A Study of the Relationship Between Aggression in the Verbally Reported Content of Dreams and Some Conceptually Related Measures of Personality

Minos Belden Fletcher

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To the Graduate Council:

I am submitting herewith a dissertation written by Minos Belden Fletcher entitled "A Study of the Relationship Between Aggression in the Verbally Reported Content of Dreams and Some Conceptually Related Measures of Personality." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Psychology.

Robert L. Williams, Major Professor

We have read this dissertation and recommend its acceptance:

Lawrence M. DeRidder, Thomas B. Scott, and Robert B. Wahler

Accepted for the Council:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)
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Robert L. Williams
Major Professor

We have read this dissertation and recommend its acceptance:

Robert G. Waller
Thomas B. Scott

Accepted for the Council:

Vice Chancellor for Graduate Studies and Research
A STUDY OF THE RELATIONSHIP BETWEEN AGGRESSION IN THE
VERBALLY REPORTED CONTENT OF DREAMS AND SOME
CONCEPTUALLY RELATED MEASURES OF PERSONALITY

A Dissertation
Presented to
the Graduate Council of
The University of Tennessee

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

by
Minos Belden Fletcher
August 1970.
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Finally, for my wife, Jean, and my daughters, Marty and Jody, whose devotion, sacrifice, and support made it all possible, I am deeply and humbly grateful.
ABSTRACT

This study involved two major research objectives: (1) to compare males and females on the basis of aggression scores computed from verbally reported dreams; and (2) to test the general hypothesis that there are predictable relationships between measures of aggression in reported dreams and conceptually related measures of personality.

A total of 529 current night dreams collected from 24 male and 15 female college students were scored for aggression content by means of the Hall-Van de Castle Aggression Scale. From the raw dream scores, six specific measures of aggression were computed: average number of aggressive incidents per dream, percent of dreamer involved aggressions, percent of aggressions directed from the dreamer, percent of aggressions directed toward the dreamer, percent of physical aggressions, and percent of non-physical aggressions. t-Tests were used to compare males and females on the six measures of aggression. Pearson Product-Moment correlations were then used to compare measures of aggression for the combined group of Ss with scores on the Welsh Anxiety and Repression Scales and the Internal-External Control Scale.

It was found that males and females in the sample did not differ significantly on any of the six measures of aggression computed from their dreams. On the basis of correlations comparing measures of aggression from dreams with personality test scores, it was concluded: (1) that the results of the study do not support the hypothesis that there is a predictable relationship between measures representing incidence (average...
aggressions per dream and percent of dreamer involved aggression) and type (physical and nonphysical) of aggression in reported dreams and scores on the Welsh Anxiety and Repression Scales; (2) that results of the study do support the hypothesis that there is a predictable relationship between measures representing direction of aggression (aggression from or toward the dreamer) in reported dreams and scores on the Internal-External Control Scale.

A post hoc analysis of the data revealed considerable variation both within and between the sexes regarding the relationship between aggression in reported dreams and personality measures. The most significant findings were that anxiety correlates positively ($r = .60; p = .02$) with percent of dreamer involved aggression for females, while anxiety correlates negatively ($r = -.50; p = .02$) with percent of physical aggression and positively ($r = .50; p = .02$) with percent of nonphysical aggression for males. These results were explained in terms of dreams reflecting culturally accepted modes of handling aggressive impulses.
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CHAPTER I.

INTRODUCTION

I. INTRODUCTION

The purpose of this study was to investigate the relationship between aggression in the verbally reported content of dreams and some conceptually related measures of human personality. Since some studies indicate that there are sex differences in dream content, particular attention was given to this variable in the analysis of results.

Chapter I presents a review of literature related to the study and a statement of the problem. The literature review consists of three major topics: The Meaning of Dreams; Dreams and Human Personality; and Dreams and Aggression.

The Meaning of Dreams

Man has always been interested in dreams and dreaming. This is true because of the uniqueness of the experience and moreso, perhaps, because of the extreme variety and character of dream content. As a rule, dreams involve commonplace settings with familiar characters whose actions appear to be closely correlated with the dreamer's waking behavior. Occasionally, however, violent themes are played out with an unusually disquieting effect on the dreamer. Between these extremes, a broad range of cognitive and affective material may be expressed in a person's dreams.
Historically, many theories have been advanced which attempt to account for the dream phenomenon. According to Hall (1951), dreams have been variously interpreted as divine messages, as the experiences of disembodied souls roaming heaven and earth during sleep, as prophecies of the future, as perceptions of external stimuli or bodily disturbances by the sleeper, as fulfillment or attempted fulfillment of wishes, as attempts to plan for the future, as expressions of life style, and as attempts to resolve conflicts.

The chronological history of dream theory has been treated in considerable detail by others and will not be discussed here. The interested reader is referred to the works of Born (1948), Fromm (1951), MacKenzie (1966), McCurdy (1946), and Wolff (1952).

Most current dream theory, as Cartwright (1969) points out, can be subsumed under one of two general theoretical positions: the Freudian and the Adlerian. In the Freudian view, dreams provide disguised gratification of instinctual wishes which are denied awareness during wakefulness. The Adlerian view regards the dream as motivated by the dreamer's need to solve current emotional problems from waking life and conscious experience. These two positions imply opposite relationships between dreaming and the conscious waking behavior which precedes it: the first implies a compensatory, the second a continuity relationship.

The primary issue between these theoretical views seems to be whether the real meaning of the dream is expressed directly in the dream content in conventional symbols or indirectly as may be inferred from the dreamer's associations. The Freudians have traditionally held the latter
view. In recent years, however, increasing attention has been given to the verbally reported (manifest) content of dreams. Saul (1940), for example, has stressed the value of dream content in the diagnosis and management of psychiatric patients, while Hall (1956) and others have argued for the utility of dream analysis in both clinical assessment and personality research.

While the controversy over the relative value of manifest versus latent content of dreams continues, the question of the significance of the dream and dream content has been raised. As might be expected there are widely divergent views on this point. Cartwright (1969) believes that mental activity is continuous and that dreaming is an "imagery language" which takes over the characteristically human occupation of thinking during sleep. Some, however, have tended to dismiss the meaningful cognitive aspects of dreaming. Kleitman (1960), for example, views the content of dreaming as a manifestation of low-grade thinking which may have no significant function whatever.

Although there is no consensus at this point with regard to the meaning of dream content or the mechanisms by which it is expressed, empirical research is demonstrating that dream content is related in meaningful ways to the dreamer's conscious, waking thoughts and experience. After analyzing the verbally reported content of some 10,000 dreams of college students, Hall (1951) concluded that the majority take place in relatively commonplace and familiar settings, that the characters which appear in the dream most frequently are people that the S knows in real life, and that recreational activities are the predominant mode of activity in dreams. (All dreamers seem to share an aversion for work!)
The content of the dream, however, may reveal much about the
dynamics of the dreamer's personality and the way he perceives and
responds to his environment. The setting of the dream, for example, may
depict how the dreamer looks at the world:

If he feels that the world is closing in on him, he dreams of
cramped places; if the world appears to be bleak, the dream
setting is bleak. Tumultuous and tempestuous scenery--raging
seas, milling crowds, exploding bombs, thunderstorms . . .
betokens an outlook of insecurity and chaos. (Hall, 1951,
p. 62)

Dreams also deal with impulses and the dreamer's attitudes toward them:

Dreams are filled with the gratification of or attempted grati-
fication of impulses, particularly sexual and aggressive impulses. They tell us how the dreamer regards these impulses.
(Hall, 1951, p. 62)

According to Hall (1951) dreams also provide us with a vista of
the dreamer's conceptions of his conflicts. The conflicts which motivate
dreams appear to be basic ones which have their origins in early life
and are rarely resolved or brought to a satisfactory conclusion. Based
on the analysis of thousands of dreams, Hall concludes that three par-
ticular conflicts stand out as being shared by many people: the tug-of-
war between the progressive pull of maturity, growth and independence and
the regressive pull of infantile security, passivity and dependence; the
ubiquitous conflict between good and evil--the moral conflict; and the
conflict generated by the tug between the opposing tendencies toward
integration and disintegration.

Clinicians have produced evidence that dream content relates to
important conflicts in the lives of psychiatric patients. Beck and Ward
(1961) have shown that depressed patients more frequently have "masochistic"
dreams (i.e., dreams involving thwarting, exploitation, rejection, punishment, etc.) than nondepressed patients. Boss (1959) reported that dreams of schizophrenic patients tended to center upon problems of impulse gratification, while the environment and scenery of their dreams tended to be vague and unimportant. These observations appear consistent with the notion that dreams which people recall relate significantly to their life state and functioning.

