Journal of Personality and Social Psychology
1986, Vol. 50, No. 3, 612-623

0022-3514/86/$00.75

Dream Content and Self-Reported Well-Being Among Recurrent Dreamers, Past-Recurrent Dreamers, and Nonrecurrent Dreamers

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A multivariate comparison was made among 67 recurrent, past-recurrent, and nonrecurrent dreamers. The participants twice completed measures of psychological well-being, and they also collected a 14-day sample of their own remembered dreams. Multivariate and discriminant analyses showed that recurrent dreamers scored low on psychological well-being and reported more negative dream content. Past-recurrent dreamers scored high on psychological well-being and reported more positive dream content. A single psychometric dimension, which we call *psychological well-being*, discriminated among the three groups over the entire set of psychological well-being and dream content variables. The results support analytical psychology theory's assertion of the relation between dreaming and psychological adaptation.

Just over 30 years ago Aserinsky and Kleitman discovered that "regularly occurring periods of eye motility (i.e., rapid eye movements or REMs) are concomitant with reports of dreaming" (Aserinsky & Kleitman, 1953, p. 273). This discovery linked objective psychophysiological measures to the subjective experience of dreaming. It catalyzed the empirical study of both dreams and dreaming sleep. Much has been done since then to integrate clinical dream theory and experimental sleep laboratory investigations into a clearer picture of "the mind in sleep" (Arkin, Antrobus, & Ellman, 1978, p. iii).

Dreams have been defined as "high frequency cognitive activity (occurring in sleep) with distinctive properties" (Webb & Cartwright, 1978, p. 237). The key characteristic of dreams is the experience of vivid, symbolic-representational imagery, sometimes described as "hallucinatory" in quality in which the dreamer may be both active participant and observer (Bakan, 1978; Fiss, 1979; Foulkes, 1978; Greenberg, 1981; C. S. Hall, 1953, 1966; C. S. Hall, Domhoff, Blick, & Weesner, 1982; Rechtschaffen, 1978; Webb & Cartwright, 1978). Over the course of a night's sleep an average adult dreams at least once each 90 min (5–6 times). The duration of these dreaming periods increases over the course of the night, from about 5–10 min at the end of the first 90-minute sleep cycle to about 45 min at the end of the last (Cohen, 1979). The average morning recall of dreams is consistently reported as about one for every two night's sleep (Webb & Kersey, 1967).

This investigation is a study of remembered dreams and of the nature of the relation between dreams and psychological self-report (Callois, 1966, pp. 23, 27).

Recurrent Dreams

> Perhaps one of the best arguments for both dream organization and dream isolation is the recurring dream. It seems most unlikely that disorganized brain activity could produce the same dream over intervals of days, weeks, or even longer. (Rechtschaffen, 1978, p. 107)

Though dreaming is a mental state noteworthy for the diversity and variation of its thematic content, one kind of dream—the recurrent dream—is an exception. Recurrent dreams (as distinguished from dreams possessing some repetitive element or motif) are distinguished by their complete repetition as a remembered experience. There is consensus that recurrent dreams "repeatedly challenge the dreamer with the vital problems of his life, until these are confronted and solved" (Weiss, 1964, p. 23). Fosshage and Lowe (1978, p. 255), in a comparative survey of modern and contemporary clinical dream theories note "there is agreement that recurrent dreams indicate no movement in the . . . area of personality." The goal of this study was to learn whether, as has been suggested in the literature, the occurrence of a recurrent dream signifies the presence of an unresolved psychological conflict and a corresponding lower level of reported psychological well-being.

The clinical and sleep laboratory literature does not include even approximate estimates of the incidence of recurrent dreams for either general or specific populations. What does appear is passing mention that "dreams that recur periodically have often been observed" (Freud, 1900/1931, p. 44). Clinical researchers have studied links between recurrent dreams and specific experiences or conditions including traumatic war experiences (Kardiner, 1941; Kardiner & Spiegel, 1947), Alzheimer's syndrome (Altschuler, Barad, & Goldford, 1963), and the approach

This study was completed in partial fulfillment of the requirements for the doctoral degree at McGill University by Ronald Brown under the supervision of Don C. Donderi. This research was partially supported by a grant from the McGill Faculty of Graduate Studies and Research for preparation of the thesis and by a grant to Don C. Donderi from the Natural Sciences and Engineering Research Council of Canada.

The authors gratefully acknowledge the help of the McGill Information Office in obtaining the participant sample, and the help of the participants whose diligence and interest were essential to the research. We thank Rhonda Amsel for her help in planning the statistical analyses.

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and onset of epileptic seizures (Epstein, 1973). There is some mention in the clinical literature of "characteristic" (i.e., repetitive) themes in the reported dream content of persons suffering from depression or some other neurotic disturbance (cf. Beck & Ward, 1961; Cartwright & Romanek, 1978; Renik, 1981). With the exception of the study by Cartwright and Romanek, this literature is largely impressionistic in its description of the predominantly negative thematic, affective and interactional content of the depressed individuals' recurrent dreams, and the apparent connection between the onset of the recurrent dream and the appearance of the psychological disturbance.

Behavior therapy (systematic desensitization) has been used to reduce waking anxiety associated with the experience of a recurrent dream (Cavior & Deutsch, 1975; Geer & Silverman, 1967; Shorkey & Himle, 1974; Silverman & Geer, 1968). In none of the studies, however, has there been a clear elucidation of the nature and function of recurrent dreams, nor has there been an empirical assessment of the hypothesis that they "repeatedly challenge the dreamer with the vital problems in his life, until these are confronted and solved" (Weiss, 1964, p. 23).

Klein et al. (1971) attempted to "capture" recurrent dreams experimentally by observing self-reported recurrent dreamers in the sleep laboratory. Only one recurrent dream was dreamt throughout the study, and the researchers were unable to arrive at any empirically based conclusions about the nature or significance of recurrent dreams. Klein et al. did speculate that the experience of a recurrent dream "may result from a failure of (psychological) adaptation," on the part of the dreamer (Klein et al., cited in Fiss, 1979, p. 53).

More data on the recurrent (or "repetitive") dreams of normal individuals—people not experiencing a recurrent dream subsequent to trauma (e.g., war) and who are from a nonpsychiatric population—were obtained in a study by Cartwright and Romanek (1978). Though their data were weakened by the retrospective method used, Cartwright and Romanek did report a predominantly negative affective and experiential tone of the typical recurrent dream. Cartwright and Romanek hypothesize that recurrent dreams "may be important landmarks in the defining of the self developmentally, and their recurrence indicators of issues of competence under review" (Cartwright & Romanek, 1978, p. 174).

