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A Validity Study of Select Symbol-Referent Relationships Using Semantic Differential Ratings

Stephen Willard
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AN ABSTRACT OF THE THESIS OF Stephen Willard for the Master of Science
in Psychology presented June 3, 1976.

Title: A Validity Study of Select Symbol-Referent Relationships
Using Semantic Differential Ratings.

APPROVED BY MEMBERS OF THE THESIS COMMITTEE:

Walter Klopfer, Ph.D., Chairman

Jim Paulson, Ph.D.

Max Reed, Ph.D.

The present research was conducted in order to develop a method useful for measuring the meaning of symbolic material. Using this method an investigation was conducted to test the validity of several personality theories which ascribe meanings to select symbols.

A summary of the major personality theories dealing with symbolic material was conducted. Each theory was briefly presented with a discussion of the methods employed to determine the meanings of symbols. A set of symbol theory considerations was presented which would suggest the necessary components of an objective investigation attempting to be a validity test of symbol meanings predictions.

A review of validation studies of symbolic material revealed

numerous methodological errors. A number of investigations gathered denotative meanings data, which is deemed inappropriate for testing symbols. Other investigations employed data methods which generated connotative meanings data, but made apparent methodological errors in their data analysis. Free association data studies only included "significant" results from half of the respondents. Semantic differential data investigations included neutral meanings and non-significant meanings in making meanings determinations.

Two highly quantified clinical investigations of intrapersonal symbol systems were reviewed. The case studies presented were few in number and did not include symbols predicted by personality theorists.

The semantic differential technique coupled with a data analysis procedure that preserved individuals symbol-referent relationships was used to investigate the meaning of ten symbols and six theoretical referents. Data from the ratings of twenty male and twenty female Ss was used to test the validity of the symbol-referent relationships predicted by specific theorists.

Results of the study suggested that on a cultural level the following symbol-referent relationships were validated: WIZARD, SWORD and ELEPHANT as FATHER symbols. ASCENT as a symbol for CONSCIOUS. VASE as a MOTHER symbol. HOUSE was a ME symbol for both sexes as was SWORD for male Ss and VASE for female Ss.

Results of the investigation supported the following universal symbol-referent relationships for individuals: ASCENT as a symbol for CONSCIOUS. VASE as a MOTHER symbol for both sexes and a ME symbol for female Ss. WIZARD, SWORD and ELEPHANT as FATHER symbols and SWORD

as a ME symbol for male Ss. HOUSE was a ME symbol for both sexes.

Symbol-referent relationships not validated included COW and WITCH as MOTHER symbols. Symbol-referent relationships not validated because of nonsignificant meanings included DESCEND for UNCONSCIOUS and DRAGON for PROHIBITIONS.

Female Ss did not validate the predicted symbol meanings for masculine or feminine symbols as much at the individual relationships data level as at the cultural level. Male Ss consistently validated both masculine and feminine symbolism predictions at both cultural and individual relationships levels.

Male Ss may employ stereotyped meanings more than do female Ss or may actually use the symbols. Female Ss may not employ the symbols yet may be aware of their meanings at a cultural level. The predominant support of the males for predictions may be indicative of a male orientation of personality theorists in viewing symbols, rather than universal symbolism.

The method employed for validating symbol-referent relationships is believed to be useful to clinicians to differentiate personal, cultural and universal components of symbol meaning.

A VALIDITY STUDY OF SELECT SYMBOL-REFERENT
RELATIONSHIPS USING SEMANTIC
DIFFERENTIAL RATINGS

by

STEPHEN WILLARD

A thesis submitted in partial fulfillment of the
requirements for the degree of

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1976

TO THE OFFICE OF GRADUATE STUDIES AND RESEARCH:

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CHAPTER I

INTRODUCTION

Freud, Rorschach, Jung and other personality theorists developed elaborate theoretical systems to explain the dynamics operating in symbol formation. These clinicians developed techniques for tapping unconscious processes which made possible symbol meaning determinations for themselves and their patients. As these major personality theorists worked with symbols they postulated meanings often associated with specific symbols. Freud, Jung and the others often predicted universal principles of symbol meanings that would hold for most people experiencing a specific symbol. The predictions about specific symbols meanings were used by other clinicians to determine meanings of their patients symbols.

Numerous research studies were conducted in attempts at testing the validity of the specific symbol meanings predictions made by the major personality theorists. The results of these investigations were interpreted as supporting or not supporting the specific symbol predictions and further used to validate or call into question the basic theoretical dynamics of a particular personality theory.

In reviewing the many studies that were designed to test the validity of symbol meanings predictions numerous methodological errors and constraints were discovered which weaken many studies and virtually invalidate some studies. Errors were of two basic types, first errors

of study design and, second, errors in methodology of data analysis.

Many objective research strategies for measuring symbol material did not employ data collection procedures or tap appropriate levels of meaning so as to be able to test the symbols meanings as predicted by the theories. These studies lacked construct validity when compared to the theories they were attempting to test. Other researchers utilized techniques which collected meanings data from unconscious or affective levels, yet when analyzing the data chose to disregard much of the data or did not use appropriate analysis procedures. Results and conclusions from these studies were based upon incomplete, neutral meanings or non-significant meanings data.

This research was conducted in order to determine a method useful for measuring the meaning of symbolic material.

Using this appropriate method, an investigation was conducted to test the validity of some of the symbol-referent connections predicted by personality theorists.

The review of personality theorists clinical empirical investigations of symbol material will provide the framework from which the hypothesized symbol meanings to be tested were developed. The theoretical constructs and methods employed by these theorists to determine the meaning of symbols will be described to assure that the validation method developed is germane to the theories to be tested. To develop appropriate techniques and procedures for measuring symbolic material, a critical methodological review of other investigations of symbolic and projective materials will be made.

The method for symbol meaning measurement developed will be used

to provide data to test the validity of specific symbol-referent relationships. By including both referents and symbols hypothesized by the personality theorist to have the same meaning as the referent on the unconscious, connotative or feeling tone levels, it will be possible to directly test the validity of hypothesized symbol referent relationships.

The finding will be discussed in terms of components of symbolism addressed by symbol theories, including universal, cultural and idiosyncratic aspects of symbol meaning.

CHAPTER II

REVIEW OF THE LITERATURE

Personality Theorists Investigations Of Dream Symbols

Freud, Jung and other clinicians investigating dream symbolism developed numerous techniques for gathering material relevant to dream interpretation. They developed theories describing certain dynamics operating in dream symbolism. Each theorist used his techniques for tapping unconscious processes to gather empirical data which often only supported the theory he had developed. The proof for a symbol theory was found in examples drawn from patients in the clinicians practice.

Freud's (1952, 1953, 1960) theory of dream interpretation was built upon several interlocking tenets. He believed the process of dream formation was an unconscious one in which the dream was a compromise between unexpressed sexual or hostile impulses and the resistance of moral attitudes (censorship). Ego alien impulses were transformed or disguised through symbolism by the processes of dramatization, condensation, displacement and secondary elaborations.

A symbol was defined as something that stood for, represented or denoted something else. Dream interpretation involved developing an understanding of the latent content (repressed content) through exploration of the dream report's symbolized contents (manifest content) by use of the free association technique. Freud believed that symbols

which express unconscious material were often determined by physiologic resemblances. These "true symbols" were universal or constant in meaning. Within the Freudian framework, dream interpretation involved analysis of the manifest dream reports by making structural and functional comparisons between dream symbols and the male and female genital organ symbolized (latent content) (Bartlett, 1932). Freudian theory would predict that the symbol SWORD was a symbol of the male penis by virtue of its structural similarity to the referent. Likewise the symbol VASE would be a feminine vaginal symbol because of its properties of concavity, holdingness and curvature. Proponents of psychoanalytic theory have utilized these interpretative formulations in their practices and writings. Bartlett (1932) and Jones (1948) report the validity of the sexual shape interpretations and offer clinical case evidence for support.

Carl Jung (1957, 1964, 1970) developed theoretical hypotheses which emphasized the purposeful structure and functions of dream symbols. He believed dreams expressed specific unconscious wisdom of a transcendental nature. Dream interpretation was accomplished through understanding the dream contents (dream symbols) by relating them to mythological symbol motifs. Through use of the amplification method, associations of a symbol to many symbol motifs, it was possible to determine both universal and individual meanings of the symbol. The symbol WIZARD would often represent a father symbol as born out by the universality of the wise old men archetype. The symbol WITCH would often carry the meanings associated with the negative aspects of the dreamer's mother. Jungian theory stressed the need for coupling universal (archetypical)

symbol meanings with personal symbols meanings, resulting from each patients individual meanings, experiences, when arriving at a full meaning of the dream symbol. Universal or constant meanings were not attributed to symbols. Dream symbol interpretation was a process whereby the patient related his symbols to archetypical symbol motifs, his personal meanings, and the therapists intuitive clinical interpretative hypotheses.

Roberto DeSoille (1965) noted that spontaneous visual imagery of his clients centered around several symbol motifs and that certain symbol images had associated with them affectual responses that were the same for most people he worked with. He developed a symbolic projective therapeutic technique which he called the Reve Eveille dirige or directed daydream.

The directed daydream images had components that described symbolically the patients relationships with others, his emotional responses toward them, and his feelings toward events in his life. DeSoille developed a framework for interpretation of symbols built upon Jung's (1957) idea of archetypical motifs, used in dreams and fantasy, as expression vehicles for statements of significant life relationships and events of the patient. DeSoille found that the fantasy of ascent was associated and equivalent in meaning to consciousness and that the imagination of descent had meaning equivalent to the person's feelings about the unconscious. Van Den Berg (1962), who used the Directed Daydream Technique, presented clinical cases in support of DeSoille's (1965) hypotheses of symbol motif meanings.

Hanscarl Leuner (1969, Swartley, 1965a) developed a symbol

interpretation technique (Initiated Symbol Projection) also based upon waking symbol productions. Interpretation of symbols was possible through a regression hypothesis, in which childhood perceptions formed the basis for the symbol meanings. Leuner believed that pre-language symbols of the child functioned in most symbols created by adults. His clinical studies validate various symbols used in the initiated symbol projection technique. Leuner found COW often to be a mother symbol and ELEPHANT to be a father symbol.

The Personality Theorists collected symbol meaning information through a variety of techniques (free association, amplification, forced fantasy, directed daydream, initiated symbol projection) from patients in therapy. Using these techniques as a means of generating information which seemed to reveal symbol meaning on small select patient populations as well as with themselves, these clinicians developed comprehensive theories of symbol interpretation and proposed their numerous methods as the means for generating data relevant to symbol meaning determination. Although their findings were clinical-empirical, these investigators were not operating without theory bias. Subjective interpretations could influence their data objectivity in observation, recording and interpretation. Since most of the population from which the symbol data was drawn was a patient population, subtle interactions between the therapist, and patient, consciously or unconsciously may have contributed to self-fulfilling prophecies regarding symbol meanings.

Early clinicians often worked from a theory which provided a comprehensive a priori framework for analysis of symbol meaning. This a priori framework may have forced symbols into meanings that did not

fit the dreamers symbol meaning, but fit the therapists way of understanding or his criterion for "acceptance of meaningful material" in the analysis. These theories of dream symbol meanings yielded conflicting determinations of symbolization. Conflicts of symbol determination from various theories, coupled with the subjective non-concise methods employed for describing symbolization leaves no systematic approach for establishing refutation or validity of theoretical symbolization meaning systems. The conflicts in interpretation at best point to the limited applicability of the theories and call to question the validity of meanings interpretation as claimed by their statements of universality. The need for objective studies of symbol meaning was necessary to provide data useful for validating the symbol theory predictions and the symbol theory systems.

Objective Investigations Of Symbols

Objective research in the area of symbols has been lacking in several areas vital to the objectification necessary for validating symbol theory formulations. Methodological approaches designed to test symbol theory predictions failed to include data collection and analysis procedures that would adequately test the theory, thus the research strategy was not congruent with formulations of the symbol theory. In many of the research procedures investigators failed to consider the nomothetic-idiographic data collection problem. They used average data to validate individuals symbol use and often included personal meanings data into the "error factor". Other researchers have included methodological errors of various kinds in their data analysis methods.