**Dreams and Human Personality**

The notion that dreams provide a basis for understanding personality is very old. Freud (1933), at the turn of the century, presented the first major theory on this topic and supported his thesis with illustrations from his own personal experience. A review of the literature on dreams and personality revealed that studies in this area are both sporadic and segmental. A comparison of their results, therefore, will necessarily be limited.

Pierce (1931), one of the earliest writers to investigate the relationships between dream life and waking personality, compared the dream reports and personality sketches of 18 adult subjects. He found that subjects could be divided into two groups: those whose dream life and personality were alike (N=8) and those in which they were different (N=10). More women fell into the first group and more men fell into the second. He hypothesized that this sex difference resulted from the fact that the motivation of dreams was largely emotional and that men from boyhood on were accustomed to emotional concealment (during waking hours) to a greater
extent than women. Pierce also concluded that his evidence indicated that dreams completed the personality configuration by providing:

1. A means of reviewing unsolved difficulties in adjusting to life (e.g., unhappy childhood experiences).
2. An intellectual process.
3. A release for artistically creative tendencies.
4. An escape valve for undischarged fragments and associations of the day's ideas.
5. A warning or reminder bearing on character and conduct.
6. A supplement to the working mind, often expressing what was either voluntarily or involuntarily suppressed or ruled out.

While Pierce's methodology and the conclusions which he draws are questionable, his work presents an interesting early attempt to relate dream content to human personality.

Dreams are frequently associated with the emotional state of the dreamer, particularly in the minds of the lay persons. Berrien (1930) attempted to test the hypothesis that emotionally unstable individuals dream more frequently than those who have a more stable emotional life. The Colgate Mental Hygiene test was administered to 4 Ss to obtain stability-instability ratings. In this small sample, he found that the emotionally unstable reported more dreams. Three years later, Berrien (1933) conducted a similar study. The Thurstone Personality Test and the Colgate $B_2$ Psychoneurotic Scale were administered to 81 college students and stability-instability ratings were derived from these measures. This
time, however, he found no relationship between these ratings and the number of dreams reported.

As previously mentioned, significant relationships between dream content and certain pathological states of behavior have been reported. While this area of research has been generally neglected, those studies which have been published deal primarily with the dreams of patients suffering from schizophrenia, depression, and organic brain disease. Since this investigation deals with the relationship of dream content to personality variables in normal Ss, these studies will not be reviewed here. The reader is referred to a recent article by Kramer (1969) which presents an excellent review of this research.

Two psychoanalysts, Alexander and Wilson (1935), were the first to apply quantitative methodology to dream analysis. Based on Alexander's vector theory of pregenital impulses, they devised a classification scheme consisting of ten types of dreams:

1. satisfied receptive
2. satisfied taking
3. satisfied giving
4. satisfied attacking
5. satisfied retaining
6. inhibited receptive
7. inhibited taking
8. inhibited giving
9. inhibited attacking
10. inhibited retaining

Dreams of 18 patients suffering from gastrointestinal disturbances were scored by placing them into one of the 10 classes. Generally, the results of this quantitative study bear out the conclusions arrived at by clinical studies of gastrointestinal cases. Patients suffering from constipation have more retentive dreams, those with peptic ulcers express
considerable passive receiving and aggressive taking in their dreams, and persons with chronic diarrhea, although resembling peptic ulcer patients, have more dreams of passive receiving than aggressive taking. In a similar study, Miller (1942) found that patients with skin disorders had more dreams of looking and/or exhibiting.

Several investigations have been concerned with the relationship of dream content to the dynamics of personality. Harris (1948) studied the anxiety dreams of 3,000 military selectees, 600 military psychiatric cases, 250 children seen at a child guidance clinic, and about 150 of the children's mothers. He found that in an overwhelming majority of the cases the most disturbing anxiety dreams have the verbally reported content of falling or being attacked from the environment. His observations also indicate that there are individual differences as to the occurrence and the comparative unpleasantness of these two types of dreams.

To account for the source of these two typical anxiety dreams, Harris suggested that the content of dreams of falling and being attacked was probably derived from threatening factors emanating from the dreamer's early relationship to the parents. On the basis of Freudian psychology, he hypothesized that people who have predominantly falling dreams are able to express relatively more aggression toward the father in waking life because they are afraid of antagonizing the nurturant mother. On the other hand, people who dream predominantly of being attacked are able to express relatively more aggression toward the mother than toward the father in waking life because they are afraid of antagonizing the castrating father. Thus, dreams of falling or being attacked may signify
respectively fear over loss of love or support and the fear of castration in its most general sense.

Hall (1955) experimentally tested the Harris proposition by means of a questionnaire which was answered by 517 college students. The hypothesis was verified at the .05 level of confidence for males but was unverified for females. Hall then subjected 106 of the dreams of being attacked to a content analysis with the following results:

1. The chief fear of the dreamer is physical assault.
2. The attacker is usually another person or persons and when identified as to sex is almost invariably a male.
3. The most common reaction of the dreamer is to run, escape, hide or wake up.
4. The attack on the dreamer is usually without provocation.
5. The similarities between the dreams of being attacked of males and females are more striking than are the differences. Men more often than women are attacked following a misdeed committed by the dreamer, and are saved by another person.

Hall concluded that the dream of being attacked represents an expression of the feminine attitudes of weakness, passivity, inferiority, and masochism as formulated by Freud. The dreamer does not fear castration as suggested by Harris since he already feels castrated. Instead, his fears are those of an impotent person who is unable to cope with internal and external threats of danger.

Griffith (1950) studied several typical dreams (falling, attack, teeth, etc.) in an attempt to find some relationship between these dreams
and scores on the Minnesota Multiphasic Personality Inventory. He found that college students of both sexes who had dreams of finding money were more masculine than those who had not had this dream. He also found that men who had had the money dream were much less depressed than men who had not, and women who had dreamed of finding money were more hypomanic than women who had not.

The relationship of personality functioning and dream content has been the object of other studies. Polster (1950) measured ego strength in the dreams of four groups of Ss: children between the ages of 5 and 10, adolescents between the ages of 12 and 16, adults over 30 years of age, and patients who were treated at a mental hygiene clinic. The predictions that ego strength would increase with age, and that the ego strength of the patient group would resemble that of children or adolescents were confirmed. Rabe (1949) studied the attitudes toward the male and female sex organs as expressed in the dreams of college students. Her results generally support Freud's formulation of the castration complex.

A few studies involving the relationship between dream content and objective measures of personality have been reported in the literature. Meer (1955), in an attempt to verify the finding that high authoritarian and nonauthoritarian Ss differ in their ability to tolerate emotional ambivalence toward parents and other powerful authorities, studied the dreams of these two groups. Seventy-one male and female college students were divided into a high scoring or authoritarian group and a low scoring or nonauthoritarian group on the basis of their scores on the F scale.
A series of dreams was obtained from each S and these were scored for aggression and friendliness toward in-group and out-group characters. Meer found that authoritarian Ss aggressed more against out-group characters than against in-group characters, whereas no difference was found in the dreams of nonauthoritarian subjects. Also, authoritarians had more friendly acts with in-group characters. Again, no such difference was found in the dreams of nonauthoritarian subjects.

Rychlak (1960) investigated the relationship between major dream themes and scores on the Cattel Junior Personality Quiz and a sociometric measure of personality. The Ss were 30 fifth-grade and 29 eighth-grade children who wrote their dreams each week during a three month period. Each dream was given a score for one of three major themes: affiliation, reward or tension. Affiliative dreams were generally defined as those involving relaxed or pleasurable interpersonal relations; reward dreams were those involving a pleasurable, positive connotation other than interpersonal contact--i.e., achievement recognition and the receiving of gifts; and tension dreams reflected hostility, anxiety or frustration as a major theme. Dream themes were shown to be significantly related to both personality test scores and sociometric measures. Reward dreamers, for example, were either outgoing and affable or dominant and achievement oriented, while affiliative dreamers were characterized by passive conformity, inhibition and preference for close interpersonal relations. Ss having many tension dreams scored highest on one of the factors reflecting neurotic trends, as might be expected from clinical experience.
In a similar study, Rychlak and Brams (1963) correlated dream themes of 41 college students (19 females and 22 males) with scores on the Taylor Manifest Anxiety Scale, the Edwards Personality Preference Schedule, and the Minnesota Multiphasic Personality Inventory. In addition to affiliative, reward, and tension themes, a fourth category, "garden variety," was added. This category included all dreams which could not be scored under one of the three themes. Ss' dreams were also scored for Reactive Content (i.e., unusual, bizarre, or distorted dream material). In general, the results of the study support the notion that dream themes of adults are related to independent measures of personality. Affiliative dreamers tend to be socially responsible, orderly, planful individuals who are somewhat introverted. Reward dreamers appear to be rather dominating individuals who desire leadership responsibility and the attention and admiration of others. Tension dreamers, who are prone to worry about physical health, find it difficult to sustain work activity, and are distracted by novelty. No consistent personality trend was shown for those classified as "garden variety" dreamers. The authors state that, although modest, the findings on Reactive Content are suggestive of internally consistent hypotheses that could be pursued in subsequent research. It appears, for example, that social dominance is related to the incidence of Reactive Content in reported dreams.