In a later paper Cartwright further develops this theme in asserting that "repetitive dreams seem to originate at different periods around points of stress . . . if this theme is supported in further work, the theme of a repetitive dream might be a good indicator of the characterological way in which an adult trauma (psychological conflict) is perceived" (Cartwright, 1979, pp. 135–136). Cartwright adds that the cessation of a recurrent dream may represent resolution of the conflict and "be a useful indicator of an improved ability to cope with the waking situation" (Cartwright, 1979, p. 136). This hypothesis regarding previously recurrent dreamers and a relative elevation in psychological well-being, first offered 30 years earlier by Jung, has an important place in our research.

Jung considered recurrent dreams "of specific importance for the integration of the (overall) psyche" (Jung, cited in Adler, 1973, p. 93). Recurrent dreams point to a psychological conflict "that has been in existence for a long time and is particularly characteristic of the (conscious) attitude of the dreamer" (Jung, cited in Adler, 1973, p. 93). Recurrent dreams indicate stasis in an important aspect of psychological development, and they signal that the conflict remains unresolved. Jung thought that once the focal psychological or personality conflict was resolved, the recurrent dream would cease (Jung, cited in Mattoon, 1978, p. 84). Thus, although the experience of a recurrent dream is hypothesized to be related to psychological distress (i.e., neuroticism), the cessation of a recurrent dream was held to signal an elevation in psychological well-being. However, Wozny (personal communication, 1980) cautions that within Jungian theory the cessation of a recurrent dream does not necessarily mean an immediate increase in perceived well-being. The change in well-being may take a year from the end of the recurrent dream.

Archetypal Dreams

According to Jung's theory, some dream content reflects the activity of a theoretical personality level called the *collective unconscious.* Specific archetypal images are supposed to represent particular themes in the unconscious personality structure of the dreamer. Archetypal dream content is characterized in general by bizarre imagery, heightened affective tone, and irrational sequences of events (Cann & Donderi, 1986; Kluger, 1975). Cann and Donderi demonstrated that dreams reported by people with low neuroticism scores have greater archetypal content. Because recurrent dreams are considered to be an indication of neuroticism, recurrent dreamers would, on the basis of Cann and Donderi's data, be expected to produce less archetypal dream content than nonrecurrent dreamers or past recurrent dreamers.

Hypotheses

The goal of the research reported here was to study the empirical relationships among measures of dream content and measures of psychological well-being in recurrent dreamers, past-recurrent dreamers, and nonrecurrent dreamers. The experimental hypotheses are organized around the main theoretical postulate that recurrent dreams serve to indicate stasis—and the existence of conflict—in some important aspect of personality.

The principal experimental hypotheses are

1. Recurrent dreamers will achieve scores on measures of psychological well-being which indicate elevated neuroticism, anxiety, dysphoric affect, life stress, somatic distress, and diminished personal adjustment.

2. Content analysis of the dreams of recurrent dreamers will produce low ratios of affiliative/aggressive social interactions, positive/negative affect, and success and good fortune/failure and misfortune experiences, and higher frequencies of anxiety and hostility-toned content.

3. Archetypal dream content (as operationalized by Kluger, 1975, and Cann & Donderi, 1986) will be significantly less prevalent in the recurrent dreamers' dreams.

4. Past-recurrent dreamers will achieve scores on the measures of psychological well-being indicating diminished neuroticism, anxiety, dysphoric affect, life stress and somatic distress, and increased personal adjustment.

5. Content analysis of the dreams of past-recurrent dreamers will produce higher ratios of affiliative/aggressive social interactions, positive/negative affect, success and good fortune/failure

and misfortune experiences, and lower proportions of anxiety and hostility-toned content.

6. Archetypal dream content will be significantly more prevalent in past-recurrent dreamers' dreams.

7. Dream archetypality and waking neuroticism will be inversely related for all participants irrespective of group membership.

Method

Subjects

The recurrent dream group was composed of people who were currently experiencing a recurrent dream (as defined earlier) over a period of at least 6 months in duration. The past-recurrent dream group was composed of people who had experienced a recurrent dream in adulthood of at least 6 months duration but for whom the dream had ceased to recur over a minimum period of 1 year. The nonrecurrent dream group was composed of people who reported never having experienced a recurrent dream in adult life.

Participants were recruited by newspaper and radio announcements in Montreal. Each announcement mentioned that "this research will be investigating possible connecting links between peoples' remembered dreams and their current life situations," and "in addition to those now experiencing a recurrent dream, individuals are welcome to participate who have never had such a dream as well as those who may have had such a dream in the past." Potential participants were made aware of the type, length, and general conditions of participation and that the confidentiality of their participation would be maintained. They were promised that no individuals would be identified and that no individual data would be published. Two hundred fifty people called to express interest in the research. One hundred twenty-one met the researcher and received the protocols. Seventy-six completed all three phases of the research.

Procedure

Each participant completed three sets of research protocols. The first set contained a Dreaming Questionnaire and six measures of psychological well-being.[1] The second set required recording on prepared cards all dreams remembered each day for 14 consecutive days. Participants were instructed to record on each dream record card the following information: the date, the dream as completely as they could recall it, its major theme and feelings, the wholeness and clarity of the dream recollection, and the time elapsed between waking and recording the dream. The third set of protocols included a readministration of the Dreaming Questionnaire and a readministration of the six well-being measures. The Symptom Check-List 90-R (SCL90-R; Derogatis, 1977) was included only in the third set.

All phases of the research were completed by participants in their homes. Post-participation debriefings held with each participant indicated excellent compliance with the experimental tasks. Omissions did occur, however, and included: failure to complete each of the psychological tests (2 people, one test each); failure to complete one part of the experiment (one person, Part III); Parts I, II, and III out of sequence (one person, excluded); and delays in proceeding from I to II and from II to III (10 people, with lapses ranging from 7 to 21 days). The study required about 18 days per participant (1–2 evenings for each of Parts I and III, and 14 days for Part II). Seventy-four participants completed and returned the research protocols within 28 days. Two others took 40 and 52 days, respectively, to return the protocols.