Symbol theory is based upon several hypotheses relevant to the

process involved in symbolization. It is known that symbols are transformed along denotative dimensions. Thus a dream symbol for the penis is denotatively (descriptively, directly) altered becoming a symbol "necktie" (sword, baseball bat, etc). The connotative aspects (feeling tone, emotional meaning, suggested meaning) remain constant and represent the same class of meaning responses associated with penis. This transformation is thought to be made in the unconscious since the conscious is often unable to attribute meanings to the symbols of dreams.

The fact that many investigators of symbol meaning did not collect data from unconscious levels, invalidates their investigations as tests of symbol theory predictions.

Symbol theories as formulated by Freud (1952, 1953, 1960), Jung (1957, 1964) and other clinicians included procedural techniques for differentiating multiple components of symbol meanings. Symbols were seen to have meanings determined through universal components (universal sexual symbolism, archetypes), cultural components (community usage, mythical usage), personal components (trauma fixations, personal meanings), and contextual components (use in dream context, dream themes). In practice symbol meanings were ascribed only after combining the patient's associations to dream symbols and the universal meanings. For Freud, a symbol meaning could only be understood within the patient's understanding of the personal meanings, the cultural sex role expectations and the universal sexual usage hypotheses. Bartlett (1933) stated that a symbol can only be interpreted in "reference to the mental life and personal history of the individual who uses it, or to the social life and the history of the group that employ it." Jung (1957) emphasized

the need for interpreting symbols through archetypical (universal) symbol motif, through the amplifications of the personal history-meaning of the person experiencing the symbol and contextual meanings assigned to the symbol in the dream theme or the series of dreams patterns. Fromm (1951) used a dream symbol interpretation procedure that drew upon universal, socio-cultural, and personal associations as well as uses of the symbol, before ascribing meaning. W. G. Klopfer (1954) described the process necessary for determining the meaning of symbolic Rorschach contents. He emphasized the need for symbolic determination to be based upon inter-related hypotheses, structural hypotheses, hypotheses from other tests and case history material, and a testing-the-limits association method. He warned of making the assumption that the individual was attributing stereotyped characteristics to the symbol he was perceiving.

These procedural techniques allowed the clinician to gather data tapping all dimensions of the patient's meanings associated with the symbol and were in keeping with symbol theories. Objective investigations of symbol meanings failed to gather this type of data or failed to preserve personal meanings when analyzing their findings.

One major problem faced by researchers attempting to objectively test the meanings of symbols was development of a method of data collection and analysis that would tap appropriate aspects of symbol meaning.

Most investigations conducted in attempts to test Freudian predictions about the sexual shapes of line drawing used variations on denotative (direct, conscious, obvious) data. Techniques employed included matching shapes (line figures) with male or female names,

(Levey, 1954; Stinnett and Thurlow, 1958; Acord, 1961, 1962) with sex roles (Lessler, 1962, 1964), or chosen as a male or female character in a story (Barker, 1957).

Data from most of these investigations supported the universal sexual symbolism hypothesis of Freud for both adult normal and psychotic populations (Acord, 1961; Jones, 1956; Lessler, 1962, 1964; Starrer, 1955; Stinnett & Thurlow, 1958; Winter & Prescott, 1957). Data for pre-adolescent populations was mixed. Levey (1954) and Acord's (1962) data not supporting while Jones (1961) and Lessler (1962) found support.

Those investigators who found strong support for Freudian predictions used denotative data which is least able to demonstrate the meaning of the symbol. The denotative dimension is the one through which symbols are transformed (i.e., penis, as a referent, is transformed into sword, a symbol) while the connotative dimension is the one maintaining meanings equivalencies (i.e., penis with its affective meanings of masculinity and self-concept for males equals sword, which if used as a symbol, will have the same affective meanings of masculinity and self-concept for males.) The use of denotative measures may lead the S to consciously recognize the symbolized genital referent and make a defended response. The defended response data may be consonant with psychoanalytic predictions, or elicit a denial that there is a meaning to the symbol. Freudian symbol theory would predict the above possible modes of responding making data from studies using only denotative measure unable to "test" the theory.

Further, the nomothetic assumptions used in these data procedures which tabulate only theory "correct" responses included in the "error

terms" responses that may have supported the theory being tested. A female S with a masculine self-concept might include symbols psycho-analytic theory would predict a masculine in the female classification. This would provide support for Freudian theory, but constitute objective data for refutation within the normative study.

Association Studies

While not falling into the dilemma of using denotative data to measure symbol meanings, the many investigations which employed free association techniques encountered difficulty in summarizing their results. The nomothetic assumptions required to quantitatively describe the data made conclusions from the studies not useful for validating individuals usage of symbols.

The free association technique, which Freud (1952) had demonstrated as most useful for bringing unconscious material into consciousness, tapped directly the dimension at which symbol meanings were carried (the connotative, unconscious, feeling tone, affectual or latent). This technique was employed to test the meanings of responses given to Rorschach contents (Earl, 1941) to determine the meaning of animal symbols and their relationship to family members (Goldfarb, 1945, Buss and Durkee, 1957) and to test the sex role of animal symbols (Gill, 1967). Both Earl and Goldfarb concluded that there were no universal meanings and that specific symbolism could be attached to any Rorschach response or animal symbol. Goldfarb found that no animal had the same meaning for all the Ss, and that for the S, a specific animal symbol may have different meanings at different times. He described dimensions of symbolism that seemed to exist for some Ss. Adults were associated with

large animals, cruel adults with aggressive animals, and kind adults with domestic animals. Man was associated with gorilla; cow with woman, and bear cub and fish with babies.

Buss and Durkee (1957) used the free associations of animals to familial figures and familial figures to animals with large adults samples and found no single animal associated to any familial figure. They did find support for dimensions of animal-familial symbolization. They concluded size and aggressive dimensions did indicate some cultural stereotypy of animal symbol usage for adults. Loving mother was symbolized by cow, deer, chicken, bird, cat, rabbit, and dominating father associated with bull.

Buss and Durkee (1957) described the problems involved in using association as a technique for generating data showing the symbolic relationships between animals and familial figures. The associations of the first 10 Ss to "timid father" were: llama, bird, monkey, fox, lamb, ram, bird, horse and rabbit. This variability of associations to familial figures forced them to adopt a strategy of describing the dimensions of animals (large-small, domestic-wild) which seemed to hold for the associations of at least 50% of the Ss to any familial figure. Data for the remaining 50% of the Ss which could not be described with this dimension was lost.

In Gill's (1967) study of the associations of adults and adolescents to animals, he found that of the 50 symbolized relationships developed in personality literature, only five had stereotypy of sex role meaning across age and sex groups. Dimensions of meaning were found to correspond to sex role animal designations (e.g., passive-active with female-male). A consistency was found between animal

associations and animal responses given to the Rorschachs by the same S. Finding only 5 of the 50 sex symbol relationships described in the literature confirmed, Gill (1967) called to question the psychoanalytic predictions of universal sex roles for certain animal symbols. Gill was able to include groups of associations to animals for Ss responding with appropriate psychoanalytic predictions designations of sex roles as well as for the Ss who did not assign the stereotyped sexual gender to the animals. He found that those who deviated from the average in assigning sex role showed a predominance of negative feelings toward both sexes. With these sub-group averages, he was able to more adequately describe the data, but was unable to conclude if meaningful personal aspects of symbol usage were being described.

Association methods are unable to describe their objective data in a manner so as to provide information relevant to individual usage of symbols and often are forced to disregard as much as 50% of "discrepant" data when summarizing their data.

Rychlak (1959) used a forced association design to circumvent the problem found in the free association studies. He had adult Ss rate Rorschach constructs (fire, mask, clouds, etc.) with a series of six descriptive adjectives or meanings (positive meaning, negative meaning, love, security, anger, depression) often assigned to these constructs by clinicians. He found that many commonly held interpretations of the constructs (symbols) were supported. Rychlak interpreted the data as providing support for a cultural symbolism hypothesis, and suggested this resulted because patients were in the same socio-cultural field and had available the same pool of symbols. Limiting the response options of the Ss to only six choices greatly restricted

the scope of this study. The most highly refined method used for determining quantitative measure of meaning, while allowing a broad range of choices, was the Semantic Differential.

Semantic Differential Investigations

Like the free association methods, the Semantic Differential also taps the appropriate level of meaning for measuring symbolic materials. The Semantic Differential as developed by Osgood (1957) provides a direct method for quantifying affective, feeling tone, or connotative aspects of meaning. This technique has an advantage over free association methods in that it limits the range of content response options while allowing ample opportunity for Ss expression of magnitude and direction of connotative meanings responses. Results from the Semantic Differential investigations fails to validate universal meanings predictions for sexual shapes (Schonbar and Davitz, 1960); stereotyped universal meanings for animal symbols (Goldfried, 1963 and Goldfried and Kissel, 1963); the stereotyped meanings of popular Rorschach percepts and personal concepts (Pope and Bare, 1961); and yields mixed results in investigations of Freudian and Jungian universal sexual Noun symbols (Worthy and Craddick, 1969, Archer and Burgess, 1970, Craddock and Worthy, 1970 and Althouse, 1970). The Semantic Differential was also used to measure a few individuals idiosyncratic symbol systems (Osgood and Lauria, 1954 and Moss, 1970).

The conclusions derived from the studies of Schonbar and Davitz, Goldfried, and Goldfried and Kissel, do not provide useful "tests" of symbol meanings predictions since they fail to differentiate normative from idiosyncratic aspects of symbol meanings.

The authors averaged the semantic differential ratings on each scale for each stimulus (symbol) across the Ss population. Using these averages as the "meaning" of the symbol, the authors contrasted the findings with the "meaning predictions" found in theory and clinical literature. These nomothetic meanings provided statistical norms of symbols stimulus qualities, but did not reflect the meaning of the symbol for the individuals in the study. Since it is individuals who use a symbol and since this data summary method did not consider use (meaning) by Ss deviating from the norm, this normative method of determining symbols connotations "does not" provide a "test" of a symbols meaning.

Symbol theory formulations generate hypotheses useful for determining the manner in which an individual uses a symbol and ascribes to the symbol emotional meaning. Universal symbols (sexual shapes predictions by Freud, or archetypes predictions by Jung) have stimulus qualities which allow individuals to attribute meaning to the universal symbol congruent with their personal meanings associated with the referent which the universal symbolizes. To test the capacity of a universal symbol to represent a certain class of meanings, it is not enough to test the symbol by describing the "stimulus value" of the symbol for the group of people judging the symbol. The stimulus quality of the universal symbol may, in fact, tap the predicted dimension (referent) and allow Ss deviating from the norm to describe their personal meanings for the symbol in terms of their unique history of meanings associated with that referent. For example, if the symbol house is a good symbol for the self-concept, as predicted by Jung (1964), then the connotative qualities used to define the symbol will vary greatly

from individual to individual. If the relationship between an individual's connotative meanings for house and connotations for self is congruent or closely related, even though quite different from the group norms, the data would support the predicted symbol-referent relationship.

When W. G. Klopfer (1954) described a process for determining individual-relevant symbol meanings to Rorschach contents, he contrasted it with "empirical nosological methods useful only for distinguishing between diagnostic groups, but of very little use in the assessment of individual personality characteristic", (Klopfer, 1954, p. 401). In Pope and Bare's semantic differential investigations of ten popular Rorschach percepts, and four personal concepts, they found that percepts and concepts formed semantically equivalent clusters, that data for the group did not demonstrate semantic overlap (equivalency of percept and concept meanings), but that data for the individuals did demonstrate affective "equivalence categories" and was expressive of personal meanings. Pope and Bare called for use of this procedure as a "method of distinguishing between culturally normative and idiosyncratic aspects of meaning" (Pope and Bare, 1961, p. 392).