An approach to dreams and personality which has drawn considerable attention among researchers is that of the relationship between dream content and projective techniques. Sarason (1944), one of the first to be concerned with the degree of similarity between dreams and projective
tests, compared the dreams and TAT stories of 25 institutionalized, mentally retarded girls. Although his data were not quantified and treated statistically, Sarason, on the basis of inspection, reported similarity between dreams and TAT stories. While the major themes of the TAT stories were not found in the dreams in every case, in none of the cases were the data at complete variance.

Gordon (1953) systematically compared the dreams and TAT protocols of 29 adult psychiatric patients. The Aron need-press system of scoring TAT productions was used to score 327 dreams and 580 TAT stories. Statistical analysis was made on the basis of percentage of the total scored content in dreams and stories. Generally, Gordon found a definite relationship between the nature and amount of content in the S's dreams and TAT stories, but the relationship was not a very high one. He theorized that some of the differences found in the content of the two measures could be explained by assuming a greater concern by the S with defending and enhancing the idealized self-concept in TAT stories. In the stories the S, consciously or unconsciously, attempted to keep the central character from expressing any material that was at variance with his self-concept. In dreams, where presumably there was less control and freer expression of repressed material, the S was less concerned with self-concept and more concerned with escaping threatening situations.

A series of dreams and TAT protocols of 13 college students were compared by Grotz (1950) with respect to desires, frustrations, conflicts, and outcome. Correlations between individual measures were uniformly low, but correlations for the group were high. A quantitative analysis of the
differences between dreams and TATs revealed that more egocentric and narcissistic desires were expressed in dreams and more socialized and mature desires in TATs. Grotz also found: that the TAT was more revealing with respect to desires; a marked tendency to project more thwarting crises than conflict crises in both TAT and dream narratives; and a marked tendency to project conflict crises to the same extent in both types of protocols. There was also a consistent relationship between the ways an individual solved his problems and crises in dreams and stories.

In a more limited analysis, Osterberg (1951) compared a series of dreams and TAT protocols of 10 male and 10 female college students for frequency, intensity and object of aggression and misfortune. As did Gordon (1953), she found more aggression in TAT stories than in dreams. The amount of aggression shown in the dreams and TATs of males was found to be quite similar. In dreams, a tendency was found for both sexes to be involved in hostile interactions more often with male characters and least often with older characters. The data indicated a trend in the TAT stories for both sexes to be involved in hostile interactions more often with peers. She also found that men were more self-punishing in dreams than women, and that men were more indirect in expressing their aggression in TAT stories than women. Only one significant correlation between dreams and TAT narratives was found--the "severe misfortune ratio."

Bolgar (1954) compared a dream series with Rorschach protocols of 30 adult subjects (15 psychotics and 15 nonpsychotics). Both were scored for hostility, anxiety, dependence, positive feelings and neutral feelings.
Significant intraindividual consistency on these measures was found. The similarity which Bolgar found between dreams and Rorschach responses may be a function of symbol formation. Symbols produced in response to the Rorschach may be more free of realistic demands than the TAT, permitting a wider range of response.

Ten dreams and ten TAT stories were collected from 30 male college students by Catanzaro (1962) and analyzed for need, press, direction of interpersonal movement, role of central character, and nature of outcome. She reported a high degree of similarity between content expressed in dreams and TAT stories. This positive relationship held for the 30 pairs of protocols on need, press, role, and outcome. Direction of movement showed differences only at the group level. Significant interrelationships between the variables were also found. These positive relationships were explained in terms of similarity in thought processes and ego functioning involved in the creation of both types of responses.

Ben-Horin (1967) investigated the relationships between impulse expressiveness in waking behavior, dream content, and projective test fantasy in 24 Ss, twelve of whom were chosen as representing high impulse expressions on the Welsh A Scale and twelve of whom were low or nonexpressers of drives. Need expression in waking behavior was measured by Ss' MMPI responses, in waking fantasy through TAT stories, and in dream content by dreams collected during two nights of EEG monitored sleep. Ben-Horin found consistent and substantial evidence that the expressers of impulses in waking life also express more hostility and sexuality in dreams as compared to nonexpressers. On the other hand, no consistent
relationship between the expression of impulses in wakefulness and TAT fantasy nor between TAT and dreams was found. Ben Horin's study is different from the others cited, however, in that the dreams were collected in a laboratory situation. Recent studies (Domhoff, 1969) have shown that the content of laboratory dreams differs significantly from that of home dreams.

The evidence presented in this section supports the theoretical notion that the verbally reported content of dreams is related to the life state and functioning of the dreamer. Studies involving both objective and projective measures of personality consistently report positive findings in this direction. Admittedly, the relationship is far from perfect (e.g., correlations in studies comparing projective measures with dream content generally range from .30 to .60). There are possibly many factors—such as age, sex, and the like—which influence the relationship between dream content and personality functioning.

Dreams and Aggression

When the relationship between the dreamer and other characters in the dream is analyzed, aggression is found to be the dominant mode of social interaction. In a sample of 1,320 dreams, Hall (1959) classified interaction according to degree of friendliness or hostility. He found that hostile acts outnumbered friendly ones 448 to 188. Aggressive acts ranged from murder (2 percent) and physical attack (28 percent) to denunciation (22 percent) and mere feelings of hostility (8 percent).
Normative data by Hall and Van de Castle (1966) based on 1,000 dreams of male and female college students corroborate this finding. In their scheme of classification, Hall and Van de Castle divided social interaction into three categories: aggressive, friendly and sexual. Their data indicate that aggressive interactions occur more frequently in the dreams of both male and female college students than do friendly or sexual interactions. (Hall and Van de Castle feel that neither sex was candid in reporting sex dreams, and that their norms do not accurately reflect the actual incidence of this type of social interaction.)

While their data indicate that males are more aggressive than females, Hall and Van de Castle (1966) found the expression of aggression in the dreams of males and females to be quite similar. For example, both sexes were involved in 80 percent of the aggressive incidents in their dreams and witnesses in 20 percent. Males were the aggressor in 31 percent and the victim in 48 percent of the incidents, while females were the aggressor in 28 percent and the victim in 57 percent of aggressive incidents. There is, according to Hall and Van de Castle, a significant difference between the sexes in aggression witnessed in dreams. Females observe aggression between males much more frequently than males observe aggression between females.

Paolino (1964) compared the dreams of 42 male and 42 female college students for the occurrence of aggressive actions in terms of (a) frequency, (b) direction, whether initiated from the dreamer or directed to the dreamer, (c) characters in the dream who were aggressors or victims, and (d) intensity. His data indicate that, in their dreams, men are more
aggressive, initiate more aggression, and exceed in average intensity the aggression of women. While there is no difference between the sexes in the amount of aggression received, women receive more than they initiate and both men and women receive more intense aggression than they initiate. Men involve males and/or strangers as their most frequent aggressors or victims in dreams, while women employ both males and females and both strangers and familiar persons about equally. Women receive more aggression from females and older persons, while men receive more aggression from strangers and people of their own age or whose ages are unspecified.

Paolino (1964) concludes that dreams, like the TAT, tend to "mirror" the real life situation of the individual insofar as aggression is concerned. The involvement of familiar people and strangers in aggression is explained on the basis of residual ego functioning which operates so that familiar people are placed in a context of minor aggression and strangers are placed in a context of serious aggression.

Data collected from 1,490 aggressive interactions which occurred in 3,049 dreams of 1,940 males and females from ages 2-80 were analyzed by Hall and Domhoff (1963). Aggressive incidents were classified on the basis of eight categories which ranged from covert feelings of hostility to murder. Based on their analysis, Hall and Domhoff (1963) conclude that aggression in dreams decreases with age, and at every level after age twelve there is more aggression in the dreams of males than in females. No sex differences in the incidence of aggression were noted before age twelve, although boys are involved in more physical aggression than girls. If attention is paid only to dreamer involved aggression, the steady
decrease in relative frequency of aggression remains for female dreamers but not for males. The main reason for this divergence is the decrease in aggressions involving male characters in female dreams. The aggression in dreams of males remains high throughout life—most of which is with strangers (strangers account for 56 percent of aggressions with male characters). Until the age of 18, the dreamer is more likely to be a victim of aggression than the aggressor.