Variables

Both the psychological tests (Parts I and III) and the dream reports were self-report data. Self-report data—in the form of questionnaire measures, behavioral and personality scales, reports of private experience, and clinical self-monitoring—are increasingly used in psychological research (Hersen & Bellack, 1981; Shelton & Ackerman, 1971; Twentyman & McFall, 1981). Self-report measures have been used in behavior therapy interventions (Nelson, 1977; Thomas, 1974), social behavioral research (Twentyman & McFall, 1981), pain recognition (Hilgard, 1969), and social psychological research (Walsh, 1967).

Measures of Psychological Well-Being

Neuroticism. The Eysenck Personality Inventory (EPI) Neuroticism scale (Eysenck & Eysenck, 1968) is a 24-item forced-choice instrument which measures "emotional lability and overreactivity, vague somatic upsets such as headache, digestive troubles, insomnia, backache, anxieties, and other disagreeable emotional feelings" (Eysenck & Eysenck, 1968, p. 6). Test–retest reliability coefficients for Forms A and B of the Neuroticism scale range from .84 to .97, at 9-month intervals. Test–retest reliabilities for Forms A and B combined range from .84 to .94. Split-half reliability (Spearman-Brown coefficient) ranges from .87 to .93.

Anxiety. The State-Trait Anxiety Inventory Scale (STAI; Spielberger, Gorsuch, & Lushene, 1970) is a 20-item self-report instrument which measures the general tendency to experience, "subjective, consciously perceived feelings of tension, apprehension, and heightened autonomic nervous activity" (Spielberger et al., 1970, p. 3). Spielberger et al. report test–retest reliability coefficients of .73 to .86 in male subjects, and report .76 to .77 in female subjects. They report correlations of the STAI scale with other major anxiety measures—Taylor's (1953) Manifest Anxiety Scale, Zuckerman and Lubin's (1965) MAACL Anxiety Scale, and the IPAT Anxiety Scale (Krug, Scheier, & Cattell, 1976)—ranging from .52 to .80 for women, and from .58 to .79 for men.

Depression. The Beck Depression Inventory (BDI; Beck & Beamesderfer, 1974) assesses affective, behavioral, cognitive, and somatic symptoms of depression and has as its basic assumption that "the number, frequency, and intensity of depressive symptoms are directly related to the depth of depression" (Mayer, 1976, p. 365). Miller and Seligman (1973) report the test–retest reliability of the BDI as .74 (n = 30, 3-month interval). Split-half reliabilities range from .53 to .93 (Beck & Ward, 1961; Weckowitz, Muir, & Cropley, 1967). The BDI is correlated with other measures of depression, including the MMPI D-Scale, (Dahlstrom, Welsh, & Dahlstrom, 1970) the Hamilton Rating Scale of Depression (Hamilton, 1960), and the Zung Depression Scale (Zung, 1965). The correlations range from .62 to .73 (Mayer, 1976).

General psychopathology symptomatology. Derogatis describes the General Symptom Index (GSI) of the Symptom Checklist as "an indicator of the current level or depth of individual psychopathology," (1977, p. 12). He reports test–retest reliability coefficients for the 9 constituent scales which comprise the GSI. They range from .78 to .90 (n = 94, 1-week interval). Split-half reliabilities for the 9 GSI subscales range from .77 to .90 (n = 219). The GSI is highly correlated with the Global Health Scale of the Middlesex Hospital Questionnaire (Crown, 1974), r = .92, n = 130, and by subscale correlations with counterpart measures from the MMPI, r = .40 to .75, n = 119 (Boleloucky & Horvath, 1974).

Life-event stress. The Life Events Inventory (LEI; Paykel & Uhlenluth, 1972) is a 61-item list of life events from Holmes and Rahe's (1967) 43-item Schedule of Recent Experiences. The LEI items range from the pleasant (wanted pregnancy, promotion, becoming engaged) to the very unpleasant (death of spouse, major financial difficulties, divorce). Respondents check each life-event item occurring in the past 6 months. The score is based on the total number of events checked. Interscale correlations with other major life-event stress scales indicate that the LEI possesses good concurrent validity (Monroe, 1982; Paykel, 1979; Paykel & Tanner, 1976).

[1] Copies of this questionnaire are available from Don C. Donderi.

Personal adjustment. The Personal Adjustment scale of the Adjective Check-List (ACL; Gough & Heilbrun, 1965) comprises 36 items from the 300-item ACL that are differentially checked by the respondent as *self-referring.* Test–retest reliability coefficients of the Personal Adjustment scale are .79 for women and .76 for men (Gough & Heilbrun, 1965). Masterson (1975) reports evidence supporting both the construct and concurrent validities of the scale.

Measures of Recalled Dream Content

Dream report content analysis was used to study the relation of dream content to psychological states. Two well-validated and formulated content analysis systems (cf. Winget & Kramer, 1979) are those of C. S. Hall and Van de Castle (1966) and Gottschalk and Gleser (1969). One of the few scales designed to study analytical psychology dream theory is that of Kluger (1975). Scales from each of these systems were used, and are described below.

Friendly and aggressive social interactions scale. C. S. Hall and Van de Castle define friendly interactions as "deliberate, purposeful attempts by one (dream) character to express friendliness to another" (1966, p. 77). Five classes of friendly social interactions are rated, ranging from mildly friendly (e.g., opening a door or greeting) to a very friendly (e.g., expressing love or performing a major act of assistance). Interrater scoring coefficients (all 5 classes combined) are .91. Agreement for frequency of friendly interactions per dream report is 70% (C. S. Hall & Van de Castle, 1966, Van de Castle & Holloway, 1970). Aggressive interactions are "deliberate, intentional acts of one character to harm or annoy some other character" (C. S. Hall & Van de Castle, 1966, p. 69). Eight classes range from mildly aggressive (e.g., casting a hostile glance) to extremely aggressive (e.g., killing). Interrater scoring reliability is .97, and the percentage of agreement for frequency per dream report is 72%.

Because sexual interactions are almost always friendly or aggressive, C. S. Hall and Van de Castle's (1966) Sexual Interactions scale was collapsed across the Friendly and Aggressive Social Interactions scales. The sexual interactions scale measures five classes of sexual activities ranging from having sexual thoughts to sexual intercourse. Reliability and validity data is 100% interrater agreement for total frequency/dream, and 64% agreement for each of the 5 categories (C. S. Hall & Van de Castle, 1966). The variable was the ratio of friendly/aggressive interactions, F/A, because the research hypotheses predicted group differences in the ratio of friendly/aggressive dream content.