The Semantic Differential investigations of sexual noun symbol meanings (Worthy and Craddick, 1969; Archer and Burgess, 1970; Craddick and Worthy, 1970; Althouse, 1970) fail to provide meaningful data for validating Freudian and Jungian theory predictions. The authors have described only normative data, used the least appropriate highly denotative potency scales for determining symbol meanings, and as a "refinement (Archer and Burgess) have used even less appropriate data for making sexual meaning determination using only the masculine-feminine Semantic

Differential scale. They used data analysis procedures which failed to adequately describe the semantic differential scales ratings. Determinations as to masculinity or femininity of a symbol were made by a binary method that often included actual neutral ratings or insignificant deviations from neutrality in making a sexual meaning determination. These authors made a sexual meanings determination based upon the mean rating of all Ss (by sex) for a symbol. If the mean value was ≤ 4.00 , a feminine determination was made, if > 4.00 , a masculine one. As Messick (1957) demonstrated, ratings on the Semantic Differential are not integers but intervals with $\pm .50$ boundaries. When ratings for a population are averaged, neutral means would fall within the range 3.50 to 4.50 and not exactly at 4.00. The authors made 30 in 192 sexual determinations based upon sexual neutral ratings.

These authors have also included non-significant deviations from neutral data when making sexual meanings determination. Based upon normative data reported by Osgood, Suci & Tannenbaum (1957), Osgood, Ware, and Morris (1961) and Triandis and Osgood (1959) mean scale scores must deviate at least one scale score from neutrality (i.e., ≤ 3.00 or > 5.00) before they represent a significant departure from neutrality.

In the four studies, the authors used non-significant neutral ratings 94 in 192 times when making masculine or feminine meanings determinations.

The conclusions drawn from these studies are not useful tests of symbol predictions since many of the ratings reported may represent actual neutral ratings or non-significant deviations from neutrality rather than masculine or feminine qualities as their authors imply.

Osgood and Lauria (1954) and Moss (1970) were able to overcome the nomothetic-idiographic symbol meaning problem by conducting extensive Semantic Differential investigations of specific individuals intra-personal symbol systems. Osgood and Lauria completed a blind analysis of the "Three Faces of Eve" case, in which each of the personalities rated clinically useful concepts (e.g., my mother, my father, love, therapist, etc.) at several times in the course of therapy. A three dimensional model was developed to demonstrate the interrelationships between the personalities' meanings for the concepts. This model developed from the blind analysis of objective semantic differential meanings material was found to accurately reflect the patients psychological structures and was responsive to personality change which occurred during the course of the therapy as described by the treating therapist.

Moss reported several cases where semantic differential ratings were used to indicate the meaning of significant people in the patient's life as well as dream symbols. Ratings were made while the patient was awake and while the patient was in a hypnotic trance. He found that early in therapy, trance ratings and dream symbol ratings were closer than were waking ratings and dream symbol ratings. As a successful therapy progressed, waking rating, trance ratings, and dream symbol ratings converged. Moss (1961) suggested that congruence of dream symbol ratings and trance ratings demonstrated similarity of symbol usage in unconscious states.

In over 25 years of semantic differential research, only two sources have reported the use of this method to measure individuals

symbol systems. These studies have described only five individuals symbol structures. Neither investigation reported measuring symbols included in meanings predictions by the personality theorists.

The current study was conducted to provide a data base for determining the meaning of some symbols-referents relationships posited by traditional personality theorists.

CHAPTER III

RESEARCH DESIGN

This investigation was conducted to test the validity of some symbol-referent relationships hypothesized by Freud (1960), Jung (1964), Leuner (1969), DeSille (1965). Throughout the preceding review of symbol investigations, methodological limitations and inappropriate procedures were described. The current study was designed to be methodologically responsive to clinical symbol theory and basic research requirements.

Symbol theory would require that an investigation of symbol meanings utilize an instrument that taps unconscious levels of meaning. The connotative or affective meanings dimension is the one on which symbols are generated and the dimension that maintains the meanings between a symbol and its referent or meaning. The semantic differential (Osgood, 1962) is the most objective instrument able to tap unconscious meanings and the best instrument to measure symbols. Use of this instrument does not lead to a denotative-defended response rating which would inhibit symbol meanings determination. Denotative techniques generate data actually supporting symbol theory but "quantitatively" refuting the symbol meanings predicted by psychoanalytic theories.

The Semantic Differential technique allows ss a sufficient range of meanings choices and generates data that can be summarized for all

Ss. This was not possible in forced choice association methods which limited Ss responses to only a few meanings nor in free association methods which could not summarize and include data for as many as 50% of the Ss giving responses not consistent with the majority of the Ss responses.

This study is unique in that it includes both symbols and hypothesized referents in the concepts to be tested. By generating Semantic Differential meanings for both sets of stimulus concepts, it is possible to directly measure the meanings relationships. In other investigations employing the semantic differential technique to measure symbols, the authors merely derived the average connotations of the symbols and compared these connotative meanings with the meanings described in personality literature. The direct symbol-referent comparisons measured in this investigation strengthen the study and allow more direct conclusions to be drawn about symbol-referent relationships for the sample of respondents.

In this investigation, there is no confusion between nomothetic and idiographic data summary methods. Nomothetic data, computed by averaging all ratings for the stimulus sets (collapsing ratings across Ss), then using the Ss mean scores as the basis for describing differences between the symbols and referents, is used only as a "popular" or "cultural" level of symbol meanings. No attempt is made to use this data to test symbol-referent relationships predicted from psychoanalytic theories applicable to individual usage.

These popular comparisons are described and used as tests of the symbol theories predictions of culturally stereotyped symbol-referent

relationships.

Data used to test symbol theory predictions about specific symbol-referent relationships is computed for each individual between the stimulus concepts. For every individual the meanings ascribed to each symbol and each referent were quantitatively derived. Then this "relationship" data was summarized with other Ss ratings to determine the average relationship scores between the sets of stimulus concepts for the males and females and the combined groups completing the study.

Through use of these data analysis techniques, the study is methodologically consistent with symbol theory formulations. The data can be differentiated in terms of personal, cultural and universal aspects of meaning as is done in clinical practice.

Theoretically, the semantic differential should be the best tool for developing data relevant to the meanings of symbols since this instrument taps data loaded on the connotative or affective meanings dimension. It is, however, possible that this instrument may not adequately tap the layers of personality that determine the unconscious attitudes and symbolic processes of the Ss determining symbol meaning. Also, Semantic differential data may not tap the dimension the clinician utilized in developing symbol theory formulations and used in clinical practice. Thus, support or refutation of the theoretical symbol-referent relationships may not necessarily constitute a test of validity, but provide indirect quantitative tests of validity. These quantitative indirect tests of validity seem to be theoretically and methodologically responsive to the process the clinician taps in making

symbol meaning determinations, and seem to describe the process involved in the generation of symbols for the individual.

The specific symbol-referent relationships under investigation include the following:

- 1) The symbol ASCENT predicted by Jung (1964) and DeSoille (1965) to represent heightened affect, and movement toward CONSCIOUS.
- 2) The symbol COW predicted by Leuner (1969) to represent the meanings associated with MOTHER and the feeling of the relationship with MOTHER(S) in general.
- 3) The symbol DESCENT hypothesized by DeSoille (1965) and Jung (1964) to represent movement into the UNCONSCIOUS and feelings associated with depression, foreboding and lower affect.
- 4) The symbol DRAGON predicted by DeSoille to represent the PROHIBITIONS of society and societal constraints. In Freudian terminology to represent the confrontation with the super ego.
- 5) The symbol ELEPHANT predicted by Leuner (1969) to symbolize the meanings associated with FATHER and represent the feelings of the relationship with FATHER(S) in general or specifically. (In Freudian terminology represents the confrontation with the Father figure or authority figure.)
- 6) The symbol HOUSE predicted by both Jung (1964) and Leuner (1969) to symbolize the meaning of the self and reflect the self concept or ME ratings.
- 7) The symbol SWORD hypothesized by DeSoille (1965) and Freud (1952, 1960) to symbolize the self concept for males (ME males) and to represent the feelings toward the masculine aspects of the self and

masculine aspects in general (FATHER for both females and males.)

- 8) The symbol VASE hypothesized by Freud (1957, 1960) and DeSoille (1965) to symbolize the self concept for the female (ME for females) and to represent the feelings toward the feminine aspects of the self and feminine aspects in general (MOTHER for both males and females.)
- 9) The symbol WITCH predicted by DeSoille (1965) and Jung (1964) to symbolize the relationship with the MOTHER concept in general and aspects of the MOTHER relationship in particular.
- 10) The symbol WIZARD hypothesized by DeSoille and Jung (1957) to represent the relationship with the FATHER concept in general and the FATHER relationship for the individual in particular.

Data for the symbol-referent relationships will be discussed for the culturally stereotyped or popular predictions separately from the individually determined or "universal" symbol meaning predictions.

CHAPTER IV

RESEARCH METHOD

Stimulus Concepts and Semantic Differential Scales

The stimulus concepts to be rated consisted of 16 nouns. Ten are theoretically symbols which often carry connotative meanings that are not consonant with their denotative definitions. These symbols, as predicted by specific theorists, often have connotative meanings equivalent to the connotative meanings associated with specific referents, but unrecognized to the individual experiencing the symbol. The stimulus concepts hypothesized to be symbols include: ASCENT, COW, DESCENT, DRAGON, ELEPHANT, HOUSE, SWORD, VASE, WITCH and ELEPHANT.

Six of the stimulus concepts are theoretically referents which usually carry denotative and connotative meanings that are consonant. The stimulus concepts that are utilized as referents are: CONSCIOUS, FATHER, ME MOTHER, PROHIBITIONS, and UNCONSCIOUS.

Each of the sixteen stimulus concepts was presented at the top of a page followed by sixteen bipolar scales.

The semantic differential scales chosen sampled the three major factors (evaluation, potency, activity) isolated by Osgood, Suci and Tannenbaum (1957). Seven scales had high loadings on evaluation: bad-good, awful-nice, ugly-beautiful, unpleasant-pleasant, worthless-valuable, dirty-clean, and healthy-sick. The potency factor was represented by weak-strong, small-large, light-heavy, and delicate-rugged. Scales with high activity factor loadings were slow-fast, passive-active,

cold-hot, and dull-sharp. Also included was a scale not factor weighted by Osgood, Suci and Tannenbaum feminine-masculine.

Sets of booklets were constructed in which the stimulus concepts appeared in random order. Sixteen random orders were constructed so that each stimulus concept would appear randomly in any location throughout the booklets. The stimulus concept random presentations would control for any ordering effects involved in the process of working through the booklets reducing the chances of position by concept interactions.

The 7-point scales on each page of the booklet were presented in 16 random orders so that each scale would have an equal likelihood of appearing on any line of the rating page. For each page in the booklets there is a different ordering of the scales. For each stimulus concept the ordering of the scales in each booklet was constant. The random order of scales presented on the pages controls for possible order effects and habituation of response patterns due to scale position on the pages.

Each presentation of the scales was designed so the scales' endpoints appear in a counterbalancing order of presentation. Each scale endpoint appeared on the left margin an equal number of times throughout the booklet and was equal with the number of times it appeared on the right margin. If good appeared on the left margin in the first presentation, it would equally be found to appear on the right margin throughout the booklet with bad appearing on the left margin. The counterbalancing of endpoints corrects for response tendencies toward ratings highly loaded on either side of the page.

Scales appeared in the following form throughout the booklets:

good ____ : ____ : ____ : ____ : ____ : ____ : ____ bad
 hot ____ : ____ : ____ : ____ : ____ : ____ : ____ cold

In every case, the stimulus concept appeared centered and at the top of the page. Directions for checking the meaning on the scales were given so that the positions represented a degree of meaning or association with the endpoint of the scale. The quantifiers were very closely associated for the two endpoint positions, quite closely associated for the two positions one in from the endpoint, only slightly related for the two positions on either side of the midpoint and completely irrelevant or equally associated for the middle space on the scale.

Subjects and Administration Procedures

Volunteer Ss from evening psychology classes at Portland State University and Portland Community College participated in the study. PSU students were enrolled in a child psychology class which included some graduate students from other than the psychology department. PCC students were enrolled in an introductory psychology class.

Ss's were told they were going to participate in a study of word meanings. Booklets were handed out and oral directions for ratings were given (reading the directions on the cover of the booklet) with the four examples demonstrated on the chalk board. Questions regarding the rating procedure were answered and the Ss were allowed to work on the booklets until completed. Completion time ranged from ten to thirty minutes for the Ss. A total of 65 booklets were collected.

The booklets from the classes were randomized and the first 20 completed booklets for males and 20 completed booklets for females were included in the study. In several cases, booklets could not be used

due to the Ss failing to make ratings on a page in the booklet. Booklets for other Ss were not included in the study due to the extreme time involved in hand coding the ratings and encoding into computer format.