Research involving the relationship between aggression in dreams and correlates of human personality is quite limited. As previously noted, Meer (1955) found that authoritarian Ss aggressed more against out-group characters in their dreams than did nonauthoritarian Ss. Both Osterberg (1951) and Gordon (1953) found a positive relationship between aggressive content of dreams and TAT protocols. Ben-Horin's (1967) study revealed a highly significant relationship between dreams and TAT stories on this variable.

Saul, Sheppard, Selby, Lhamon, Sachs and Master (1954) compared the dreams of 17 chronic hypertensive patients and 16 normotensive college students for hostility. A six point scale developed by the authors was used to quantify three major categories of hostility in the S's dreams. Hypertensive Ss were found to have a significantly greater amount of hostility (.001 level) in their dreams than normotensive Ss.

Framo, Osterweil and Boszormenyi-Nagy (1962) rated 189 dreams collected from 92 patients in a psychiatric research and training institute as either "threat" or "nonthreat" dreams on the basis of verbal content. At the same time, the Ss were rated by nurses and aides for
manifestations of active and passive behavior. By comparing the results, the authors tested and confirmed the hypothesis that if threat in the manifest content of the psychotic's dream is directed toward the self, the overt behavior of the Ss will be largely characterized by overactivity, and if threat is directed toward others in the dream, the overt behavior will be largely characterized by pathological passivity.

In a very recent study, Robbins and Tanck (1969) studied the relationship between aggression in dreams and community violence. Dream reports were obtained from two groups of 24 female undergraduates each. The dreams from one group were collected during a period in which the life of the community was more or less normal. The other group reported their dreams after a period of extreme violence in the community. The findings indicate that there was less aggression in the dreams of the second group.

**Summary Statement**

In summary, a review of the literature revealed some empirical support for the theoretical notion that verbally reported dream content is related to the life state and functioning of the dreamer. Research in this area, however, was found to be sporadic and segmental. Two factors in particular seem to have contributed to this paucity of research: the dominance of Freudian psychology with its emphasis on the latent content of dreams, and methodological problems involved in quantifying and analyzing verbal material.
The bulk of the evidence seems to support the view that dreams are related to waking behavior in a continuity relationship (i.e., dreams constitute an effort on the part of the dreamer to resolve current emotional conflicts and problems). Most of the research to date, however, has utilized a general approach in the study of this problem. What seems warranted at this point is a detailed treatment of the relationship between specific components of dream content and personality.

The study of aggression provides a case in point. Research indicates that there are similarities in the way that aggression is expressed in dreams and projective tests. No distinctions are made, however, between such factors as type of aggression or the manner in which the dreamer is involved in the aggression. It would appear that a more detailed analysis of these kinds of relationships may provide a better understanding of how aggression is handled by the individual.

II. THE PROBLEM

This study is an investigation of the relationship between aggression in the verbally reported content of dreams and three dimensions of human personality. Based on the Aggression Scale of the Hall-Van de Castle (1966) classification system, six separate measures of aggression in the dreams of male and female college students were computed. These measures were then compared with scores obtained from the Welsh Anxiety and Repression Scales (Welsh, 1956) and the Internal-External Control Scale (James, 1957).
Several studies (Hall, 1951; Hall & Domhoff, 1963; Hall & Van de Castle, 1966; Paolino, 1964) suggest that there are sex differences in the aggression content of verbally reported dreams. These studies indicate that the incidence of aggression is generally higher in the dreams of males, that males initiate more aggressive interactions while females are more often the victim of aggression, and that males are more physically aggressive than females. Therefore, when measures of aggression in the dreams of males and females are compared, it was predicted that:

1. The average number of aggressive incidents per dream will be higher for males than females.
2. The percentage of aggressive incidents in which the dreamer is involved will be higher for males than for females.
3. The percentage of aggressions directed from the dreamer will be higher in the dreams of males than females.
4. The percentage of aggressions directed toward the dreamer will be higher in the dreams of females than males.
5. The percentage of physical aggressions will be higher in the dreams of males than females.
6. The percentage of nonphysical aggressions will be higher in the dreams of females than males.

The theoretical position taken in this study is that dreams represent a meaningful form of mental activity which is motivated by the dreamer's need to resolve current conflicts and problems. The assumption was made, therefore, that there is continuity between dimensions of personality revealed in dreams and in conceptually related measures.
of personality. On the basis of this assumption, it was hypothesized that stable, predictable relationships would exist between aggression in dreams and scores on the Welsh Anxiety and Repression Scales and the Internal-External Control Scale.

The Welsh Anxiety Scale is purported to be a measure of general emotional upset as reflected by anxiety and dysphoria. It was hypothesized that scores on this scale would correlate positively with the incidence of aggression in dreams, with the degree of dreamer involvement in the aggression, and with the incidence of physical aggression in dreams. The Welsh Repression Scale is generally considered to be a measure of the mechanisms of repression and denial involving rationalization and lack of effective insight. It was hypothesized that scores on this scale would correlate negatively with the incidence of aggression in dreams, with the degree of dreamer involvement in the aggression, and with the incidence of physical aggression in dreams. The Internal-External Control Scale was designed to measure the degree to which an individual perceives external events to be under his control (internal) or beyond personal control (external). It was hypothesized that externals would more often be the victim of aggression in dreams while internals would more often be the initiators of aggression in dreams.

Based on these theoretical considerations, the following specific predictions were made:

7. There will be a positive relationship between the average incidence of aggression and scores on the Welsh Anxiety Scale.
8. There will be a negative relationship between the average incidence of aggression and scores on the Welsh Repression Scale.

9. There will be a positive relationship between the percentage of dreamer involved aggressions and scores on the Welsh Anxiety Scale.

10. There will be a negative relationship between the percentage of dreamer involved aggressions and scores on the Welsh Repression Scale.

11. There will be a negative relationship between the percentage of aggressions directed from the dreamer and scores on the Internal-External Control Scale.

12. There will be a positive relationship between the percentage of aggressions directed toward the dreamer and scores on the Internal-External Control Scale.

13. There will be a positive relationship between the percentage of physical aggressions and scores on the Welsh Anxiety Scale.

14. There will be a negative relationship between the percentage of physical aggressions and scores on the Welsh Repression Scale.

15. There will be a negative relationship between the percentage of nonphysical aggressions and scores on the Welsh Anxiety Scale.

16. There will be a positive relationship between the percentage of nonphysical aggressions and the Welsh Repression Scale.
CHAPTER II

METHOD

This study involves data collected from a group of college students over a period of eight weeks. Chapter II presents a description of the sample, procedures used in collecting the data, the instruments involved, and methods of analyzing the data.

Subjects

The sample for the study consisted of 39 college students (24 males and 15 females) enrolled in a course in abnormal psychology at the University of Denver. Most of the Ss were either seniors majoring in psychology or graduate students working toward a master's degree in education. They ranged in age from 22 to 56, and about 35 percent were married.

Procedure

At the beginning of the summer quarter, the Ss were informed by their instructor that one of the requirements for the course would involve the reporting of a series of dreams. They were told that the dreams would be used in research related to the study of dream content and that some tests would be administered during the quarter. The group was permitted to discuss the assignment and, after some deliberation, decided to participate in lieu of a research paper routinely required in the course.

The Ss were told that they would be expected to report an average of two current dreams per week over a period of 8 weeks during the quarter--
a minimum of 16 dreams was required. In order to equalize the task, those Ss who could not produce the required number of current dreams during the reporting period were permitted to report previous dreams. As a last resort, the reporting of daydreams was permitted. Only current dreams were used, however, in obtaining data for this study.

In reporting their dreams, Ss were instructed to include the following information: name, date, type of dream (night dream, previous dream, or daydream), and the affect or emotion which accompanied the dream. The dream report was to include a full, accurate description of the dream. It was strongly emphasized that observations and/or speculations about the dream should not be included in the dream narrative. Associations to the dream and the dreamer's impressions, however, were permitted and were included in a separate section at the end of the report.

To facilitate the reporting of their dreams, it was suggested that the Ss keep a note pad and pencil by their beds, devote some time immediately upon awakening to dream recall, and record all that they could remember about their dreams while impressions were fresh in their minds. The Ss were encouraged to report their dreams candidly and accurately and were assured that the dream reports would be treated confidentially.

During the quarter, the Welsh Anxiety and Repression scales and the Internal-External Control Scale were administered to each of the Ss along with some other tests not utilized in this study.
Instruments

The Welsh Anxiety and Repression Scales. The Welsh Anxiety and Repression Scales (Welsh, 1956) were developed to measure the two major factor dimensions of the Minnesota Multiphasic Personality Inventory (MMPI). In developing these instruments, Welsh based his analysis on the "pure" clinical scales of the MMPI—i.e., all items scored on more than one scale were deleted.