Positive and negative affect. The Emotions scale of C. S. Hall and Van de Castle (1966) measures dream affect. Happiness encompasses all affect from the mildly pleasant to the exultant. Anger, apprehension, confusion, and sadness cover the range of negative affect. C. S. Hall and Van de Castle report interrater reliability for happiness as .76 with 95% agreement for frequency per dream report. Reliability is .76 for the combined four classes of negative dream affect with 75% agreement on frequencies per dream report (C. S. Hall & Van de Castle, 1966). Because the research hypotheses were stated in terms of relative proportions of positive/negative dream content, the ratio of the two classes of dream affect was used as the variable.

Success, good fortune—failure, and misfortune experiences. Two C. S. Hall and Van de Castle content categories—achievement outcome and environmental press—measure four types of event outcomes. Achievement outcome measures success (expenditure of energy and perseverance in pursuit of a goal, resulting in goal attainment) or failure (expenditure of energy and perseverance in pursuit of a goal resulting in failure to attain goal). Environmental press is what C. S. Hall and Van de Castle (1966) call two other classes of outcomes: Good fortunes—"something beneficial happens to a character that is completely adventitious . . . over which no one has control" (p. 105); and misfortunes—"any mishap, adversity, harm, danger or threat which happens to a character as a result of circumstances over which he has no control" (p. 103). Interrater scoring reliabilities for the four classes are success, 75%; good fortune, 83%; failure, 100%; misfortune, 71%.

The variable in this research was the ratio of positive outcomes (success and good fortune) to negative outcomes (failure and misfortune). This was done to enable comparison of the dream groups with respect to the proportional representation of positive- versus negative-toned dream content.

Anxiety-toned content. Gottschalk and Gleser's (1969) Anxiety scale assesses six classes of dream anxiety from mild (nonspecific) to extreme (death anxiety). When the six classes of anxiety-toned content are collapsed and scored as event frequency per dream report, interscorer reliability is .90. This was the procedure used in this research.

Dreamer-involved hostility. Three of Gottschalk and Gleser's (1969) content analysis scales measuring hostility are hostilities directed inward (hostilities directed at the dreamer from other dream characters); hostilities directed outward-overt (hostilities by the dreamer against other dream characters); and ambivalently-directed hostility (hostility by the dreamer against himself or herself). Interscorer reliability coefficients reported by Gottschalk and Gleser are .83, .83, and .87 to .96, respectively. These three scales were added together to measure dreamer-involved hostility (DH).

Dream archetypality scale. Kluger's Archetypality Scale (Kluger, 1975) was designed to test analytical psychology dream theory. Archetypal dream content refers to material from the nonpersonal or "collective unconscious" elements of the personality. Archetypal dream content is more affective, less rational, and less like everyday experience than is everyday dream content. Kluger's Archetypality scale combines ratings from three subscales (affect, rationlity, and everydayness) into an overall rating of dream report archetypality. An archetypal dream report is one which achieves ratings above the midpoint on each of the three subscales. Interrater reliability coefficients for the three archetypality subscales are .66 to .94, .77 to .95, and .82 to .97, respectively (Cann & Donderi, 1986; Faber et al., 1978, 1983, Kluger, 1975).

A fourth Kluger Archetypality Scale, Presence of Mythological Parallel (Kluger, 1975), was not used because it has not been operationalized and validated. Kluger originally rated dreams for the presence of themes found in the literature of mythology, because of the theoretical equivalence of archetypal dream material from an individual "collective unconscious," and the archetypal material generated individually and transmitted socially in the form of legends, myths, and fables. However we, as well as Cann and Donderi (1986), found it impossible to obtain raters with the necessary background in ethnology or comparative literature to make the "mythological parallels" judgment. Cann and Donderi (1986) found that the ratings on this scale were in fact highly correlated with the ratings on the three other scales which were evaluated in the present study.

Covariates

Nine covariates were used. Four are self-explanatory: age, years of education, dream report frequency (over the 14-day dream collection period), and dream report length (mean number of words). The other five are described below.

Socioeconomic status (SES). Blishen and McRoberts (1976) developed a hierarchical ordering of the 500 most common occupations among Canadians according to socioeconomic status. SES rankings were based on subjects' reported occupations.

Social desirability. The Marlowe-Crowne Social Desirability Scale (SDS; Crowne & Marlowe, 1964) is a 33-item measure of the inclination to present oneself in a 'socially desirable' light. The SDS has test–retest reliability coefficients of .78 to .89, and split-half reliabilities of .74 to .90 (Crowne & Marlowe, 1964). The SDS assesses defensiveness (regarding unbiased self-representation) as much as inclination to respond in "socially desirable" ways (Ramaniah, Schill, & Leung, 1977; Ramaniah & Martin, 1980).

Defensiveness. The L-scale is a 14-item subscale of the Eysenck Personality Inventory (Eysenck & Eysenck, 1968) which measures consistency in reporting undesirable behaviors. Eysenck and Eysenck report test–retest reliability coefficients ranging from .67 to .78. Recent data indicate it possesses less reliability than the EPI (Pryke & Harper, 1977; r = .47 to .59). These authors recommend use of the L-scale along with another "defensiveness" or "social desirability" measure.

Psychological mindedness. The Intraception (Psychological Mindedness) scale of the Adjective Check-List is a 30-item measure of inclination "to engage in attempts to understand one's own behavior" (Gough & Heilbrun, 1965, p. 19). Test–retest reliability ranges from .37 to .71 (Gough & Heilbrun, 1965; Masterson, 1975). Concurrent validity is reported as good by the scale's authors and by Masterson (1975). Both also present evidence for the scale's construct validity.

Dream activities. C. S. Hall and Van de Castle's (1966) Activities scale was also used as a covariate.

Age, years of education, and socioeconomic status were used as covariates in order to reduce variability on the dependent measures and to help assure that the results were independent of these demographic variables. Social desirability, defensiveness, and psychological mindedness were used as covariates to insure that variation on the dependent measures was not confounded either with subjects' efforts to please the researcher or with subjects' efforts to expressly understand their own behavior. Dream report frequency, dream report length, and dream activities were used as covariates in order to assure that dependent measures were not confounded with fluency of verbal dream report or with simple differences in the overall dream activity level which was reported.