Femlae Ss ranged in age from 18 to 50 years with a mean age of 27.25 years. Ten were married, three divorced and seven single. College class status included five freshmen, one sophomore, three juniors, one senior and ten graduate students. Male Ss ranged in age from 17 years to 42 years with a mean of 27.50 years. Thirteen were married, one divorced and six were single. College classes included seven freshmen, three sophomores, three juniors, no seniors and seven graduate students.

No attempt was made to draw responses from a homogenous sample. The age range, marital status and college class status variance provided a richer group of Ss for generating data. Since individual response relationships were the main focus of this study, group characteristics are of lesser importance. The diversity of Ss characteristics may more accurately reflect a sample of cultural symbol users than would a sample of "typical college sophomores".

Data Analysis Procedures

Ss's check marks on the scales were converted into numerals ranging from one to seven following the standard semantic differential technique. In all cases, the one (1) value represents the lesser, weaker, or less valued pole. A rating of three would be determined on both of these scales:

good	_____	:	_____	:	_____	:	_____	:	<u>X</u>	:	_____	:	_____	:	bad
cold	_____	:	_____	:	<u>X</u>	:	_____	:	_____	:	_____	:	_____	:	hot

Analysis of the scales was done in terms of the ratings on the original scale. No conversion to factors (evaluation, activity, potency) scores was made. Presley (1969) has shown that until it is demonstrated that the scales have the same high factor loadings for the concepts presented, considerable error is introduced by presenting new concepts and assuming that each bipolar scale will tap the factor as it did for other types of stimulus material. No research has been done to demonstrate that the factors represented by the standard scales (Osgood, 1957) have the same loadings when the stimulus material are noun symbol concepts.

A data summary sheet was constructed for each S indicating every rating for every scale for every concept. Each data sheet contained 256 data position entries with each position value ranging from one to seven (16 concepts X 16 scales).

The raw data sheets for each S showing each rating were then combined into a single summary sheet for each sex. This was accomplished by averaging each of the 256 data entries for all males and all females. The two summary sheets yielded the mean ratings which indicated direction and degree of meaning. The means were used to determine the significance of the ratings and to generate the normative or "popular" connotations of the symbols.

The second data analysis step involved using the two sets of mean values derived above as the basis for developing measures of similarity between the stimulus. The normative, "cultural" or "popular" means were compared for each concept with every other concept for each sex separately. The square difference method (D^2) was used as the measure

of similarity. D^2 is obtained by summing the squares of the difference on each scale between the scale positions for the two concepts being compared. For each concept by concept relationships, a single D^2 was derived. The smaller the D^2 , the closer the two concepts were rated; the larger the D^2 , the more dissimilar were the ratings on the concepts.

It is possible to describe the normative or cultural relationships between the symbols and referents for the Ss making the ratings through examination of square difference comparisons ranked ordered by the mean values. These relationships descriptions provide quantitative information useful for testing cultural aspects of symbol meaning.

The third data analysis procedure used the raw data sheets for each S described above. The data was then analyzed in terms of the inter-relationships between the stimulus concepts for each S separately. Thus, the squared differences were computed between the symbols and referents for each S in the study. The D^2 for each concept by concept comparison for each S were then used as the basis for deriving a mean summary sheet of D^2 values for each sex. The mean D^2 sheets represent the average of the idiosyncratic symbol referent relationships. By not first converting to normative mean values, then computing D^2 inter-relationships (as was done in step two above) the data preserves individuals symbol-referent meaning relationships before the data is summarized.

Using this individual relevant data which quantifies the symbol-referent relationships it is possible to test Symbol theory hypotheses about specific relationships or "universal" meanings. The "universal" meanings would be validated if the hypothesized symbol-referent relationships for a large number of Ss did demonstrate semantic overlap. For

those symbol-referent relationships to be tested, if theory were validated, we could expect a very close ranking between the symbol and its referent. Each symbol was used as the base for rank ordering every other concept.

CHAPTER V

RESULTS

Significance of Ratings and Popular Connotations

Table I shows the mean scale score ratings for each of the concepts on each of the scales for both males and females. A mean scale score of 3.00 or less and 5.00 or more is a significant deviation from neutrality (Osgood, Suci and Tannenbaum, 1957; Osgood, Ware and Morris, 1961; Triandis and Osgood, 1958) and refers to the polar adjective to the left and the right of the continuum respectively.

Summarizing mean scale scores that deviate from neutrality it is possible to determine if enough scales were significantly used to describe a given concept. Only concepts that were significantly differentiated from one another would be used in making meanings tests. If a concept did not have at least three significant non-neutral responses on the scales, it was not included in the comparisons.

Table II contains a summary of the significant scales rated on each concept as well as a summary of significant concepts being differentiated on each scale. If a scale did not demonstrate at least three concepts as being significantly different from neutrality responses, the scale was not as useful for differentiating the concepts.

Scales as used by both sexes significantly differentiated the concepts from one another. Results indicate an average of 8 of 16 significantly non-neutral concepts per scale. One scale, cold-hot for female Ss, had significant ratings on only two concepts. All scales

TABLE I-MEAN RATINGS OF CONCEPTS FOR MALE AND FEMALE S's.

Polar Score=1																	Polar Score=7	
	Ascent		Conscious		Cow		Descent		Dragon		Elephant		Father		House			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
bad	5.35*	5.00*	6.25*	5.55*	6.10*	5.65*	4.60	3.80	2.95*	3.65	5.30*	5.35*	6.25*	5.65*	6.30*	5.70*	good	
awful	5.40*	5.15*	6.05*	5.25*	4.90	5.30*	4.60	3.60	3.10	3.15	4.85	5.10*	6.05*	5.60*	6.05*	5.70*	nice	
ugly	5.15*	5.65*	5.60*	5.25*	4.55	4.55	4.15	4.15	2.15*	3.15	4.25	4.45	4.90	5.10*	6.15*	5.40*	beautiful	
unpleasant	5.45*	5.30*	6.10*	5.75*	5.30*	5.30*	4.45	3.95	2.50*	2.95*	4.80	5.30*	5.85*	5.15*	6.25*	5.90*	pleasant	
dirty	4.90	5.00*	5.50*	4.65	4.55	4.30	4.05	4.35	3.20	3.70	3.25	3.70	6.05*	5.55*	6.05*	5.30*	clean	
worthless	5.70*	5.35*	6.10*	6.20*	6.45*	6.35*	4.75	4.45	3.45	4.45	5.70*	5.80*	5.55*	6.15*	6.50*	5.90*	valuable	
sick	5.25*	5.10*	6.00*	6.00*	5.80*	5.65*	4.20	3.85	4.25	4.40	5.75*	5.80*	5.85*	5.65*	5.50*	4.75	healthy	
weak	5.20*	5.30*	5.90*	5.50*	5.70*	5.40*	4.15	3.95	6.20*	6.40*	6.90*	6.60*	6.15*	5.45*	5.55*	5.25*	strong	
small	5.00*	4.90	5.25*	4.35	6.05*	6.05*	4.00	4.60	6.25*	6.60*	6.90*	7.00*	5.75*	4.90	5.80*	5.15*	large	
light	4.00	3.25	4.10	3.80	5.80*	6.40*	4.95	5.05*	6.15*	5.85*	6.90*	6.70*	5.55*	5.05*	5.20*	5.35*	heavy	
delicate	4.55	4.55	3.30	3.85	4.55	5.35*	4.25	4.55	6.50*	6.10*	6.20*	6.35*	5.95*	5.40*	4.90	4.90	rugged	
slow	5.65*	4.45	5.55*	5.15*	2.50*	2.10*	4.20	4.80	4.50	4.95	2.50*	2.30*	5.80*	4.70	4.10	3.70	fast	
passive	5.40*	6.00*	6.00*	5.65*	3.35	3.00*	4.30	4.55	5.30*	6.40*	4.70	4.00	5.45*	5.00*	4.65	3.55	active	
dull	4.90	5.70*	5.80*	5.65*	3.05	2.75*	3.80	3.95	4.40	4.40	3.20	2.85*	5.55*	5.30*	4.85	4.00	sharp	
cold	4.45	3.85	4.95	4.55	4.35	4.15	3.55	3.50	5.60*	5.30*	4.10	3.75	4.50	4.10	4.75	4.65	hot	
feminine	4.80	4.80	4.55	3.80	2.25*	2.50*	4.05	3.80	5.85*	5.90*	6.05*	4.70	6.50*	6.70*	4.00	3.60	masculine	

	Me		Mother		Prohibitions		Sword		Unconscious		Vase		Witch		Wizard			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
bad	6.30*	5.70*	6.15*	5.95*	3.85	3.60	4.20	3.45	4.20	3.75	5.05*	5.45*	1.85*	3.00*	5.30*	4.85	good	
awful	5.85*	5.65*	6.15*	5.95*	3.05	3.45	4.25	3.35	3.80	3.50	5.95*	5.65*	2.25*	3.30	4.80	4.85	nice	
ugly	5.25*	5.15*	5.85*	5.70*	3.45	3.40	4.45	4.35	4.00	4.05	5.90*	5.90*	1.90*	2.35*	4.20	3.95	beautiful	
unpleasant	5.40*	5.60*	6.10*	5.80*	2.85*	2.85*	4.05	3.35	3.75	3.60	5.60*	5.85*	1.95*	3.00*	4.95	4.65	pleasant	
dirty	6.55*	6.05*	5.80*	5.80*	3.95	3.90	4.95	4.65	4.35	4.10	5.75*	5.05*	2.50*	3.60	4.85	4.05	clean	
worthless	6.20*	6.15*	5.90*	6.15*	4.15	3.85	5.05*	5.25*	4.25	4.05	5.65*	5.45*	3.00*	4.85	5.05*	4.90	valuable	
sick	6.30*	6.10*	5.25*	5.85*	3.70	3.30	4.15	4.15	3.60	3.00*	4.60	4.60	2.55*	3.90	5.10*	4.70	healthy	
weak	5.80*	5.20*	4.25	5.25*	3.90	4.15	6.25*	6.15*	3.25	3.35	4.00	4.85	5.10*	5.00*	5.60*	5.25*	strong	
small	5.60*	3.85	3.60	3.80	3.95	4.10	5.40*	5.05*	4.60	4.35	3.25	4.05	3.45	4.30	4.65	4.05	large	
light	4.10	3.45	3.15	3.50	4.50	4.85	4.80	4.65	4.70	3.65	2.70*	3.30	3.55	3.85	4.55	3.60	heavy	
delicate	5.25*	3.95	3.20	3.50	4.85	4.55	5.55*	4.70	3.50	3.70	1.90*	2.10*	4.85	4.85	4.75	4.40	rugged	
slow	5.95*	4.50	5.10*	5.10*	3.80	3.80	5.85*	6.10*	3.60	3.10	3.85	3.85	4.90	5.05*	5.40*	5.30*	fast	
passive	5.90*	5.30*	5.45*	5.90*	4.30	4.65	5.35*	5.50*	3.10	2.25*	3.50	3.15	5.50*	5.85*	6.00*	5.90*	active	
dull	5.80*	5.50*	5.30*	5.50*	3.85	3.70	7.00*	6.85*	3.30	3.10	4.25	4.30	4.85	5.30*	5.90*	5.70*	sharp	
cold	5.15*	4.70	4.95	4.35	3.90	3.80	2.95*	2.45*	3.15	3.35	3.40	3.45	2.45*	3.85	4.60	4.20	hot	
feminine	6.45*	1.75*	1.65*	1.70*	4.35	4.40	6.30*	5.85*	3.75	3.75	2.90*	3.00*	1.25*	2.05*	6.10*	5.60*	masculine	

*indicates a deviation from neutrality (ie 4.00) which is significant at the .05 level. Values less than 4.00 refer to the adjective to the left of the continuum, and values greater than 4.00 refer to adjectives to the right.

