>IV</sub>	5.50	1.98	6.29	2.04	
.000002					
Q <sub>V</sub>	5.84	2.00	5.37	1.90	.004
Q <sub>VI</sub>	5.96	1.93	6.06	1.79	.510
Q <sub>VII</sub>	5.58	1.68	5.33	1.71	.071
Q <sub>VIII</sub>	4.93	1.84	5.41	1.85	.002
Q <sub>IX</sub>	4.44	1.91	4.51	1.82	.641

Appendix E

Means, Standard Deviations, and Univariate F for Groups of  
Male and Female Low and High Feelings of Sexual Arousal in  
Dreams

Means, Standard Deviations, and Univariate F for Men for DSQ  
Item 49 (Feelings of Sexual Arousal)

Significance		Low Sexual Arousal		High Sexual Arousal		
16PF Scale	F	M	SD	M	SD	of Univariate
Primary Scales						
A		4.99	2.03	5.04	1.81	.802
B		5.13	2.19	5.18	2.00	.789
C		5.09	2.03	4.75	1.91	.084
E		6.05	2.14	6.58	2.08	.010
F		5.85	2.27	5.97	2.15	.574
G		5.09	1.88	5.11	2.00	.940
H		5.47	2.24	5.73	2.06	.215
I		5.78	2.05	5.82	1.99	.851
L		6.18	2.14	6.76	2.03	.004
M		4.53	1.98	4.60	1.78	.704
N		5.71	2.32	5.57	2.05	.524
O		5.75	2.17	6.06	1.87	.120
Q <sub>1</sub>		5.85	2.12	5.96	2.17	.616
Q <sub>2</sub>		6.05	2.06	6.04	1.94	.957
Q <sub>3</sub>		5.40	2.08	5.14	1.86	.186
Q <sub>4</sub>		5.96	2.18	6.57	1.94	.003
Secondary Scales						
Q <sub>I</sub>		5.27	2.05	5.42	1.93	.431
Q <sub>II</sub>		5.97	1.85	6.45	1.69	.005
Q <sub>III</sub>		5.83	2.03	5.78	1.82	.791
Q <sub>IV</sub>		6.06	2.30	6.55	2.28	.030
Q <sub>V</sub>		5.17	2.00	5.05	1.97	.555
Q <sub>VI</sub>		5.70	1.82	5.96	1.73	.134
Q <sub>VII</sub>		5.36	1.86	5.23	1.58	.407
Q <sub>VIII</sub>		5.66	2.15	5.81	1.83	.428
Q <sub>IX</sub>		4.87	2.05	4.75	2.02	.544

(Continued)

## Appendix E (cont.)

Means, Standard Deviations, and Univariate F for Women for  
DSO Item 49 (Feelings of Sexual Arousal)

Significance		Low Sexual Arousal		High Sexual Arousal		
16PF Scale	F	M	SD	M	SD	of Univariate
Primary Scales						
A		5.36	2.07	5.11	2.16	.150
B		5.00	1.95	5.08	2.04	.627
C		4.71	2.01	4.24	1.96	.005
E		5.94	2.02	6.67	2.08	
.00003						
F		6.00	2.40	6.02	2.35	.926
G		5.66	2.01	5.47	2.07	.276
H		5.64	2.13	5.64	2.21	.995
I		5.23	2.18	5.34	2.10	.513
L		6.66	2.00	6.81	2.02	.381
M		3.78	1.77	4.21	2.03	.007
N		6.16	2.07	5.64	2.18	.004
O		6.49	2.22	6.42	2.21	.729
Q <sub>1</sub>		5.91	1.75	6.30	1.82	.011
Q <sub>2</sub>		5.56	1.74	5.96	1.97	.010
Q <sub>3</sub>		5.71	1.88	5.21	1.91	.002
Q <sub>4</sub>		6.51	2.23	6.87	2.02	.047
Secondary Scales						
Q <sub>I</sub>		5.67	2.08	5.45	2.12	.217
Q <sub>II</sub>		6.52	1.98	6.83	1.83	.048
Q <sub>III</sub>		6.94	1.92	7.04	1.95	.541
Q <sub>IV</sub>		5.57	1.97	6.22	2.10	.0002
Q <sub>V</sub>		5.71	1.97	5.33	2.02	.026
Q <sub>VI</sub>		5.99	1.86	6.09	1.80	.495
Q <sub>VII</sub>		5.52	1.65	5.23	1.74	.041
Q <sub>VIII</sub>		4.93	1.84	5.54	1.95	.0001
Q <sub>IX</sub>		4.34	1.85	4.62	1.95	.086