Dream Report Procedures

There is considerable debate concerning the advantages of home or laboratory collection of dream reports (Cartwright & Kaszniak, 1978; Cohen, 1979; Dement, Kahn, & Roffwarg, 1965; Domhoff & Kamiya, 1964a, 1964b; Okuma, Fukuma, & Kobayashi, 1975; C. S. Hall & Van de Castle, 1966). A structured home dream recording method was used after subjects had received instructions regarding the conditions for enhanced dream recall. This was done for the following reasons:

1. Home dream reports contain fewer references to the experimental situation (Cohen, 1979; Okuma et al., 1975).
2. Even after many adaptation nights, dream reports collected in sleep laboratories show diminished thematic, affective, and social interaction ranges (Cartwright & Kaszniak, 1978; Cohen, 1979; Okuma et al., 1975).
3. Home dream recording is much less affected by social desirability or self-serving bias (Domhoff & Kamiya, 1964a, 1964b; Okuma et al., 1975).
4. Dream report recall rates in home dream studies can reach or exceed one per person per night (Domhoff & Kamiya, 1964b).
5. Home dream recording is consistently perceived as less intrusive and less stressful than the traditional sleep laboratory paradigm (Cohen, 1979; Domhoff, 1969; Okuma et al., 1975).

Scoring

All participant data was coded before analysis. Names appeared only on the signed 'Informed Consent/Confidentiality of Participation' form. The well-being measures from Parts I and III were scored blind by the researcher according to standard criteria supplied in the scoring manuals for each. Standardized scores (t or percentile) were obtained for each measure of well-being. Raw scores averaged over the two test administrations were used for the Social Desirability Scale and the Beck Depression Inventory. The average of the scores from first and second administration was used for all of the self-report measures which were administered twice. Dream reports were content analyzed by two research assistants. Each was trained by the researcher in the content analysis scales over a 6-week period until criterion performance was attained on each of the scales. The dream reports used for training were obtained in a pilot study and were comparable in length, thematic variation, and content range to the experimental data. Once content analyses of participants' dream reports were begun by each rater, however, each had no further contact with the researcher or with each other. The dreams were scored blind by each assistant. Each rater applied content analytic scales for each of the 17 content categories. Interrater reliabilities for the content analyses of all dream reports (n = 849) appear in Table 1. Percent agreement was used as a measure of interrater reliability for two reasons (C. S. Hall & Van de Castle, 1966): (a) where mean frequencies of events are low, Pearson product-moment coefficients are not meaningful and (b) the percent agreement statistic is tolerant of situations commonly found in content analysis where ratings are parallel, but one rater consistently under- or overrates with respect to the other.

Table 1
Interrater Reliabilities of Dream Report Content Analysis

Dream content category	Percent agreement[a]
Characters	90.2
Activities	83.9
Friendly interactions	85.5
Aggressive interactions	90.6
Positive emotions	90.5
Negative emotions	86.1
Success experiences	93.6
Failure experiences	91.1
Good fortunes	93.0
Misfortunes	84.8
Anxiety	88.1
Dreamer involved hostilities	95.6
Archetypality	95.6
Affect	84.6
Rationality	78.9
Everydayness	77.7

[a] Percent agreement = agreement between Raters 1 and 2, with respect to event frequency per content category per dream report, for 849 dream reports.

Results

Population Demographics and Group Covariate Comparisons

Although 76 people completed all phases of the research, only 67 were successfully classified as a recurrent dreamer, past-recurrent dreamer, or nonrecurrent dreamer. The rest fell in between the established criteria: their past recurrent dreams had ended within the year or their answers made it unclear whether or not they experienced recurrent dreams.

Table 2 summarizes the demographic and covariate variables for the entire sample and for each experimental group. The sample was above average in education and slightly above average in socioeconomic status (Blishen & McRoberts, 1976). It was well within normal population norms on social desirability, defensiveness, and psychological mindedness.[2] Of the 67 participants, 57 were women.

Analyses of variance of the demographic variables demonstrated only one significant group difference. Nonrecurrent

[2] Population norm data are available from Don C. Donderi.

dreamers reported significantly more dream activities than recurrent dreamers, $F(2, 64) = 4.55$, $p < .05$. This single significant univariate F was the only significant difference among the 27 separate univariate comparisons among covariates (9 covariates × 3 paired comparisons between groups). The total sample was close to the population norms on dreaming frequency and mean dream length. There was a slightly higher proportion of dream activities than the published norms: $M = 6.5$, versus 5.0 in the normative sample. In comparing the recurrent and past-recurrent dream groups, the duration of the recurrent dreams is of interest. For the recurrent group, the mean duration of their recurrent dreams, to date, was 8.2 years ($SD = 8.3$ years). For the past-recurrent dreamers, the previously recurrent dream lasted for an average 3.2 years ($SD = 3.5$ years). This difference is statistically significant, $F(1, 46) = 7.9$, $p < .01$. Also of note is that 45 of the 67 participants (70%) reported experiencing at least one recurrent dream in childhood. (The selection criterion for nonrecurrent dreamers excluded only those people who had experienced a recurrent dream in adult life.) We do not know the average time since the last recurrent dream for the past-recurrent dream group: we know only that it was greater than 1 year for all subjects in this group.

Table 2
Covariate Scores for Each Group and for the Whole Sample

Covariate	Dream group RD ($n = 30$)	PRD ($n = 18$)	NRD ($n = 19$)	Sample summary ($n = 67$)
Age: years				
M	36.5	32.6	30.9	33.9
SD	17.0	11.8	12.1	14.4
Range	20–88	20–58	18–58	18–88
Education: years				
M	14.4	14.0	14.0	14.2
SD	2.2	2.0	2.0	2.1
Range	9–19	10–16	10–16	9–19
Socioeconomic Status: Blishen				
M	170	176	168	171
SD	85	58	51	69
Range[a]	105–394	109–301	106–367	105–394
Defensiveness: EPI				
M	61.8	60.0	62.0	61.4
SD	21.3	24.0	27.0	23.5
Range	21–99	21–99	21–96	21–99
Social Desirability: SDS				
M	14.1	13.3	14.3	13.9
SD	5.8	6.0	5.2	5.6
Range[b]	3–28	4–26	7–22	3–28
Psychological Mindedness: ACL				
M	48.0	52.4	49.6	49.7
SD	10.4	7.7	10.1	9.7
Range[a]	29–65	36–67	30–74	29–74
Dream report frequency: 14 days				
M	13.4	11.6	11.8	12.5
SD	3.5	6.7	6.3	6.8
Range	1–35	4–30	3–25	1–35
Dream report length: No. words				
M	141	136	130	137
SD	60	64	62	61
Range	64–347	53–276	49–314	49–347
Dream report activities: Freq				
M	6.1	6.6	7.5	6.6
SD	1.4	1.7	1.9	1.7
Range	3.7–10	3.2–9.5	4.1–11	3.2–11

Note. RD = recurrent dreamers, PRD = past-recurrent dreamers, NRD = nonrecurrent dreamers, Freq = frequency/100 words. ACL = adjective checklist.
[a] Standard score. [b] Raw score.