TABLE II

SUMMARY OF SIGNIFICANT SCALES AND CONCEPTS BY SEXES

<u>SCALES</u>	<u>MALE Ss</u>	<u>FEMALE Ss</u>	<u>CONCEPTS</u>	<u>MALE Ss</u>	<u>FEMALE Ss</u>
bad-good	12*	10	ASCENT	10*	10
awful-nice	8	9	CONSCIOUS	12	10
ugly-beautiful	8	8	COW	9	13
unpleasant-pleasant	11	12	DESCENT	0	1
dirty-clean	7	6	DRAGON	10	8
worthless-valuable	12	10	ELEPHANT	9	11
sick-healthy	10	8	FATHER	14	13
weak-strong	11	12	HOUSE	10	9
small-large	9	5	ME	15	11
light-heavy	6	6	MOTHER	11	12
delicate-rugged	6	5	PROHIBITIONS	1	1
slow-fast	9	7	SWORD	9	8
passive-active	9	11	UNCONSCIOUS	0	2
dull-sharp	6	10	VASE	9	8
cold-hot	4	2	WITCH	11	8
feminine-masculine	10	9	WIZARD	8	5

*The entry in the table is the total of significant scales or concepts out of the 16 possible scores.

for male Ss had significant rating on at least four or more concepts.

Concepts were significantly differentiated from each other by the number of scales having non-neutral ratings for each concept. Results indicate an average of 8 of 16 significantly non-neutral scales per concept. Several concepts did not meet the criterion of at least three significant scales for each sex and were not included in the meanings comparisons. DESCENT had no significant scale ratings by male Ss and only one by female Ss. PROHIBITIONS had only one scale significantly deviating from neutrality for each sex. UNCONSCIOUS had no scales with significant ratings by males and only two scales with non-neutral ratings by females. These three concepts were determined not to have significant non-neutral meanings and were not included in the symbol-referent comparisons for either sex.

For each of the significant ratings, the intensity of the rating may be described by means of the quantifiers "very", "quite", and "slightly", which were used to represent the scale positions in the instructions to the Ss. These connotations of the stimulus represent the "popular" or average connotations for the Ss by sex.

Table III presents these quantifiers as they apply to the scale units. Each of the scale units does not represent an absolute value, although it is assigned an integer. It actually represents an integer with boundaries $\pm .5$ (Messick, 1957). Therefore, it is possible to determine the intensity of mean ratings by placing them on the scale with intervals given to represent the limits of the scale position.

Table I indicates that the mean ratings for ASCENT on the good-bad scale was 5.35 for males and 5.00 for females. These means are

TABLE III

QUANTIFIERS CORRESPONDING TO EACH SCALE UNIT

.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5
1	2	3	4	5	6	7	
very	quite	slightly	----	slightly	quite	very	

statistically significant (i.e., >5.00) and since they both fall within the limits of 4.5 to 5.5, it indicates that both male and female Ss categorized ASCENT as being "slightly good". Appendix Table VII contains a summary of the popular significant connotations for the combined sample and for each sex separately.

Comparison of the significant ratings of male and female Ss reveals reversals in direction for only one concept. For ME females rated the concept as feminine while males rated it as masculine. In all other cases, if the stimulus was rated by one sex in a polar direction, the other sex also rated it in that direction or showed no significant rating at all.

The only symbol included in this study and included in previous semantic differential studies was COW. It was found in Goldfried and Kissel's (1963) study to be viewed by males as quite good; slightly strong, feminine and slow. Female Ss rated COW as very good; quite feminine and slow. Male and Female ratings combined described it as quite large and slightly passive. COW in Goldfried's (1963) study was found by males and females to be rated quite good, large, feminine and slow. In the present study for the same scales, COW was found to be quite good, large, feminine, strong and slightly slow by male Ss. Female Ss rated it as quite good, large, slow; slightly

strong, feminine and passive. Male and Female ratings combined were quite good, strong, large, slow and feminine. For the symbol COW, the three populations showed considerable agreement in connotative meanings ratings.

In the traditional method of semantic differential studies, the connotations described in Appendix Table VII would be contrasted with qualities of symbols developed in clinical theoretical literature. The authors would draw comparisons between the symbols and the meanings as "validated" in their study by contrasting the connotations with obvious qualities predicted by symbol theories. For instance, to test the validity of the use of the symbol SWORD as a masculine symbol, the connotations would be described. In Appendix Table VII the connotations of Male Ss for SWORD were very sharp; quite strong, rugged, fast and masculine; slightly valuable, active, large and cold. Female Ss connotations were very sharp; quite strong, fast and cold; slightly valuable, large and masculine. Both Male and Female Ss describe SWORD as masculine with males describing it as more masculine than females (i.e., quite masculine by Male Ss and slightly masculine by female Ss.) The other qualities attributed to the symbol are generally connotations attributed to masculinity more often than femininity (i.e., sharp, strong, rugged, fast, active and large) and support the symbol as masculine and support psychoanalytic theory.

Through the inclusion of both symbols and referents in the present study it is possible to go beyond a comparison of connotations with qualities ascribed in literature to actual comparisons of the symbols closeness of fit with the referents predicted in the literature. In

Results, Normative or Popular symbol-referent relationships, the quantitative difference between the mean ratings of the Ss for symbols and for referents is compared directly.

Normative or Popular Symbol-Referent Relationships

Appendix Table VIII shows the squared difference scores (D^2) between the symbols and referents for Male Ss. D^2 were computed between the stimulus concepts using the mean values described for Male Ss in Table I. The D^2 of 6.56 between ASCENT and CONSCIOUS in Appendix Table VIII is the sum of all squared difference comparisons for all sixteen scales. On the bad-good scale, Male Ss average rating for ASCENT was 5.35 and CONSCIOUS was 6.25. The difference between the mean ratings is .90 and the d^2 is .81. This d^2 is summed with the .42 d^2 between ASCENT and CONSCIOUS for the awful-nice scale (ASCENT mean 5.40; conscious mean 6.05; difference .65; d^2 equals .42 on the awful-nice scale).

Continuing this procedure through all sixteen rating scales, the summary D^2 between ASCENT and CONSCIOUS is 6.56. This D^2 is the second smallest for all stimulus distance comparisons with ASCENT (the smallest is between ASCENT and WIZARD at 5.72) when reading down the first Column on Appendix Table VII.

All possible combinations of distance measures between the sixteen concepts (symbols and referents, symbols and symbols, referents and referents) are presented for the male Ss normative ratings.

Symbols, which should have the same meaning as their hypothesized referents, should have small squared difference scores compared with the theoretical referent.

Appendix Table IX contains a summary of Popular or Normative squared difference distances between symbols and referents for Male Ss. In this Table, the ten hypothesized symbols are presented along the left margin with the closest fitting symbols or referents ordered from the symbols. In the first row, the symbol ASCENT has the smallest possible D^2 when compared with WIZARD (5.72) also a symbol. The second closest concept is CONSCIOUS (6.56) which is underlined because it is theoretically the referent for the symbol ASCENT. The third closest fitting concept is ME (10.78) and so on up to the seventh most similar meaning concept SWORD (15.59). Since this investigation is interested in assessing the closeness of meaning between symbols and their referents, ordinal positions beyond the seventh were not considered useful. These positions can be derived from ordering the D^2 for the symbol in Appendix Table VIII for Male Ss. The D^2 's range over a 79.49 value scale of similarity on the ASCENT comparisons for Male Ss. The hypothesized referent for the symbol ASCENT appears second closest to the symbol and is 6.56 D^2 units from the symbol. While the referent proves not to be the closest concept to the symbol, it is the closest referent to the symbol. The closest concept to the symbol is another hypothesized symbol WIZARD (5.72). This data comparison procedure was used in making all other symbol referents comparisons.

Appendix Table X contains the squared difference values between the symbols and referents for Female Ss normative or popular ratings. Appendix Table XI presents the summary of distances from the symbols for the popular ratings of the Female Ss.

Appendix Table XII contains the Popular or Normative D^2 between

symbols and referents for the combined sample of male and female Ss.

Appendix Table XIII presents the summary of distances from the symbols for the popular ratings of the sample.

TABLE IV contains a summary of the ranks for the hypothesized symbol-referent relationships predicted by symbol theories to be equivalent in meanings. This table indicates the degree to which the symbol and referent were ordered in closeness for the male, female and combined normative or popular ratings presented in Appendix Tables VII through XIII.

TABLE IV

NORMATIVE OR POPULAR RANKINGS FOR HYPOTHESIZED
SYMBOL-REFERENT COMPARISONS

	MALE RANKS	FEMALE RANKS	COMBINED
ASCENT X CONSCIOUS	2nd	1st	1st
COW X MOTHER	8th	11th	10th
DESCENT X UNCONSCIOUS	n.s.	n.s.	n.s.
DRAGON X PROHIBITIONS	n.s.	n.s.	n.s.
ELEPHANT X FATHER	2nd	3rd	3rd
HOUSE X ME	4th	6th	1st
SWORD X ME	4th		
SWORD X FATHER	3rd	5th	3rd
VASE X ME		2nd	
VASE X MOTHER	1st	3rd	1st
WITCH X MOTHER	10th	10th	8th
WIZARD X FATHER	3rd	3rd	2nd

TABLE IV does not contain rankings for concepts found not to differ significantly from neutrality. In summarizing the rank orders of closeness of symbol with hypothesized referent there is a trend for hypothesized relationships being found in the first several ranks.

For the combined male and female Ss normative ratings the symbol ASCENT was found to be closest to its referent CONSCIOUS. COW did not

represent MOTHER. DESCENT for UNCONSCIOUS and DRAGON for PROHIBITIONS could not be compared due to lack of significance of ratings on original scales. ELEPHANT as a symbol for FATHER was third closest, while WIZARD as a symbol for FATHER was second closest. SWORD as a symbol for FATHER was also third closest. HOUSE as a symbol for ME proved to be the closest fitting relationship for the combined male and female ratings. VASE proved to be the best symbol for MOTHER and WITCH failed as a symbol at eighth place. SWORD was a good ME symbol for male Ss as was VASE for female Ss.

Insofar as the subjects in the sample may represent the symbol using culture, the normative or popular meanings relationships should reflect the cultural meanings attributed to the symbols. These popular meanings of the symbols could be utilized by many people in the culture to symbolize their unique personal meanings associated with the specific referent. FATHER meanings could be symbolized by WIZARD, SWORD, or ELEPHANT. MOTHER meanings by VASE. CONSCIOUS by ASCENT. ME or self-concept could be symbolized by HOUSE for both sexes, by SWORD for male Ss and VASE for female Ss.

Meanings attributes ascribed to these symbols in dreams and fantasy would easily parallel the personal meanings associated with the theoretical referent for many individuals in the culture.

Idiosyncratic Symbol-Referent Relationships

Appendix Table XIV contains the average of individual squared difference values for the Male Ss. D^2 were derived from the average of the individual D^2 between each concept for each male subject. The D^2 of 50.35 between ASCENT and CONSCIOUS is the average of all individual

D^2 for the two concepts. The D^2 is computed based upon the actual individuals symbol-referent distance rather than the average rating for each symbol and referent. In this way, the information about individual's symbol-referent relationships is maintained and the descriptive D^2 represents an average of the relationships. Idiosyncratic information is preserved in the array of D^2 of which the Appendix Table XIV entry represents the mean.

Reading down the first column of Appendix Table XIV, the smallest D^2 is between ASCENT and CONSCIOUS and the largest is between ASCENT and WITCH (50.35 and 133.65 respectively) all other comparisons with ASCENT are presented. Since symbols and referents should have the same connotative meanings, hypothesized symbol-referent relationships squared differences should be small.

Appendix Table XV contains a summary of Individuals D^2 's between symbols and referents for Male Ss. In this table, the ten hypothesized symbols are along the left margin with the closest fitting symbols or referents ordered from the symbols. In the first row, the symbol ASCENT is closest to the referent CONSCIOUS (50.35) which is underlined because it is theoretically the referent for the symbol.

Thus, for the Male Ss, the average of the symbol-referent relationships between ASCENT and CONSCIOUS is smaller than the average of any other symbol-symbol or symbol-referent relationships compared to ASCENT. The next concept having closest similarity to ASCENT is HOUSE, a referent with an average D^2 of 58.75. The range of D^2 is 83.30 for all comparisons with ASCENT. The other symbol-referent comparisons are also presented.

Appendix Table XVI contains the averages of individual D^2 values for Female Ss. Appendix Table XVII presents the summary of distances from the symbols for the female Ss idiosyncratic D^2 relationships averages.