The first factor, identified as factor A, accounts for the largest single component of variance among the clinical scales. It shows high loadings from scales 7 (Pt) and 8 (Sc) and high but negative loading from the K scale. The source of variance accounted for by factor A is related to anxiety and general emotional upset as reflected by dysphoria, tension, inefficiency, and symptomatic complaints.

The second major source of variance in the MMPI was labelled factor R by Welsh. Scales 1 (Hs), 2 (D), and 3 (Hy) show moderate loading on factor R, and scale 9 (Ma) shows a moderate but negative loading. This second-factor variance reflects reliance on the mechanisms of repression and denial with rationalization and lack of effective insight.

Several studies employing these scales (Eichman, 1961; Williams & Lawrence, 1954) have shown confirmation of the relative orthogonality of the scales and have demonstrated their utility as measures of the two general factors that consistently emerge in MMPI analyses.

Internal-External Control Scale. Locus of control, a construct generated within Rotter's social learning theory, refers to the degree to which individuals accept personal responsibility for what happens to them.
In general terms, internal control refers to perception of external events as being a consequence of one's own actions and thereby under personal control; external control refers to the perception of external events as unrelated to one's own behaviors in certain situations and thereby beyond personal control (Rotter, Seeman & Liverant, 1962). The first assessment of the internal-external control variable, a 13 item Likert-type scale, was developed by Phares (1955). The James-Phares Internal-External Control Scale, an expanded version of the Phares scale, was subsequently developed (James, 1957). This scale, a 60 item Likert-type scale, was used as the measure of locus of control in the present study.

The locus of control dimension of personality has been found to relate to a variety of social and behavioral factors in normal populations. Tin-Yee Hsieh, Shijbut and Lotsof (1969), for example, confirmed the hypothesis that this variable is significantly related to ethnic group membership. Watson (1967) found significant relationships between locus of control and both manifest and test anxiety. Williams and Vantress (1969) demonstrated small but positive correlations between internal-external control and aggression as measured by the Buss-Durkee Hostility Inventory. In the latter study, external Ss scored significantly higher than internal Ss on 5 of 8 scales of the Hostility Inventory.

**Dream Content Scale.** The Aggression Scale used in this study is one of sixteen different objective scales devised by Hall and Van de Castle (1966) to provide a comprehensive classification system for the content analysis of dreams. The major groupings within this system
include: physical surroundings, characters, social interactions, activities, achievement outcomes, environmental press, emotions, and descriptive elements. The Aggression Scale is one of three (Aggressive, Friendly, and Sexual) which comprise the social interaction grouping.

In treating aggression in the verbally reported content of dreams, eight subclasses are scored:

8. An aggressive act which results in the death of a character.
7. An aggressive act which involves an attempt to physically harm a character. The attempt may be carried out through personal assault or through the use of a weapon. Threatening a character with a weapon is also included in this class.
6. An aggressive act which involves a character being chased, captured, confined or physically coerced into performing some act.
5. An aggressive act which involves the theft or destruction of possessions belonging to a character.
4. An aggressive act in which a serious accusation or verbal threat of harm is made against a character.
3. This subclass covers all situations where there is an attempt by one character to reject, exploit, control, or verbally coerce another character. Such activity may be expressed through dismissals, demands, refusals, disobedience, or any other type of negativistic behavior.
2. Aggression displayed through verbal or expressive activity. Included are such activities as one character yelling or
swearing at another or when a character criticizes or scowls at another.

1. Covert feelings of hostility or anger without any overt expression of aggression.

The subclasses numbered 1 to 4 involve various forms of nonphysical aggression, principally verbal, although various forms of expressive behavior and covert feelings of aggression are frequently included. Subclasses 5 to 8 involve various forms of physical aggression. It should be noted that in all except the first subclass, aggression involves a deliberate, intentional act on the part of one character to harm or annoy some other character.

The scale also provides for scoring the direction of the aggressive interchange (who did what to whom). Aggressions are scored as directed from the dreamer (the dreamer attacks another character in the dream) or toward the dreamer (the dreamer is attacked by another character). Aggressive interactions are also scored as reciprocal acts from or toward the dreamer (i.e., the dreamer is provoked by another and attacks, or the dreamer provokes another and is attacked). Aggressive interchanges between two characters in which causal factors cannot be established are termed mutual aggressions (e.g., two people quarreling). An aggression in which the dreamer is not involved is called a witnessed aggression.

In discussing reliability of scoring, Hall and Van de Castle (1966) report a reliability coefficient of .97 between independent raters for the number of aggression scores in a series of 50 dreams. The raters achieved perfect agreement in scoring 54 percent of the aggressive interactions,
and in .72 percent they agreed in every detail except one. It must be kept in mind that scoring an aggressive interaction involves a number of components. In order for perfect agreement to occur, the judges must agree that a social interaction was present, they must agree as to the scoring for the characters who initiated the interaction and those to whom the interaction was directed, as well as the appropriate subclass of the interaction and whether it was an initiated, reciprocated, mutual, or self-directed interaction. Hall and Van de Castle (1966, p. 157) conclude that "the reliability figures . . . for the various dream scales are generally higher than those reported for most projective techniques, and the authors feel that they are substantial enough to warrant their use in a broad spectrum of research studies."

Analysis of the Data

In obtaining data for the study, only current night dreams reported by the Ss were used. Each dream was scored for aggression by a research assistant trained in the use of the Hall-Van de Castle (1966) classification system. The following scores were then computed for each S:

1. The total number of dreams reported.
2. The total number of aggressive dreams (a dream is considered an aggressive dream if it includes one aggressive incident).
3. The total number of aggressive incidents.
4. The total number of aggressive incidents in which the dreamer is involved.
5. The total number of aggressions directed from the dreamer.
6. The total number of aggressions directed toward the dreamer.
7. The total number of physical aggressions.
8. The total number of nonphysical aggressions.

Using these scores, the following measures of aggression in the dreams of each S were derived by the methods indicated:

1. The **average number of aggressive incidents per dream** was derived by dividing the total number of aggressive incidents by the total number of dreams reported.

2. The **percentage of dreamer involved aggressions** was derived by dividing the number of aggressive incidents in which the dreamer was involved by the total number of aggressive incidents.

3. The **percentage of aggressive incidents directed from the dreamer** was derived by dividing the number of aggressive incidents directed from the dreamer by the total number of dreamer involved aggressive incidents.

4. The **percentage of aggressive incidents directed toward the dreamer** was derived by dividing the number of aggressive incidents directed toward the dreamer by the total number of dreamer involved aggressive incidents.

5. The **percentage of physical aggressions** was computed by dividing the number of physical aggressions by the total number of aggressive incidents.

6. The **percentage of nonphysical aggressions** was derived by dividing the number of nonphysical aggressions by the total number of aggressive incidents.
In testing the various hypotheses, three separate statistical procedures were used. Because of the skewed nature of the data, percentage figures derived in computing aggression scores from dream content scores were transformed by the procedure for transformation of proportion scores into angle scores described by Walker and Lev (1963, p. 423). The first six predictions were tested by means of the t-Test for difference between independent means (Bruning & Kintz, 1968). The remaining hypotheses (7-16) involved the comparison of dream scores with personality measures. These comparisons were made by means of the Pearson-Product-Moment correlation technique (Bruning & Kintz, 1968).
CHAPTER III

RESULTS

The 39 Ss who participated in the study reported a total of 529 current night dreams during the reporting period. A summary of the data produced by scoring each of these dreams for aggression content is reported in Table 1.

The mean number of dreams reported by male and female Ss was almost identical. Males reported an average of 13.30 dreams compared to an average of 13.39 for females. The mean number of aggressive dreams reported was also quite similar when the sexes were compared. The means for males and females were 6.79 and 6.13 respectively. (It should be noted that a dream was considered an aggressive dream if one or more aggressive incidents occurred.) In each of the six remaining categories reported in Table 1, the aggression scores of male Ss exceeded those of females although none of these differences were found to be statistically significant.