Psychological Well-Being Measures

The sample mean scores on each of the psychological well-being measures were close to published population norms. Results for the total sample and the three comparison groups appear in Table 3. Recurrent dreamers always achieved the highest (least adaptive) mean scores, followed by the nonrecurrent and then the past-recurrent dreamers on the five measures of neuroticism or psychological distress. On the measure of personal adjustment, past-recurrent dreamers achieved the highest mean scores and recurrent dreamers achieved the lowest mean scores.

The mean scores of the recurrent dream group on each of the neuroticism measures were above population norms but below neurotic and psychiatric patient norms. The recurrent dreamer group's mean score on personal adjustment was below the population norm. Past-recurrent dream group mean scores were at or below population norms on each of the neuroticism measures and above the norm on the measure of personal adjustment. Nonrecurrent dream group mean scores on all of the measures were at or very near the population norms.

Dream Content Measures

The mean scores over the entire sample on most of the recalled dream content measures were close to population norms. The recalled dreams contained greater proportions of negatively toned thematic, affective and event-outcome content, and a roughly balanced proportion of affiliative/aggressive dream content (Table 4). The sample mean proportions of dream anxiety, dreamer-involved hostility, positive/negative affect, success and good fortune/failure and misfortune experiences, and archetypal/nonarchetypal dream content were close to previously published population norms. The sample produced a higher mean ratio of friendly/aggressive dream report social interactions than previously reported. However, in our data sexual interactions were collapsed across friendly and aggressive interactions. When the ratios from previous normative studies were similarly adjusted, the discrepancy is reduced (i.e., $M = 1.27$ vs. $M = 1.05$; cf. C. S. Hall & Van de Castle, 1966).

The recurrent dream group produced the highest mean scores on anxiety and hostilities involving the dreamer, and the lowest mean ratios of friendly/aggressive, positive/negative affect, success and good fortune/failure and misfortune, and archetypal/nonarchetypal dream content. Compared with population norms,

the past-recurrent dream group reported smaller proportions of anxiety and dreamer-involved hostility, and higher ratios of friendly/aggressive, positive/negative, success and good fortune/failure and misfortune, and archetypal/nonarchetypal dream content.

The nonrecurrent dream group mean dream content ratings were between the other two groups on all of the dream content dimensions. Their group mean dream content and ratings were close to population norms.

Data Analysis

Test–retest reliability data on participants' responses to the psychological well-being measures are presented in Table 5. The mean intertest interval between Parts I and III was 18 days.

Multivariate analysis of covariance was used to assess group differences on the psychological well-being and recalled dream content measures (Hull & Nie, 1981). The Pillais-Bartlett statistic was used because it is robust with respect to possible violations of normality and homogeneity of variance (Olson, 1976, p. 579). A discriminant analysis was carried out to determine whether the three groups differed across the entire set of variables on one or more than one psychological dimension (Klecka, 1975). Univariate analyses of variance were used to assess group differences on demographic and covariate measures, and pooled within-groups correlation matrices were used to assess the intercorrelations among the covariate, psychological well-being, and dream content dimensions.

Three planned multivariate comparisons were carried out: (a) the recurrent dream group versus the past-recurrent dream group; (b) the recurrent dream group versus the nonrecurrent dream group; and (c) the past-recurrent dream group versus the nonrecurrent dream group. The results are summarized in Table 6.

Statistically significant differences exist between recurrent and past-recurrent dreamers on each of the psychological well-being, $F(6, 276) = 5.11$, $p < .001$, recalled dream content, $F(6, 276) = 14.82$, $p < .001$, and combined, $F(6, 276) = 10.79$, $p < .001$, multivariate comparisons. Statistically significant univariate differences exist on all of the univariate well-being measures as well as all of the dream content measures. The minimum univariate, $F(1, 46)$, over all 12 of these measures was 9.61, $p < .004$.

Table 3
Psychological Well-Being for Each Group and for the Whole Sample

Well-being measure	Dream group: RD (n = 30)	PRD (n = 18)	NRD (n = 19)	Sample summary (n = 67)
Neuroticism: EPI				
M	76.5	52.6	62.1	66.0
SD	22.6	27.5	25.6	26.5
Range	18–99	6–95	15–99	6–99
Trait Anxiety: STAI				
M	58.7	47.7	51.3	53.7
SD	10.8	8.3	8.4	10.5
Range[a]	35–75	29–55	42–65	29–75
Depression: BDI				
M	11.3	4.1	7.5	8.3
SD	7.8	2.7	4.2	6.5
Range[b]	1–27	0–9	0–16	0–27
General Symptom Index: SCL				
M	65.7	51.7	59.5	60.1
SD	11.0	7.9	6.2	10.7
Range[a]	37–81	37–68	48–70	37–81
Life-Event Stress: PLEI				
M	6.6	3.5	4.1	4.9
SD	4.1	2.3	2.0	3.4
Range[b]	1–20	0–8	1–9	0–20
Personal Adjustment: ACL				
M	42.6	51.1	48.2	46.5
SD	9.9	9.7	8.4	10.0
Range[a]	23–59	35–64	36–73	23–73

Note. RD = recurrent dreamers, PRD = past recurrent dreamers, NRD = nonrecurrent dreamers, EPI = Eysenck Personality Inventory; STAI = State-trait Anxiety Inventory; BDI = Beck Depression Inventory; SCL = Symptom checklist; PLEI = Paykel Life Events Inventory; ACL = Adjective checklist.
[a] Standard score. [b] Raw score.