Appendix Table XVIII contains the averages of the individuals D^2 between symbols and referents for the combined male and female Ss. Appendix Table XIX presents the summary of distances from the symbols for these average individual relationships.

Table V contains a summary of the ranks for the symbol-referent relationships predicted by theory to be equivalent in meanings. This table indicates the degree to which the symbol and referent were ordered in closeness for male, female and the combined sample on the Average of individuals relationships presented in Appendix Tables XIV through XIX.

TABLE V

AVERAGE OF INDIVIDUALS' SYMBOL-REFERENT RELATIONSHIPS
FOR HYPOTHESIZED COMPARISONS

	MALE RANKS	FEMALE RANKS	COMBINED
ASCENT X CONSCIOUS	1st	1st	1st
COW X MOTHER	9th	7th	8th
DESCENT X UNCONSCIOUS	n.s.	n.s.	n.s.
DRAGON X PROHIBITIONS	n.s.	n.s.	n.s.
ELEPHANT X FATHER	2nd	6th	3rd
HOUSE X ME	2nd	2nd	2nd
SWORD X ME	3rd		
SWORD X FATHER	2nd	8th	4th
VASE X ME		1st	
VASE X MOTHER	1st	5th	2nd
WITCH X MOTHER	9th	10th	10th
WIZARD X FATHER	4th	5th	5th

In the summary of individuals symbol-referent relationships,

Table V shows a trend in hypothesized relationships being found in the first several ranks closest in meaning between symbol and referent.

Insofar as the subjects in the study are actually symbol users, the summary of their individually described symbol-referent relationships should provide a basis for determining if the theoretically universal symbols are, in fact, used as symbols for hypothesized referents. The following symbols were found to be equivalent in meaning to their theoretical referent and are likely to be universal symbols for the referent.

CONSCIOUS and the meanings associated with it could be symbolized by ASCENT. MOTHER could be symbolized by VASE but not WITCH or COW. FATHER could be symbolized by ELEPHANT, SWORD or WIZARD. This relationship was closer for male Ss than for female Ss. ME or self-concept could be symbolized by HOUSE for both sexes by SWORD for male Ss and VASE for female Ss.

Some of the symbols have natural opposites in meaning, which when set out in select comparisons more fully demonstrate the closeness of association and equivalency of meaning for the symbol-referent relationships hypothesized. The average ranks of individuals symbol-referent relationships were used in Table VI to demonstrate the symbol-referent relationships validity when presented in contrasted comparisons.

When examining the contrasted comparisons in Table VI, the theoretical formulations having greatest validity tend to have small rankings for the theory correct contrast and large rankings for the theory opposite comparison. When the theory is only partially supported and the symbol and referent are not highly equivalent in meaning, the theory correct and theory opposite rankings are closer together and closer to a random average ranking of 7.5th.

TABLE VI

CONTRASTED COMPARISONS USING INDIVIDUALS' SYMBOL-REFERENT
RELATIONSHIPS AVERAGE RANKINGS

THEORY CORRECT Comparison vs. THEORY OPPOSITE	MALE		FEMALE		COMBINED	
	CORRECT	OPPOSITE	CORRECT	OPPOSITE	CORRECT	OPPOSITE
ASCENT X CONSCIOUS vs. ASCENT X UNCONSCIOUS	1st	ns.	1st	ns.	1st	ns.
COW X MOTHER vs. COW X FATHER	9th	6th	7th	9th	8th	12th
DESCENT X UNCONSCIOUS vs. DESCENT X CONSCIOUS	ns.	ns.	ns.	ns.	ns.	ns.
ELEPHANT X FATHER vs. ELEPHANT X MOTHER	2nd	14th	6th	15th	3rd	14th
SWORD X ME vs. VASE X ME	3rd	9th	10th*	1st*	5th	5th
SWORD X FATHER vs. SWORD X MOTHER	2nd	11th	8th	12th	4th	14th
VASE X MOTHER vs VASE X FATHER	1st	10th	5th	10th	2nd	11th
WITCH X MOTHER vs. WITCH X FATHER	9th	15th	10th	15th	9th	15th
WIZARD X FATHER vs WIZARD X MOTHER	4th	10th	5th	12th	5th	13th
ELEPHANT X ME vs. COW X ME	7th	10th	10th*	5th*	9th	7th
WIZARD X ME vs. WITCH X ME	1st	14th	11th*	9th*	4th	13th

*reversed for female Ss.

CHAPTER VI

DISCUSSION

The results of this study suggest that for this sample the Freudian universal sexual noun symbols tended to be validated. SWORD proved to be a good FATHER symbol and self-concept ME symbol for male Ss. VASE was validated as a ME symbol, but not a MOTHER symbol for female Ss. Male Ss, however, validated VASE as a MOTHER symbol. The Freudian symbols were validated more by male Ss than by female Ss.

Throughout this study, male Ss consistently made slightly more significant ratings than the female Ss (138 significant ratings vs. 130 for female Ss) and the symbol-referent relationship rankings of male Ss was closer than for female Ss.

The closeness of the male Ss symbol-referent relationships may be due to a trend of the males to make more stereotyped responses to sexual symbolism than the female Ss. The consistent tendency of male Ss to validate both male symbols and female symbols postulated by Freud, also a male, may validate a masculine symbolism theory perspective.

The fact that female Ss results tended not to validate the Freudian symbolism for either masculine or feminine symbols may be because female Ss have less stereotyped symbol expression or do not use symbols for sexual meaning that are generated by the physiognomic resemblances postulated by Freud.

The study results provide support for one of Leurner's (1969)

formulations by male Ss and disconfirm the other by both sexes. ELEPHANT proves to be a strong FATHER symbol for Male Ss but not masculine self-concept ME males. Female Ss do not support ELEPHANT symbolism. COW is not a good MOTHER symbol for either sex nor a self-concept ME symbol for female Ss. Results disconfirm the hypothesized symbolization and suggest caution in accepting Leurner's (1969) infantile regression's hypothesis as a basis for symbol determination. The support of the ELEPHANT-FATHER symbolism by male Ss may be another confirmation of a Freudian sexual stereotyped response by male Ss and provide validity for a masculine generated sexual symbol perspective.

The results of this study suggest validation for some of the symbol predictions of Jung (1968) and DeSoille (1965), while others are disconfirmed or not validated by virtue of non-significance of meanings. ASCENT is a good symbol for CONSCIOUS for each sex. DESCENT had non-significant meaning as did UNCONSCIOUS. Results for these concepts were not valid tests of the hypothesized relationships.

In this culture, UNCONSCIOUS has no generally understood connotations that evoke a stereotyped response. Individuals in the study rated the concept with much variability although the normative data reduced to neutrality of meaning. A frequency response of all 40 Ss in the sample was made of the ratings to UNCONSCIOUS. The responses were distributed over the seven point scales as follows: 63 1's; 90 2's; 105 3's; 221 4's; 62 5's; 65 6's; and 34 7's. This data range reflects many significant ratings. When the individuals profiles were examined, 25 Ss were found to rate the concept mainly on 4 or lower; 6 Ss to rate the concept clustered evenly around 4 and 9 Ss to rate

the concept on 4 or higher. Yet, when the data was reduced to a summary statistic, the average rating of all scales on UNCONSCIOUS was 3.71 or neutrality.

The data as presented in the individual's relationships section, may actually support DESCENT-UNCONSCIOUS symbolism, but may not be determined within the methods of this investigation.

The Jungian archetypal symbol WIZARD proved to be a validated FATHER symbol for both male and female Ss and a self-concept symbol for males. WITCH was not a MOTHER symbol for either sex nor was it a self-concept symbol for females. While the results suggest support for one archetype and non-support for the other, they may have been skewed by culturally stereotyped responses. Ss may have made predominantly positive connotation responses to FATHER, WIZARD and MOTHER and very negative responses to WITCH. The overwhelming negative connotations associated with WITCH, in this culture, may have generated so much negative stereotyped meaning that personal meanings ratings were not reflected. As Jung and DeSoille use the symbol the old magic woman or SORCERESS or WITCH will carry the Ss' meanings associated with the MOTHER. If NEGATIVE MOTHER had been the referent, the Ss may have generated connotations more in keeping with WITCH symbolism. The choice of SORCERESS as the symbol may have evoked ratings more open to personal meanings and provided a better test of the symbol-referent relationship.

Jung, Learner and DeSoille all use the symbol HOUSE as a ME self-concept symbol. This symbol was consistently validated by both males and females. As was the case for other of the symbol-referent

relationships the degree of relatedness between the symbol (HOUSE) and hypothesized referent (ME) was closer for the individuals relationships data (both 2nd) than for the cultural meanings (4th males and 6th females). This finding supports the methods of data comparison employed to validate symbol-referent relationships separate from the cultural meanings relationships.

As the data level used to compare the symbols and referent was closer to expressing individual's symbol-referent relationship there was a tendency for the data to validate more the theoretical predictions for the male Ss data. The female Ss data tended to be a better predictor at the cultural level.

When examining those symbol-referent relationships that were validated more at the individual's data level for each sex, a trend emerged. For male Ss, relationships supporting symbolism for ME, FATHER and CONSCIOUS were usually closer. For female Ss, relationships supporting symbolism for ME and MOTHER were closer at the individual's level and symbolism for FATHER less close. With the exceptions of HOUSE and VASE as ME symbols for females, the hypothesized symbol-referent predictions for females tended not to be confirmed at the individual's relationships data level. This suggests that theory predictions of masculine symbols and of feminine symbols for males may be more indicative of male orientation than of universal symbolism. The fact that masculine symbols are less confirmed for female Ss at the individual relationship data suggest that females do not use "masculine symbols" as much as theories would predict. Female Ss data may reflect masculine symbolism at a "cultural level" because

females understand but do not use stereotyped masculine symbolization or because at a cultural level there is a masculine symbolism overlay.

The current study was based upon the assumption that symbolism as a process does occur and that some concepts are symbols and some referents. When examining the finding describing the extent of the closeness between a symbol and any other concept for individuals relationships data (Appendix Tables XVI, XVII, and XIX) a general association paradigm might also explain some of the relationships. If we were to predict that the concepts would be related by animals to animals, people to people and objects with objects; we find that COW and ELEPHANT are closer relationships than either as a symbol for human referents. DRAGON is closely associated to ELEPHANT for male Ss and to SWORD for female Ss.

WITCH is closest to DRAGON for female Ss and to WIZARD for male Ss. These might be explained as being common folk and children's stories associations. WIZARD is closest to ME males and ASCENT females one example of the people-people association.

The prediction of objects associated with objects is not supported. VASE is closest to MOTHER for male Ss and ME for female Ss supporting Psychoanalytic theory predictions. SWORD is closest to WIZARD for male Ss and ASCENT females. The SWORD-WIZARD relationship might be a validation of Psychoanalytic predictions and common children's story relatedness. HOUSE is closely related to CONSCIOUS for males and COW for females not supporting a general associations hypotheses. Although other explanations of concept-concept relatedness may be generated that describe some of the findings the paradigm of symbolism

and symbol-referent relationships used in personality work was presented and tested by this study.

The present investigation represents a significant development in the symbol validation research in that it presented both symbols and referents to subjects for meanings ratings. The use of semantic differential ratings and scale by scale comparisons allowed for ample individual responses in as differentiated comparisons as possible. By not collapsing the scales data to two or three factors, comparisons were more representative of individuals meanings. The inclusion of a diverse sample of respondents in the study increased the likelihood of symbol users and of many symbol experiences. The use of data analysis methods including both normative and individual relationships averages allowed, for the first time, an exploration of the question of the differentiation of cultural symbols from individual or theoretically universal symbols.

The study is limited in several respects. There was no differentiation made between symbol users from non-symbol users for the symbols investigated. The mixing of both symbol users and not users may have canceled significant trends in data. This investigation, like all studies using several subjects, must at some time average across the Ss. Relationships between symbols and referents were preserved as far as possible within the data collection and analysis steps. The "Individual's relationships findings" was based upon the average of the relationships. Thus, the "Individual's relationship findings" and the "Normative findings" differ by one level of summation and may not reflect the difference between individuals who ascribe certain meanings

to symbols compared with culturally shared symbols having shared meanings for many individuals.