The results of t-Tests comparing the means of six measures of aggression in the dreams of males and females are presented in Table 2. The figures in Table 2 are based on either ratio or percentage scores which were derived from raw dream scores. In column 1, the ratio of aggressive incidents per dream was computed by dividing the total number of aggressive incidents by the total number of dreams per S. The remaining columns (2-6) represent percentage scores. Percent of dreamer
Table 1
Summary of Aggression Scores

<table>
<thead>
<tr>
<th></th>
<th>No. of Dreams Reported</th>
<th>No. of Aggressive Dreams</th>
<th>No. of Aggressive Incidents</th>
<th>Dreamer Directed Aggressions</th>
<th>Directed From Dreamer</th>
<th>No. of Physical Aggressions</th>
<th>No. of Nonphysical Aggressions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MALES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(N=24)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>320</td>
<td>163</td>
<td>341</td>
<td>274</td>
<td>116</td>
<td>158</td>
<td>130</td>
</tr>
<tr>
<td>MEAN</td>
<td>13.30</td>
<td>6.79</td>
<td>14.20</td>
<td>11.42</td>
<td>4.83</td>
<td>6.58</td>
<td>5.42</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.82</td>
<td>3.08</td>
<td>11.08</td>
<td>8.02</td>
<td>4.13</td>
<td>4.70</td>
<td>4.52</td>
</tr>
<tr>
<td><strong>FEMALES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(N=15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>209</td>
<td>92</td>
<td>169</td>
<td>117</td>
<td>39</td>
<td>78</td>
<td>71</td>
</tr>
<tr>
<td>MEAN</td>
<td>13.39</td>
<td>6.13</td>
<td>11.26</td>
<td>7.80</td>
<td>2.60</td>
<td>5.20</td>
<td>4.73</td>
</tr>
<tr>
<td>S.D.</td>
<td>1.61</td>
<td>2.65</td>
<td>8.37</td>
<td>5.40</td>
<td>2.60</td>
<td>3.43</td>
<td>4.34</td>
</tr>
</tbody>
</table>


Table 2

Means, Standard Deviations, and Results of t-Tests Comparing Six Measures of Aggression in the Dreams of Male and Female Ss

<table>
<thead>
<tr>
<th></th>
<th>(1) Average Aggressive Incidents Per Dream</th>
<th>(2) Percent of Aggressions Involved (Converted)</th>
<th>(3) Percent of Aggressions From Dreamer (Converted)</th>
<th>(4) Percent of Aggressions Toward Dreamer (Converted)</th>
<th>(5) Percent of Physical Aggressions (Converted)</th>
<th>(6) Percent of Nonphysical Aggressions (Converted)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MALES (N-24)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAN</td>
<td>1.04</td>
<td>2.43</td>
<td>1.28</td>
<td>1.86</td>
<td>1.26</td>
<td>1.89</td>
</tr>
<tr>
<td>S.D.</td>
<td>.74</td>
<td>.53</td>
<td>.49</td>
<td>.49</td>
<td>.50</td>
<td>.50</td>
</tr>
<tr>
<td><strong>FEMALES (N-15)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAN</td>
<td>.78</td>
<td>2.17</td>
<td>1.11</td>
<td>2.03</td>
<td>1.37</td>
<td>1.77</td>
</tr>
<tr>
<td>S.D.</td>
<td>.53</td>
<td>.59</td>
<td>.53</td>
<td>.53</td>
<td>.58</td>
<td>.58</td>
</tr>
<tr>
<td>t</td>
<td>1.14 ns</td>
<td>1.40 ns</td>
<td>1.00 ns</td>
<td>-1.00 ns</td>
<td>-.61 ns</td>
<td>.61 ns</td>
</tr>
</tbody>
</table>

Note: The figures in columns 2-6 are based on percentage scores which were derived from raw dream scores. Because of the skewed nature of the percentage scores, the procedure for transformation of proportion scores into angle scores described by Walker and Lev (1953, p. 423) was used to normalize the data prior to statistical analysis. This conversion explains why each of the means in columns 2-6 exceed 1.
involved aggressions, for example, was determined by dividing the number of aggressive incidents in which the dreamer was involved by the total number of aggressive incidents per S. Because of the skewed nature of the data, all percentage scores (columns 2-6) were converted into angle scores by the procedure described by Walker and Lev (1953, p. 423) prior to statistical analysis. This transformation produced a series of scores approximating a normal distribution. It also explains why the mean scores in columns 2-6 of Table 2 exceed 1.

Six specific predictions were made with reference to the content of aggression in the reported dreams of males and females. These predictions were evaluated on the basis of results presented in Table 2.

1. It was predicted that the average number of aggressive incidents per dream would be higher for males than for females. As indicated in column 1 of Table 2, males reported an average of 1.04 aggressive incidents per dream compared to .78 for females. These results were in the direction predicted but were not statistically significant.

2. It was predicted that the percentage of aggressive incidents in which the dreamer is involved would be higher for males than for females. As indicated in column 2 of Table 2, the mean percent of dreamer involved aggressions (converted) was 2.43 for males and 2.17 for females. These results were in the direction predicted but were not statistically significant.

3. It was predicted that the percentage of aggressions directed from the dreamer would be higher in the dreams of males than females. As indicated in column 3 of Table 2, the mean percent of aggressions from the dreamer (converted) was 1.28 for males and 1.11 for females. These
results were in the direction predicted but were not statistically significant.

4. It was predicted that the percentage of aggressions directed toward the dreamer would be higher in the dreams of females than males. As indicated in column 4 of Table 2, the mean percent of aggressions toward the dreamer (converted) was 2.03 for females and 1.86 for males. These results were in the direction predicted but were not statistically significant.

5. It was predicted that the percentage of physical aggressions would be higher in the dreams of males than females. As indicated in column 5 of Table 2, the mean percent of physical aggressions (converted) was 1.37 for females and 1.26 for males. These results were not in the direction predicted and were not statistically significant.

6. It was predicted that the percentage of nonphysical aggressions would be higher in the dreams of females than males. As indicated in column 6 of Table 2, the mean percent of nonphysical aggressions (converted) was 1.89 for males and 1.77 for females. These results were not in the direction predicted and were not statistically significant.

In summary, four of the mean differences between the aggression scores of males and females were in the direction predicted and two were not. None, however, was statistically significant. As predicted, males reported more aggressive incidents per dream, were involved in more aggressive incidents, and initiated more aggressive incidents than females, while females were more often the victim of aggression than males. The mean percent of physical aggression was slightly higher for
females and the mean percent of nonphysical aggression was slightly higher for males, neither of which was in the direction predicted. An interesting contrast was noted in the figures of Tables 1 and 2 (pages 35 and 36) with respect to the measures of physical aggression. Although males report a greater incidence of physical aggression than females, when compared to the total number of aggressive incidents reported females have a slightly higher percentage of physical aggression than do the males. On the basis of the results presented in Table 2, however, it was concluded that males and females represented in the sample did not differ significantly on any of the six measures of aggression.

Three objective measures of personality were used in the study: the Welsh Anxiety and Repression Scales (Welsh, 1956) and the Internal-External Control Scale (James, 1957). A comparison of the scores of male and female Ss on these scales is presented in Table 3. As indicated by the results of t-Tests comparing the means, there were no significant differences between the sexes on these measures. The means for males were slightly higher than for females on the Welsh Anxiety and Repression Scales, while the mean score for females on the Internal-External Control Scale was slightly higher (in the external direction) than for males.

The main purpose of the study was to investigate the relationship between aggression in the verbally reported content of dreams and some conceptually related measures of personality. In essence it was hypothesized that, although there is some evidence which indicates that males and females differ with regard to the expression of aggression in their dreams, stable relationships between measures of aggression in verbally
Table 3
Means, Standard Deviations, and Results of t-Tests Comparing the Scores of Male and Female Ss on Anxiety, Repression, and Internal-External Control Scales

<table>
<thead>
<tr>
<th></th>
<th>Anxiety (T scores)</th>
<th>Repression (T scores)</th>
<th>I-E Control (Raw scores)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MALES (N-24)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAN</td>
<td>47.40</td>
<td>51.04</td>
<td>63.79</td>
</tr>
<tr>
<td>S.D.</td>
<td>10.64</td>
<td>7.27</td>
<td>8.27</td>
</tr>
<tr>
<td><strong>FEMALES (N-15)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAN</td>
<td>46.70</td>
<td>48.30</td>
<td>66.30</td>
</tr>
<tr>
<td>S.D.</td>
<td>10.04</td>
<td>8.59</td>
<td>7.93</td>
</tr>
<tr>
<td>( t )</td>
<td>.20 ns</td>
<td>1.04 ns</td>
<td>.91 ns</td>
</tr>
</tbody>
</table>

reported dreams and objective measures of personality which generally apply to both males and females could be predicted. In order to test this general hypothesis and the 10 predictions made in reference to it, correlations comparing the measures of aggression with personality test scores for the combined group of Ss were computed. The results of these statistical comparisons are presented in the bottom portion of Table 4.