Table 4
Dream Content Measures for Each Group and for the Whole Sample

Dream content measure	Dream group: RD (n = 30)	PRD (n = 18)	NRD (n = 19)	Sample summary (n = 67)
Anxiety: Freq				
M	.43	.28	.32	.36
SD	.20	.17	.21	.20
Range	0–.98	0–.57	0–.84	0–.98
Archetypality: Pr				
M	.12	.31	.18	.19
SD	.10	.18	.09	.15
Range	0–.36	0–.63	0–.30	0–.63
Friendly/Aggressive interactions				
M	.63	2.25	1.34	1.27
SD	.77	2.06	.75	1.11
Range[a]	0–3.00	.40–7.00	.40–3.25	0–7.00
Positive/Negative affect				
M	.23	.66	.31	.37
SD	.16	.87	.27	.51
Range[a]	0–1.00	0–2.00	0–1.00	0–2.00
Success, GF/Failure, MF Experiences				
M	.19	1.26	.48	.56
SD	.20	1.43	.28	.88
Range[a]	0–.80	0–2.33	0–1.00	0–2.33
Hostility involving dreamer: Freq				
M	.43	.18	.29	.32
SD	.29	.16	.32	.29

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

Table 5
Test–Retest Reliability: Psychological Well-being and Covariate Measures

Test	Pearson *r*
Well-being measure	
Neuroticism (EPI)	.744
Trait Anxiety (STAI)	.865
Depression (BDI)	.708
General Symptom Index (SCL-90R)	[a]
Life-Event Stress (PLEI)	.895
Personal Adjustment (ACL)	.768
Covariates	
Defensiveness (EPI)	.727
Social Desirability (MCSDS)	.864
Psychological Mindedness (ACL)	.721

Note. EPI = Eysenck Personality Inventory; STAI = State-trait Anxiety Inventory; BDI = Beck Depression Inventory; SCL = Symptom Checklist; PLEI = Paykel Life Events Inventory; ACL = Adjective Checklist; MCSDS = Marlowe-Crowne Social Desirability Scale.
[a] Single administration.

Table 6
Multivariate Analysis of Covariance: Paired Comparisons Among Dream Groups

Comparison and variables	*n*	*F*	*p*
RD versus PRD			
Well-being measures	6	5.11	.001
Dream content measures	6	14.82	< .001
Combined measures	12	10.79	< .001
RD versus NRD			
Well-being measures	6	2.58	.037
Dream content measures	6	10.91	< .001
Combined measures	12	6.31	< .001
PRD versus NRD			
Well-being measures	6	4.55	.004
Dream content measures	6	2.85	.034
Combined measures	12	3.45	.013

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

Recurrent and nonrecurrent dreamers were significantly different on the multivariate measures of well-being, $F(6, 282) = 2.58$, $p < .037$, dream content, $F(6, 282) = 10.91$, $p < .001$, and on the combined measures, $F(6, 282) = 6.31$, $p < .001$. Statistically significant univariate differences exist on the well-being measures of anxiety, $F(1, 47) = 5.37$, $p < .026$, life-event stress, $F(1, 47) = 5.78$, $p < .021$, and personal adjustment, $F(1, 47) = 7.54$, $p < .009$, and on the dream content measures of archetypality, $F(1, 47) = 11.83$, $p < .001$, ratio of friendly/aggressive interactions, $F(1, 47) = 15.22$, $p < .001$, ratio of success and good fortune/failure and misfortune, $F(1, 47) = 24.65$, $p < .001$, and dreamer-involved hostilities, $F(1, 47) = 9.30$, $p < .004$.

Past-recurrent and nonrecurrent dreamers were significantly different on the multivariate measures of well-being, $F(6, 210) = 4.55$, $p < .004$, dream content, $F(6, 210) = 2.85$, $p < .034$, and on the combined measures, $F(6, 210) = 3.45$, $p < .013$. Statistically significant univariate differences exist on the well-being measures of depression, $F(1, 35) = 7.61$, $p < .01$, general symptomatology, $F(1, 35) = 7.85$, $p < .009$, and life-event stress, $F(1, 35) = 21.79$, $p < .001$, and on the dream content measures of archetypality, $F(1, 35) = 6.53$, $p < .017$, and the ratio of success and good fortune/failure and misfortune, $F(1, 35) = 8.42$, $p < .007$.

Only one discriminant function was statistically significant. It accounted for 96.3% of the total variance (Table 7). Thus one dimension accounts for the differences on all 12 of the dependent variables: 6 well-being measures and 6 dream content measures, which discriminate among the recurrent, nonrecurrent, and past-recurrent dream groups. Eight of the 12 dependent variables were significantly correlated with the single dimension defined by the significant canonical discriminant function. The six largest correlations were success and good fortune/failure and misfortune ($r = .62$), ratio of friendly/aggressive interactions ($r = .38$), dream archetypality ($r = .36$), general psychopathology symptomatology ($r = -.33$), trait anxiety ($r = -.32$), and depression ($r = -.27$). The psychological well-being and recalled dream content dimensions each made statistically significant and approximately equal contributions to the single dimension, which we call *psychological well-being*, that discriminates among the three groups.

In summary, the principal results are

1. Recurrent dream group scores on the psychological well-being measures indicated elevated anxiety, neuroticism, depression, life-event stress, and somatic symptomatology, as well as lower levels of personal adjustment, relative to the past-recurrent dream and nonrecurrent dream groups.

2. Content analyses of recurrent dreamers' dream reports yielded significantly smaller proportions of affiliative and positive-toned and larger proportions of aggressive, anxious, and dysphoric dream content, relative to the other two groups.

3. The past-recurrent dream group-mean scores on the psy-

Table 7
Discriminant Analysis: Correlations Between All Variables and Canonical Discriminant Function 1

Variables	Pearson *r*
Psychological well-being	
Neuroticism	−.129
General symptom index	−.330**
Anxiety	−.322**
Depression	−.272*
Life-event stress	−.256*
Personal adjustment	.129
Recalled dream content	
Anxiety	−.130
Archetypality	.362**
Friendly/Aggressive interactions	.383**
Positive/Negative affect	.227*
Success, Good Fortune/Failure, Misfortune	.616***
Dreamer-involved hostilities	−.237

Note. Canonical Discriminant Function 1 accounted for 96.3% of total variance in the discriminant analysis.
* $p < .05$. ** $p < .01$. *** $p < .001$.

chological well-being measures were significantly above the recurrent dream and nonrecurrent dream group scores.

4. The dream reports of the past-recurrent dream group contained significantly higher proportions of friendly/aggressive interactions, positive/negative affect and success and good fortune/failure and misfortune experiences than the reports of the other groups.

5. Archetypal dream content occurred more often in the dream reports of the past-recurrent dream group than in either of the recurrent dream or nonrecurrent dream groups, and less often in the RD group than in either of the other two groups.