A problem that plagued the results of this investigation was that of significance of ratings for the averages. In several cases, symbols and referents could not be compared because the average of the ratings on the scales were not ± 1 from neutrality. For the Normative findings, no statement about meanings could be made. In examining individual data summary sheets it was found that for some subjects, significant relationships did exist between the symbols and referent. Thus, for some individuals, symbol-referent meaning relationships did exist that were not reflected in the normative summary of the data or in the "Individual's Relationships average" data. These individual relationships may have been few in number, may have had polar values and thus canceled each other out, or may have been negated by many individuals who were non-symbol users who did not rate the specific symbol and referent as having meanings.

A possible limiting assumption included in this and other paper and pencil investigations of symbolism, was that the stimulus concepts, e.g., words on a page, would evoke the imagery and emotional meaning involvement as is found in personal symbol experiences. The very nature of the meanings of symbols may be as much a function of the process of their realization in dreams, daydreams or altered states of awareness as it is their content representation. Thus, a booklet with words at the top of each page may not evoke the meanings sufficient for relationships to be fully scaled.

The objective, quantifiable methods developed in this research

for measuring symbol-referent meanings are built upon and refined from previous objective investigations of symbol meanings. Use of these methods suggest an area of research capable of yielding objective verification of symbol theory formulations and meanings interpretations developed in clinical practice and literature.

The symbol meanings validated in this study might be used as general meanings hypotheses useful in helping a client determine personal symbol meanings. The clinician must not assume the client is ascribing the universal meaning to the symbol and must further test the clients personal meanings associations to the symbol. The use of the validated symbols in guided fantasy techniques may well evoke responses representative of clients meanings for the referents.

This method of symbol-referent comparisons employed in this study could be used to help individual clients map the unconscious relationships between dream symbols, projective techniques symbol responses, guided fantasy symbols, and meaningful personal referents.

Clinicians could employ this method to help patients determine personal meanings of symbols and to differentiate personal from cultural and universal components of symbolism.

BIBLIOGRAPHY

- Adler, G. 1948. Studies in Analytical Psychology, London: Routledge and Kegan Paul.
- Archer, G. S., & Burgess, 1970. I.S.A. Further Investigation of Sexually Symbolic Concepts Using the Semantic Differential Technique, Journal of Projective Techniques and Personality Assessment, 34, 369-372.
- Acord, D. 1962. Sexual Symbolism as a Correlate of Age. Journal of Consulting Psychology, 26, 279-281.
- Althouse, R. N. 1970. A Semantic Differential Investigation of Sexually Symbolic Concepts: Freud and Jung. Journal of Projective Techniques and Personality Assessment, 34, 507-512.
- Barker, E. D. 1957. The Perception of Sexual Symbolism, Unpublished doctoral dissertation, Columbia University.
- Bartlett, F. C. 1932. Remembering, London: Cambridge University Press.
- Buss, A. N., & Durkee, A. 1957. The Association of Animals with Familial Figures, Journal of Projective Techniques and Personality Assessment, 21, 366-371.
- Craddick, R. A., & Worthy, M. 1970. Reply to Archer and Burgess on Their Investigation of Symbolic Concepts Using the Semantic Differential Technique. Journal of Projective Techniques and Personality Assessment, 34, 373-374.
- DeSoille, R. 1965. The Directed Daydream, (Translated by Frank Haronian), New York: Psychosynthesis Research Foundation, Issue No. 18.
- Earl, C. J. C. 1941. A Note on Validity of Certain Rorschach Symbols, Rorschach Research Exchange, 5, 51-61.
- Freud, Sigmund 1952. (Translated by James Stachey) On Dreams, New York: W. W. Norton.
- Freud, Sigmund 1953. Fragment of an Analysis of a Case of Hysteria (1905). In J. Stachey (Ed.), The Standard Edition of the Complete Psychological Works of Sigmund Freud, Vol. 7, London: Hogarth.

- Freud, Sigmund 1960. The Interpretation of Dreams, (Translated by J. Stachey), New York: Basic Books.
- Fromm, Erich 1951. The Forgotten Language, New York: Holt, Rinehart & Winston.
- Gill, W. S. 1967. Animal Content in the Rorschach, Journal of Projective Techniques and Personality Assessment, 31, 49-56.
- Goldfarb, W. 1945. The Animal Symbol in the Rorschach Test and an Animal Association Test, Rorschach Research Exchange, 9, 8-22.
- Goldfried, M.R. 1963. The Connotative Meaning of Some Animal Symbols for College Students, Journal of Projective Techniques and Personality Assessment, 27, 60-67.
- Goldfried, M. R., & Kissel, S. 1963. Age as a Variable in the Connotative Perceptions of Some Animal Symbols, Journal of Projective Techniques & Personality Assessment, 27, 171-179.
- Jones, A. 1956. Sexual Symbolism and the Variables of Sex and Personality Integration, Journal of Abnormal and Social Psychology, 53, 187-190.
- Jones, A. 1961. Sexual Symbolic Responses in Prepubescent and Pubescent Children, Journal of Consulting Psychology, 25, 383-387.
- Jones, E. 1948. Papers on Psychoanalysis, London: Bailliere, Tindall Cox.
- Jung, C. G. 1957. The Collected Works of C. G. Jung, Princeton: Princeton University Press.
- Jung, C. G., Henderson, J. L., von Franz, M. S., Jaffe, A., & Jacobi, J. 1964. Man and His Symbols, Garden City: Doubleday.
- Klopfer, W. G. 1954. Interpretative Hypotheses Derived from the Analysis of Content. In Klopfer, B.; Ainsworth, M., Klopfer, W. G., & Holt, R., Developments in the Rorschach Technique, Volume I, New York: World Book Company.
- Leuner, Hanscarl 1969. Guided Affective Imagery (GAI), American Journal of Psychotherapy, 23, 4-22.
- Lessler, K. 1962. Sexual Symbols; Structured and Unstructured, Journal of Consulting Psychology, 26, 44-49.
- Lessler, K. 1964. Cultural and Freudian Dimensions of Sexual Symbols, Journal of Consulting Psychology, 28, 46-53.
- Levy, L. H. 1954. Sexual Symbolism: A Validity Study, Journal of Consulting Psychology, 18, 43-46.

- Messick, S. J. 1957. Metric Properties of the Semantic Differential, Educational and Psychological Measurement, 17, 200-206.
- Moss, C. S. 1961. Experimental Paradigms for the Hypnotic Investigation of Dream Symbolism, Journal of Clinical and Experimental Hypnosis, 9, 105-117.
- Moss, C. S. 1970. Dreams, Images, and Fantasy: A Semantic Differential Casebook, Urbana: University of Illinois Press.
- Osgood, E. E. 1962. Studies on the Generality of Affective Meaning Systems, American Psychologist, 17, 10-28.
- Osgood, E. E., & Lauria, A. 1954. A Blind Analysis of a Case of Multiple Personality Using the Semantic Differential, Journal of Abnormal and Social Psychology, 49, 579-591.
- Osgood, E. E., Suci, G. J., & Tannenbaum, P. H. 1957. The Measurement of Meaning, Urbana: University of Illinois Press.
- Osgood, E. E., Ware, E. E., & Morris, E. 1961. Analysis of the Connotative Meanings of a Variety of Human Values as Expressed by American College Students, Journal of Abnormal and Social Psychology, 62, 62-73.
- Pope, B., & Bare, E. E. 1961. A Semantic Study of Selected Rorschach Responses, American Psychologist, 16, 392 (abstract).
- Presley, A. S. 1969. Concept-Scale Interaction in the Semantic Differential and Its Implications for Factor Scores, British Journal of Psychology, 60, 109-113.
- Rychlak, J. F. 1959. Forced Association, Symbolism and Rorschach Constructs, Journal of Consulting Psychology, 23, 455-460.
- Schonbar, R. A., & Davitz, J. R. 1960. The Connotative Meaning of Sexual Symbols. Journal of Consulting Psychology, 24, 483-487.
- Starer, E. 1955. Cultural Symbolism: A Validity Study, Journal of Consulting Psychology, 19, 453-454.
- Stennett, R. G., & Thurlow, M. 1958. Cultural Symbolism: The Age Variable, Journal of Consulting Psychology, 22, 496.
- Swartley, W. 1965. Initiated Symbol Projection, In Assagiolia, R. Psychosynthesis, New York: Viking Compass.
- Triandis, H. C., & Osgood, E. E. 1958. A Comparative Factorial Analysis of Semantic Structures in Monolingual Greek and American College Students, Journal of Abnormal and Social Psychology, 57, 187-196.

- Van den Berg, J. H. 1962. An Existential Explanation of the Guided Daydream in Psychotherapy, Review of Existential Psychology and Psychiatry, 2, 5-35.
- Winter, W. D., & Prescott, J. W. 1957. A cross validation of Starrer's Test of Cultural Symbolism, Journal of Consulting Psychology, 21, 22.
- Worthy, M., & Craddick, R. A. 1969. Semantic Differential Investigation of Sexually Symbolic Concepts, Journal of Projective Techniques and Personality Assessment, 33, 78-80.

APPENDIX

TABLE VII

POPULAR CONNOTATIONS OF SYMBOLS AND REFERENTS
FOR MALE AND FEMALE SS

ASCENT	M: quite <u>valuable and fast; slightly good, nice, beautiful, pleasant, healthy, strong, large and active</u>
	F: quite <u>beautiful, active and sharp; slightly good, nice, pleasant, clean, valuable, healthy and strong</u>
	M & F: quite <u>valuable and active; slightly good, nice, beautiful, pleasant, healthy, strong, fast and sharp</u>
CONSCIOUS	M: quite <u>good, nice, beautiful, pleasant, valuable, healthy, strong, fast, active and sharp; slightly clean and large</u>
	F: quite <u>pleasant, valuable, healthy, active and sharp; slightly good, nice, beautiful, strong and fast</u>
	M & F: quite <u>good, nice, pleasant, valuable, healthy, strong and active; slightly beautiful, clean, fast and sharp</u>
COW	M: quite <u>good, valuable, healthy, strong, large, heavy and feminine; slightly pleasant and slow</u>
	F: quite <u>good, valuable, healthy, large, heavy and slow; slightly nice, pleasant, strong, rugged, passive, sharp and feminine</u>
	M & F: quite <u>good, valuable, healthy, strong, large, heavy, slow and feminine; slightly nice, beautiful, pleasant and dull</u>
DESCENT	M: none
	F: slightly <u>heavy</u>
	M & F: slightly <u>heavy</u>
DRAGON	M: quite <u>ugly, masculine, strong, large, heavy and rugged; slightly bad, hot, unpleasant and active</u>
	F: quite <u>strong, large, heavy, rugged, active, hot and masculine; slightly unpleasant</u>
	M & F: quite <u>strong, large, rugged, active and masculine; slightly hot, ugly and unpleasant</u>
ELEPHANT	M: very <u>strong, large and heavy; quite valuable, healthy, rugged and masculine; slightly good and slow</u>
	F: very <u>strong, large, and heavy; quite valuable, healthy, rugged, slow and dull; slightly good, nice, pleasant and masculine</u>
FATHER	M: quite <u>good, nice, pleasant, clean, valuable, healthy, strong, large, heavy, rugged, fast, active, sharp and masculine</u>

- F: very masculine; quite good, nice, clean, valuable, healthy and strong; slightly beautiful, pleasant, heavy, rugged and sharp
- M & F: very masculine; quite good, nice, clean, valuable, healthy, strong and rugged; slightly beautiful, pleasant, large, heavy, fast, active and sharp
- HOUSE
- M: quite good, nice, beautiful, pleasant, clean, valuable, strong and large; slightly healthy and heavy
- F: quite good, nice, pleasant and valuable; slightly beautiful, clean, strong, large and heavy
- M & F: quite good, nice, beautiful, pleasant, clean and valuable; slightly healthy, strong, large and heavy
- ME
- M: very clean; quite good, nice, valuable, healthy, strong, large, fast, active, sharp and masculine; slightly beautiful, pleasant, rugged and hot
- F: quite good, nice, pleasant, clean, valuable, healthy and feminine; slightly beautiful, strong, active and sharp
- M & F: quite good, nice, clean, valuable, healthy, active, and sharp; slightly beautiful, pleasant, strong and fast
- MOTHER
- M: quite good, nice, beautiful, pleasant, clean, valuable and feminine; slightly healthy, fast, active and sharp
- F: quite good, nice, beautiful, pleasant, clean, valuable, healthy, active and feminine; slightly strong, fast and sharp
- M & F: quite good, nice, beautiful, pleasant, clean, valuable, healthy, active and feminine; slightly fast and sharp
- PROHIBITIONS
- M: none
- F: slightly unpleasant
- M & F: slightly unpleasant
- SWORD:
- M: very sharp; quite strong, rugged, fast and masculine; slightly valuable, active, large and cold
- F: very sharp; quite strong, fast and cold; slightly valuable, large and masculine
- M & F: very sharp; quite strong, fast and masculine; slightly valuable, large, rugged, active and cold
- UNCONSCIOUS:
- M: none
- F: quite passive; slightly sick
- M & F: slightly passive
- VASE
- M: quite nice, beautiful, pleasant, clean, valuable and delicate; slightly good, light and feminine
- F: quite nice, beautiful, pleasant, and delicate; slightly