7. It was predicted that there would be a positive relationship between the average incidence of aggression and scores on the Welsh Anxiety Scale. The correlation coefficient \( r = .14 \) comparing these measures was in the direction predicted but was low and not statistically significant,
Table 4

Correlation Coefficients Comparing Six Measures of Aggression in Dreams
With Scores on Anxiety, Repression, and Internal-External Control
Scales for Males, Females and Combined Groups

<table>
<thead>
<tr>
<th></th>
<th>Average Aggressive Incidents Per Dream</th>
<th>Percent of Aggressions Involved From Aggressions</th>
<th>Percent of Aggressions Toward Dreamer</th>
<th>Percent of Physical Aggressions</th>
<th>Percent of Nonphysical Aggressions</th>
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</thead>
<tbody>
<tr>
<td><strong>MALES (N=24)</strong></td>
<td></td>
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<tr>
<td>Anxiety</td>
<td>.31</td>
<td>.08</td>
<td></td>
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<td>.50***</td>
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<td>.33</td>
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<td>.10</td>
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<td>.10</td>
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<tr>
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<td>-.55**</td>
<td>.55**</td>
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<td><strong>COMBINED (N=39)</strong></td>
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<tr>
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<td>.30*</td>
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*Significant at the .05 level (1 tailed test).
**Significant at the .05 level (2 tailed test).
***Significant at the .02 level (2 tailed test).
8. It was predicted that there would be a negative relationship between the average incidence of aggression and scores on the Welsh Repression Scale. The correlation coefficient ($r = .08$) comparing these measures indicated that there is no relationship.

9. It was predicted that there would be a positive relationship between the percentage of dreamer involved aggressions and scores on the Welsh Anxiety Scale. The correlation coefficient ($r = .28$) comparing these measures was in the direction predicted and was significant at the .05 level (1 tailed test).

10. It was predicted that there would be a negative relationship between the percentage of dreamer involved aggressions and scores on the Welsh Repression Scale. The correlation coefficient ($r = .07$) comparing these measures indicated that there is no relationship.

11. It was predicted that there would be a negative relationship between the percent of aggressions directed from the dreamer and scores on the Internal-External Control Scale. The correlation coefficient ($r = -.30$) comparing these measures was in the direction predicted and was significant at the .05 level (1 tailed test).

12. It was predicted that there would be a positive relationship between the percentage of aggressions directed toward the dreamer and scores on the Internal-External Control Scale. The correlation coefficient ($r = .30$) comparing these measures was in the direction predicted and was significant at the .05 level (1 tailed test).

13. It was predicted that there would be a positive relationship between the percentage of physical aggressions and scores on the Welsh
Anxiety Scale. The correlation coefficient \((r = -0.21)\) comparing these measures was not in the direction predicted and was not statistically significant.

14. It was predicted that there would be a negative relationship between the percentage of physical aggressions and scores on the Welsh Repression Scale. The correlation coefficient \((r = -0.24)\) comparing these measures was in the direction predicted but was not statistically significant.

15. It was predicted that there would be a negative relationship between the percentage of nonphysical aggressions and scores on the Welsh Anxiety Scale. The correlation coefficient \((r = 0.21)\) comparing these measures was not in the direction predicted and was not statistically significant.

16. It was predicted that there would be a positive relationship between the percentage of nonphysical aggressions and scores on the Welsh Repression Scale. The correlation coefficient \((r = 0.24)\) comparing these measures was in the direction predicted but was not statistically significant.

In summary, 6 of the 10 correlations comparing aggression in verbally reported dreams with scores on the personality tests were in the direction predicted, two were in the opposite direction, and two indicated no relationship. Three of the 10 correlations were significant at the .05 level of confidence. As predicted, the percent of dreamer involved aggression correlated positively with anxiety. Both correlations comparing measures representing direction of aggression in dreams with scores
on the Internal-External Control Scale were in the direction predicted and were significant.

It was concluded that the results of this study do not decisively support the hypothesis that there is a predictable relationship between measures representing incidence (average aggressions per dream and percent of dreamer involved aggression) and type (physical and nonphysical) of aggression in verbally reported dreams and scores on the Welsh Anxiety and Repression Scales. The results do support the hypothesis that there is a predictable relationship between measures representing direction of aggression (aggression from or toward the dreamer) in verbally reported dreams and scores on the Internal-External Control Scale.

Because of the inconclusiveness of the results with regard to aggression in dreams and scores on the Welsh Anxiety and Repression Scales, a post hoc analysis of the data was undertaken. Separate correlations for males and females comparing the six measures of aggression with personality test scores were computed. The results of these statistical comparisons are presented in the upper portion of Table 4, page 41.

These results suggest that there is considerable variability both within and between the sexes with regard to the relationship between aggression in verbally reported dreams and personality measures. When anxiety and repression scores were compared to average aggressive incidents per dream, for example, correlations were in the direction predicted for males and in the opposite direction for females.

As in the case of the combined groups, the majority of the correlations for males and females were low and not statistically significant.
Some significant relationships were found, however, between measures of aggression and personality scores. Anxiety correlated positively ($r = .60; p = .02$) with the percent of dreamer involved aggressions for females. When anxiety was compared to the incidence of physical and nonphysical aggression for males, a correlation of $-.50$ was obtained for percent of physical aggression and a correlation of $.50$ was obtained for percent of nonphysical aggression. Both of these correlations were significant at the .02 level but neither was in the direction predicted. Both correlations comparing measures representing direction of aggression in dreams with scores on the Internal-External Control Scale were in the direction predicted and were significant ($p = .05$) for females.

The results of tests for significance of the difference between the correlations (Bruning & Kintz, 1968) of males and females shown in Table 4, page 41, are presented in Table 5. As indicated by the figures in Table 5, males and females in the sample differ significantly ($p = .05$) when anxiety is correlated with percent of physical aggressions and when anxiety is correlated with percent of nonphysical aggression.
Table 5

Results of Tests for Difference Between Correlations of Males and Females Comparing Measures of Aggression With Personality Test Scores

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<th></th>
<th>Average Aggressive Incidents Per Dream</th>
<th>Percent of Dreamer Aggression</th>
<th>Percent of Aggressions From Dreamer</th>
<th>Percent of Aggressions Toward Dreamer</th>
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<td>-1.43</td>
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<td>-1.43</td>
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</tbody>
</table>

*Significant at the .05 level.
CHAPTER IV

DISCUSSION

This study involved two major research objectives: (1) to compare males and females on the basis of aggression scores computed from reported dreams; and (2) to investigate the relationship between aggression in verbally reported dreams and some conceptually related measures of personality. These objectives were achieved by comparing six measures of aggression from the dreams of 24 male and 15 female Ss by means of t-Tests and, in turn, correlating the aggression measures for the combined groups with scores on the Welsh Anxiety and Repression Scales and the Internal-External Control Scale. Chapter IV presents a discussion of the results of these research procedures.

On the basis of evidence cited in the review of literature, it was predicted that males and females would differ on the six measures of aggression computed from their dreams. When the means of these measures were compared, however, none of the differences were found to be significant. It was concluded that the males and females represented in the sample did not differ significantly in the expression of aggression in their reported dreams.

The normative studies cited in the review of literature (Hall, 1951; Hall & Domhoff, 1963; Hall & Van de Castle, 1966; Paolino, 1964) are based on dreams that were collected some twenty or more years prior to the present study. During this period, revolutionary changes have
occurred with respect to the woman's role in society. Women are less dominated and more dominant than they were a quarter of a century ago. The current emphasis upon freedom and equality of the sexes may be reflected in an increase in the incidence of aggression in the dreams of women. As women move from the traditionally passive role to a more aggressive and competitive position societally and vocationally, a higher incidence of conflict (as indicated by the expression of aggression in their dreams) might be expected.

A more conservative and perhaps a more plausible explanation for the higher incidence of aggression in the dreams of women included in this sample may be the structure of the sample itself. The dreams on which the studies cited above are based were collected largely from freshman and sophomore college students. The sample for this study was comprised of senior college students and a number of graduate students. Among the female Ss were several older women who had been professionally employed as school teachers for many years. The age differential and particularly the inclusion of the older women in the sample may account for the increased incidence of aggression in the dreams of the female Ss.

To date, normative dream research has been limited mainly to an investigation of age and sex variables. The few studies which have been published are quite limited in scope. It would seem that, at this point, a wider range of research spanning such variables as occupation, education, race and socioeconomic status is in order. Results of this type of research would provide a more reliable and productive base for making predictions in reference to dream studies.
The theoretical basis underlying this study was the continuity view of dreams—i.e., that dreams represent a meaningful form of mental activity which is motivated by the dreamer's need to resolve current conflicts and problems. In support of this general hypothesis, the results of correlations comparing measures of aggression in dreams with personality test scores (see Table 4, page 41) offered some evidence that there are predictable relationships between these dimensions. It does not appear, however, that these relationships are generally applicable to both males and females as was predicted. On the basis of statistical comparisons presented in Table 4, it seems clear that the resultant relationships between aggression in reported dreams and personality measures represent different ways of coping with aggression when the sexes are compared.