6. The three comparison groups were significantly different along one dimension (canonical discriminant function), which was significantly correlated with both psychological well-being and recalled dream content measures. We call this dimension *psychological well-being.*

Discussion

The dream reports of recurrent dreamers differ from those of past- and nonrecurrent dreamers. Recurrent dreamers experienced more anxious, dysphoric, and conflict-oriented dream content than either of the other two groups. The results support three propositions about recurrent dreams as psychological phenomena. The first proposition concerns the dream theory of the depth psychologists (Freud, 1932/1939; Jung, 1948/1974, 1921/1971; Mattoon, 1978) and extends the data of recent empirical recurrent dream studies (Cartwright, 1979; Cartwright & Romanek, 1978; Klein et al., 1971). There is a link between the experience of recurrent dreams and psychological well-being. Recurrent dreamers experience psychological conflict. The conflict is apparently not so great as to compel them to seek help from a mental health professional. Subjects completed a questionnaire item asking whether they were receiving or had ever received therapy from a mental health professional. No subject reported receiving help either currently or previously. However, the data indicate a systematic and statistically significant deficit across the entire range of well-being measures. The second proposition relates to recurrent dreamers' increased dysphoric and conflict-oriented dream content. Though previous research had described the negative tone of recurrent dreams, we now know that there is negative affect and experience in recurrent dreamers' everyday dreams. This supports the widely held belief that remembered dreams are related to current psychological health (e.g., Cohen, 1979; Fiss, 1979; J. A. Hall, 1977; Kramer, 1969; Kramer & Roth, 1979). The third major proposition is related to past-recurrent dreamers. Maintained cessation of a previously recurrent dream is correlated with psychological well-being. Past-recurrent dreamers achieved well-being and dream content scores which were significantly higher than recurrent dreamers, statistically higher than the nonrecurrent dreamer control group, and higher than the population norms on almost all the well-being and dream content measures.

Analytical Psychology Dream Theory

The second focus of this research was on analytical (Jungian) psychological dream theory. According to Jungian theory, recurrent dreams indicate a psychological conflict "that has been in existence for a long time and is particularly characteristic of (ingrained in) the conscious attitude of the dreamer" (Jung, cited in Adler, 1973, p. 93). That the recurrent dream group had the lowest mean scores on each of the psychological well-being measures—significantly below those of both other dream groups—is consistent with Jung's assertion. The two specific well-being measures most closely correlated with the psychological construct of neuroticism—Eysenck's Neuroticism Scale (Eysenck & Eysenck, 1968) and Derogatis' (1977) General Symptomatology Index—successfully discriminated the recurrent dream group from the other dream groups. Jung asserted that once a focal psychological conflict is resolved, the recurrent dream will cease (Jung, cited in Mattoon, 1978, p. 84), and that cessation of a recurrent dream is accompanied by an elevation in psychological health. One Jungian dream therapist cautions, however, that increased well-being lags behind the actual cessation of the recurrent dream by up to 1 year (Wozny, 1980, personal communication). Past-recurrent dreamers not only had higher psychological well-being scores than the recurrent dream group, but also significantly higher scores than the nonrecurrent dreamer control group as well. These data clearly support the Jungian theory of a relation between the maintained cessation of a recurrent dream and increased well-being.

Archetypality

The dream archetypality scale (Kluger, 1975) gave high interrater reliability coefficients (Table 1) which compare favorably with reliability coefficients from previous studies using Kluger's archetypality scale (Cann & Donderi, 1986; Faber et al., 1978, 1983; Kluger, 1975). Analytical psychology theory asserts that neurotic conflict is coupled with diminished access to the collective unconscious or archetypal elements of personality. Recurrent dreamers should thus experience diminished dream archetypality in their remembered dreams (experimental Hypothesis 3). The results partially support this hypothesis. Recurrent dreamers reported less archetypality than the other groups. This is consistent with Jung's assertion that recurrent dreamers experience a diminution of the flow of psychologically adaptive but ego-alien material. Data of past-recurrent dreamers also support Jung's hypothesis of an inverse relation between dream archetypality and neuroticism. The past-recurrent dream group reported significantly more dream archetypality and significantly lower neuroticism than the other groups. The past-recurrent dreamers' proportion of dream archetypality (31%) exceeded the recurrent and nonrecurrent dreamers (12% and 18%, respectively), and also the previously reported norms (cf. 20–25%) by Kluger and Cann and Donderi. The data support three basic propositions of analytical psychology dream theory. Recurrent dreamers did show significantly greater psychological conflict and neuroticism and significantly less archetypality in their recalled dreams. Previously recurrent dreamers reported significantly less neuroticism, and their recalled dreams contained significantly higher levels of archetypality. And reported neuroticism or psychological distress is negatively correlated across groups with dream report archetypality.

The support for a general theory of dream function is enhanced

because the research participants were a nonpatient and nonclinical sample. But can the results be explained as artifactual group differences? The groups were not significantly different with respect to any of the demographic variables (age, sex, education, socioeconomic status); they were not significantly different on the psychological variables of social desirability, defensiveness, and psychological mindedness; and they did not differ significantly with regard to the number of dreams reported and their mean length. In these nine aspects, the groups were equivalent. Not only that, but all of these variables except sex were used as covariates, and as a result, group mean scores on the dependent measures were adjusted to compensate for individual differences in these variables.

Was the participant sample representative of the general population? The total sample's mean scores on eight of the nine covariate measures were within one standard deviation of published population norms, and the sample mean scores on all the psychological well-being measures and five of the six dream content dimensions were within one standard deviation of the published norms.

Participants were on average better educated that the population norm (M = 14.2 years, SD = 2.1), which happens often in psychological research (cf. Derogatis, 1977; C. S. Hall et al., 1982; Kramer et al., 1971). But only 18% of the participant sample were university students; the usual over-representation of students in psychological research was avoided. The other deviation from published norms was the participants' higher mean ratio of reported friendly/aggressive social interactions in dreams.

Eighty-five percent of the participants were women. One potential confounding variable is the tendency for women to report more psychological distress than men (Beck & Beamesderfer, 1974; Derogatis, 1977; Eysenck & Eysenck, 1968; Gough & Heilbrun, 1965; Spielberger et al., 1970). This would not account for the strong statistical differences between the three comparison groups on the psychological well-being measures. The few sex differences observed in the dream content literature (cf. C. S. Hall et al., 1982; Winget & Kramer, 1979) do not explain the discriminability of the dream groups on the six dream content analysis dimensions. Pooled within-groups correlations of participant sex by covariate, well-being, and dream content dimensions revealed no significant relation.

We conclude that the observed differences in psychological well-being and dream content measures among the three groups are not artifactual, and that the data support the analytical psychology theory of the psychodynamic correlates of recurrent dreams.

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Received April 4, 1985
Revision received June 20, 1985 ■