The results suggest that, in general, the incidence of aggression in the dreams of females is negatively related to anxiety and positively related to repression. The presence of physical aggression or involvement in aggression in dreams, however, is accompanied by a corresponding increase in anxiety and decrease in repression. This may indicate that covert or nonphysical aggression in the dreams of females is normally an effective means of sublimating aggressive impulses. On the other hand, when external contingencies generate sufficient anxiety, repressive defenses are lowered and an increase in the incidence of aggression in dreams occurs.

In rather sharp contrast to females is the finding for males that anxiety is related positively to the incidence of nonphysical aggression.
This seems to indicate that males, under normal circumstances, are capable of effectively discharging aggressive impulses in their dreams. When repressive mechanisms inhibit the expression of physical aggression in the dreams of males, the result is a corresponding increase in anxiety.

When the relationships between aggression in reported dreams and scores on the Welsh Anxiety and Repression Scales for males and females are compared, the results seem to indicate that dreams reflect cultural modes of expressing aggressive impulses. The male role is traditionally viewed as dominant and aggressive. Females are expected to be more passive and receptive. These cultural expectations are compatible with the findings in this study that dreamer involvement in aggression is positively related to anxiety for females and that the incidence of physical aggression in dreams is negatively related to anxiety for males. Whenever either male or female dreamers move away from the culturally accepted modes of expressing aggression, however, the result is a corresponding increase in anxiety.

The most consistent finding in the study involved the relationship between measures representing direction of aggression in dreams and scores on the Internal-External Control Scale. It was predicted that percent of aggression from the dreamer (dreamer is aggressor) would correlate negatively with the Internal-External Control Scores—i.e., when the dreamer initiates aggression, he will perceive external events to be under personal control. It was also predicted that percent of aggression toward the dreamer (dreamer is victim) would correlate positively with scores on the Internal-External Control Scale—i.e., when the
dreamer is the victim of aggression he will perceive that external events are beyond personal control. These predictions held at the group level and for both males and females. Both correlations were significant at the group level (p = .05) and for females (p = .05) but neither was significant for males.

These results may indicate that the Internal-External Control Scale is a more valid measure for females than for males because it reflects a cultural bias. Females are not expected to be assertive and aggressive. When they are willing to flaunt conventional sex-role stereotypes and verbally declare their aggressive impulses, therefore, the likelihood that they are expressing valid self-perceptions is greater. Their willingness to seize the initiative in interpersonal relationships may be accurately reflected in their scores. Males, on the other hand, are expected to be more dominant and assertive than females. Because of the nature of the questioning in this scale, males may answer in accord with cultural expectations and thus pretend the initiative even if they do not have it in real life. For this reason, the correlations for males may be invalid.

In retrospect, it appears that a more potent predictor of aggression in dreams would have been the interaction pattern of sex and personality measures. Considerable variation was found both within and between the sex groups in regard to the relationship between aggression scores and personality measures. It is clear that these relationships are not generally applicable to both sexes. A combination of sex and personality variables as in the sensitizer-repressor dimension (Welsh, 1956), might provide a more productive approach. One study (Van de Castle, 1960) has
shown that college Ss classified as sensitizers (high Welsh Anxiety, low Welsh Repression scores) perceived significantly more aggressive words in a binocular-rivalry situation than did repressors (low Welsh Anxiety, high Welsh Repression scores).
CHAPTER V

SUMMARY

The purpose of this study was: (1) to compare male and female college students on the basis of aggression scores computed from reported dreams; and (2) to investigate the relationship between aggression in reported dreams and some conceptually related measures of personality. The theoretical position taken was that dreams represent a meaningful form of mental activity which is motivated by the dreamer's need to resolve current conflicts and problems. It was assumed that there is continuity between dimensions of personality revealed in dreams and related personality measures.

On the basis of evidence cited in the review of literature, it was predicted that males and females would differ on the following six measures of aggression computed from their dreams: ratio of aggressive incidents per dream, percent of dreamer involved aggressions, percent of aggressions directed from the dreamer, percent of aggressions directed toward the dreamer, percent of physical aggressions, and percent of nonphysical aggressions.

It was hypothesized the measures of anxiety would correlate positively with ratio of aggressive incidents per dream, percent of dreamer involved aggressions, and percent of physical aggressions, and negatively with percent of nonphysical aggression. It was hypothesized that measures of repression would correlate negatively with ratio of aggressive incidents.
per dream, percent of dreamer involved aggressions, and percent of physical aggressions, and positively with percent of nonphysical aggressions. It was hypothesized that percent of aggression from the dreamer would correlate negatively with scores on the Internal-External Control Scale and that percent of aggression toward the dreamer would correlate positively with scores on this scale. Further, it was hypothesized that these relationships would apply generally to both males and females. Ten specific predictions were made in reference to these hypotheses.

In order to test the predictions, 529 current night dreams collected from 24 male and 15 female college students were scored for aggression by means of the Hall-Van de Castle (1966) Aggression Scale. Males and females were then compared on the six measures of aggression which were computed from raw dream scores. The t-Test was used in making these comparisons. Predictions in reference to the relationship between aggression in reported dreams and personality measures were tested by correlating the six measures of aggression with scores on the Welsh Anxiety and Repression Scales (Welsh, 1956) and the Internal-External Control Scale (James, 1957). These comparisons were made by means of the Pearson Product-Moment correlation technique.

In general, the results of the study may be summarized as follows:

1. When males and females were compared on the six measures of aggression computed from their dreams, none of the mean differences were found to be significant.

2. Six of the 10 correlations comparing aggression scores computed from dreams with personality test scores were in the direction predicted.
Four of eight correlations comparing aggression scores with scores on the Welsh Anxiety and Repression Scales were in the direction predicted. Only one, however, was significant. Both correlations comparing scores representing direction of aggression in dreams with scores on the Internal-External Control Scale were in the direction predicted and were significant ($p = .05$). It was concluded that the results of this study do not decisively support the hypothesis that there is a relationship between aggression in dreams and measures of anxiety and repression. The results do support the hypothesis that there is a relationship between measures representing direction of aggression in dreams and scores on the Internal-External Control Scale.

3. A post hoc analysis of the data revealed considerable variation both within and between the sexes in regard to the relationship between aggression in dreams and personality measures. It is clear that these relationships do not apply generally to both sexes as was predicted. Anxiety is positively related to percent of dreamer involvement in aggression for females, whereas for males, anxiety is positively related to percent of nonphysical aggression and negatively related to percent of physical aggression. It was concluded that dreams reflect culturally accepted modes of handling aggression. When the dreamer moves away from these accepted modalities, the result is a corresponding increase in anxiety.
REFERENCES
REFERENCES


James, W. Internal versus external control of reinforcements as a basic variable in learning theory. Unpublished doctoral dissertation, Ohio State University, 1957.


APPENDIX
Table 6

Raw Dream Scores For Each of 24 Male Ss

<table>
<thead>
<tr>
<th>No. of Dreams Reported</th>
<th>No. of Aggressive Dreams</th>
<th>No. of Aggressive Incidents</th>
<th>Dreamer Involved Aggressions</th>
<th>Directed From Dreamer</th>
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<th>No. of Physical Aggressions</th>
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Table 8

Scores on the Welsh Anxiety and Repression Scales and the Internal-External Control Scales for Each of 24 Male and 15 Female Ss

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VITA

Minos Belden Fletcher was born on July 27, 1929 at Moscow, Tennessee. After completing the 4th grade, he moved to Lenoir City, Tennessee, where his education was continued in the public schools through the 10th grade. In the summer of 1945, he moved to Knoxville, Tennessee, and was graduated from Knoxville High School in June of 1947. The following September, he enrolled in Carson-Newman College, Jefferson City, Tennessee, where, in June of 1951, he received the Bachelor of Arts degree with a major in English.

From June, 1951 through March, 1955, he served on active duty with the United States Air Force as an Intelligence Technician and was honorably discharged in the enlisted rank of S/Sgt. For three years following separation from military service; he was employed by two Knoxville, Tennessee, industrial firms--Fulton Sylphon Company and Rohm & Haas Company. In 1958 and 1959, he was medical detail and sales representative in the Knoxville area for Parke-Davis Pharmaceutical Company.

In September of 1960, he enrolled in Midwestern Baptist Theological Seminary, Kansas City, Missouri, where, in June of 1963, he received the Bachelor of Divinity degree with a major in theology. After serving 4 years in the active pastorate, he entered the Graduate School of The University of Tennessee where, in August of 1970, he received the Doctor of Education degree with a major in Educational Psychology and Guidance.
From July, 1969 through June, 1970, he served an internship in the Department of Psychiatry at the University of Virginia Hospital, Charlottesville, Virginia.

He is married to the former Jean Lebow of Knoxville, Tennessee.