- good, clean, valuable, and feminine
- M & F: quite nice, beautiful, pleasant, valuable, and delicate; slightly good, clean, light and feminine
- WITCH M: very feminine; quite bad, awful, ugly, dirty and cold; slightly worthless, sick, strong and active
- F: quite bad, ugly, unpleasant, active and feminine; slightly strong, fast and sharp
- M & F: quite bad, ugly, unpleasant, active and feminine; slightly awful, dirty, strong and sharp
- WIZARD M: quite strong, active, sharp and masculine; slightly good, healthy and fast
- F: quite active and sharp; slightly strong, fast and masculine
- M & F: quite active, sharp, masculine; slightly good, strong and fast

TABLE VIII
POPULAR OR NORMATIVE D^2 BETWEEN SYMBOLS
AND REFERENTS FOR MALE SS

ASCENT	0														
CONSCIOUS	6.56														
COW	30.83	38.82													
DESCENT	14.92	33.99	24.58												
DRAGON	52.70	81.03	68.35	39.85											
ELEPHANT	37.13	51.84	75.68	35.92	35.26										
FATHER	12.33	15.05	46.78	38.87	59.05	32.85									
HOUSE	11.01	10.40	18.45	29.35	77.99	34.22	14.67								
ME	10.78	9.61	53.60	44.28	71.13	47.81	4.69	16.04							
MOTHER	19.01	16.30	39.97	32.52	109.93	86.25	47.36	21.66	38.48						
PROHIBITIONS	32.50	60.59	43.03	7.64	26.94	47.37	60.67	55.72	64.92	58.41					
SWORD	18.59	32.51	62.36	29.01	35.47	43.02	20.65	38.45	25.37	60.80	34.15				
UNCONSCIOUS	33.62	58.04	32.69	6.11	49.22	52.13	65.40	48.53	70.66	49.73	7.39	46.01			
VASE	27.33	32.21	39.61	23.75	111.80	84.85	63.04	32.61	56.05	14.50	45.31	63.49	28.15		
WITCH	85.21	120.53	100.50	48.19	55.90	113.47	132.68	127.02	138.66	103.40	30.56	71.68	46.15	94.80	
WIZARD	5.72	13.40	45.45	19.30	37.78	35.45	10.73	22.58	11.20	36.20	30.32	9.58	39.97	45.24	81.37
	ASCENT	CONSCIOUS	COW	DESCENT	DRAGON	ELEPHANT	FATHER	HOUSE	ME	MOTHER	PROHIBITIONS	SWORD	UNCONSCIOUS	VASE	WITCH

TABLE IX
POPULAR OR NORMATIVE D^2 BETWEEN SYMBOLS AND REFERENTS FOR MALE Ss

SUMMARY OF DISTANCES FROM SYMBOLS

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	D^2 <u>RANGE</u>
ASCENT	5.72 Wizard	6.56 <u>Conscious</u> *	10.78 Me	11.01 House	12.33 Father	14.92 Descent	18.59 Sword	79.49
COW	18.45 House	24.58 Descent	25.68 Elephant	30.83 Ascent	32.69 Unconscious	38.82 Conscious	39.61 Vase	82.05
DESCENT	6.11 <u>Unconscious</u>	7.64 Prohibitions	14.92 Ascent	19.30 Wizard	23.75 Vase	24.58 Cow	29.01 Sword	42.08
DRAGON	26.94 <u>Prohibitions</u>	35.26 Elephant	35.47 Sword	37.78 <u>Wizard</u>	39.85 Descent	49.22 Unconscious	52.70 Ascent	86.86
ELEPHANT	25.68 Cow	32.85 <u>Father</u>	34.22 House	35.26 Dragon	35.45 Wizard	39.92 Descent	37.13 Ascent	87.79
HOUSE	10.40 Conscious	11.01 Ascent	14.67 Father	16.04 <u>Me</u>	18.45 Cow	21.66 Mother	22.58 Wizard	116.62
SWORD	9.88 Wizard	18.59 Ascent	20.65 <u>Father</u>	25.37 <u>Me</u>	29.01 Descent	32.51 Conscious	34.15 Prohibitions	61.80
VASE	14.50 <u>Mother</u>	23.75 Descent	27.33 Ascent	28.25 Unconscious	32.21 Conscious	39.61 House	45.24 Wizard	97.30
WITCH	30.56 Prohibitions	46.15 Unconscious	48.19 Descent	55.90 Dragon	71.68 Sword	81.37 Wizard	85.21 Ascent	108.10
WIZARD	5.72 Ascent	9.58 Sword	10.73 <u>Father</u>	11.20 Me	13.40 Conscious	19.30 Descent	22.58 House	75.65

*underlined concepts represent the theoretical referent for the symbol on the left. If no concept is underlined in a given row, the theoretical referent did not appear in the first seven closest distances.

POPULAR OR NORMATIVE D² BETWEEN SYMBOLS AND REFERENTS FOR FEMALE Ss5

TABLE XI

POPULAR OR NORMATIVE D^2 BETWEEN SYMBOLS AND REFERENTS FOR FEMALE Ss

SUMMARY OF DISTANCES FROM SYMBOLS

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	D^2 RANGE
ASCENT	4.30 <u>Conscious</u> *	8.37 Wizard	12.59 Me	12.99 Mother	13.71 Father	16.78 House	20.05 Vase	40.00
COW	10.31 Elephant	11.28 House	35.06 Descent	35.47 Vase	38.90 Me	39.47 Conscious	40.07 Father	63.98
DESCENT	4.55 Prohibitions	13.12 <u>Unconscious</u>	14.96 Witch	17.19 Wizard	21.43 Ascent	22.94 Sword	22.98 House	35.70
DRAGON	25.41 Sword	25.81 <u>Prohibitions</u>	27.29 Descent	27.42 Wizard	32.25 Witch	36.36 Father	37.70 Elephant	57.94
ELEPHANT	10.31 Cow	20.09 House	30.60 <u>Father</u>	37.70 Dragon	39.99 Descent	42.20 Ascent	45.03 Cow	58.42
HOUSE	11.28 Cow	15.84 Conscious	16.09 Vase	16.75 Father	16.78 Ascent	18.19 <u>Me</u>	20.09 Elephant	40.70
SWORD	15.10 Wizard	22.94 Descent	23.88 Ascent	25.41 Dragon	26.80 <u>Father</u>	29.07 Witch	29.26 Prohibitions	59.19
VASE	16.09 House	17.65 <u>Me</u>	18.29 <u>Mother</u>	18.72 Conscious	20.05 Ascent	29.46 Descent	29.83 Unconscious	67.26
WITCH	14.96 Descent	15.06 Prohibitions	25.71 Wizard	29.07 Sword	32.25 Dragon	33.78 Unconscious	34.28 Ascent	53.77
WIZARD	8.37 Ascent	11.24 Conscious	13.91 <u>Father</u>	15.10 Sword	17.19 Descent	22.36 Prohibitions	25.71 Witch	40.44

*underlined concepts represent the theoretical referent for the symbol on the left. If no concept is underlined in a given row, the theoretical referent did not appear in the first seven closest distances.

POPULAR OR NORMATIVE D² BETWEEN SYMBOLS AND REFERENTS FOR FEMALE AND MALE Ss

ASCENT CONSCIOUS COW DESCENT DRAGON ELEPHANT FATHER HOUSE ME MOTHER PROHIBITIONS SWORD UNCONSCIOUS VASE WITCH

TABLE XIII

POPULAR OR NORMATIVE D^2 BETWEEN SYMBOLS AND REFERENTS FOR MALE AND FEMALE Ss

SUMMARY OF DISTANCES FROM SYMBOLS

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	D^2 RANGE
ASCENT	4.09 <u>Conscious*</u>	5.32 Me	5.81 Wizard	11.24 House	11.47 Father	14.54 Mother	16.47 Descent	50.35
COW	13.69 House	16.76 Elephant	28.46 Descent	34.40 Ascent	36.49 Vase	37.02 Unconscious	37.41 Me	63.94
DESCENT	5.09 Prohibitions	8.13 <u>Unconscious</u>	16.47 Ascent	16.63 Wizard	24.19 House	25.08 Sword	25.13 Vase	31.08
DRAGON	24.92 <u>Prohibitions</u>	28.22 Sword	29.97 Wizard	31.31 Descent	34.40 Elephant	41.85 Witch	44.60 Father	70.56
ELEPHANT	16.76 Cow	25.38 House	29.60 <u>Father</u>	34.40 Dragon	36.17 Descent	38.05 Ascent	40.79 Wizard	70.32
WIZARD	5.81 Ascent	11.47 <u>Father</u>	11.62 Sword	11.67 Conscious	13.76 Me	16.63 Descent	24.05 House	42.75
HOUSE	10.78 <u>Me</u>	11.24 Ascent	12.30 Conscious	13.69 Cow	14.34 Father	19.44 Mother	22.32 Vase	71.27
SWORD	11.61 Wizard	19.69 Ascent	22.72 <u>Father</u>	25.08 Descent	28.22 Dragon	30.62 Prohibitions	31.46 Conscious	54.93
VASE	15.57 <u>Mother</u>	21.51 Ascent	22.32 House	23.33 Conscious	25.13 Descent	27.07 Me	27.38 Unconscious	79.91
WITCH	19.20 Prohibitions	26.51 Descent	34.67 Unconscious	44.47 Sword	47.55 Wizard	54.44 Ascent	71.31 Vase	70.96

*underlined concepts represent the theoretical referent for the symbol on the left. If no concept is underlined in a given row, the theoretical referent did not appear in the first seven closest distances..

TABLE XIV

ASCENT CONSCIOUS COW DESCENT DRAGON ELEPHANT FATHER HOUSE ME MOTHER PROHIBITIONS SWORD UNCONSCIOUS VASE WITCH

TABLE XV
AVERAGE OF INDIVIDUALS D^2 RELATIONSHIPS BETWEEN SYMBOLS
AND REFERENTS FOR MALE SS

SUMMARY OF DISTANCES FROM SYMBOLS								D^2
	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>RANGE</u>
ASCENT	50.35 <u>Conscious</u> *	58.75 House	60.20 Me	66.55 Wizard	69.10 Vase	72.95 Father	76.60 Mother	83.30
COW	59.00 Elephant	62.55 House	76.80 Descent	82.15 Conscious	82.80 Ascent	86.25 Father	86.30 Vase	110.65
DESCENT	56.05 Prohibitions	62.05 <u>Unconscious</u>	70.55 Wizard	76.80 Cow	79.30 Ascent	79.50 Vase	85.50 Dragon	78.30
DRAGON	71.35 <u>Prohibitions</u>	85.30 Elephant	94.65 Witch	95.55 Wizard	101.50 Descent	105.30 Sword	112.00 Ascent	97.55
ELEPHANT	59.00 Cow	75.95 <u>Father</u>	79.75 House	84.80 Ascent	85.30 Dragon	85.50 Descent	86.89 ME	98.85
HOUSE	46.00 Conscious	51.95 <u>Me</u>	57.50 Father	58.75 Ascent	62.55 Cow	72.45 Mother	75.25 Vase	132.10
SWORD	69.95 Wizard	75.05 Father	79.20 <u>Me</u>	80.40 Ascent	86.15 Conscious	94.35 House	97.00 Descent	62.30
VASE	67.60 <u>Mother</u>	69.10 Ascent	75.25 House	79.15 Conscious	79.50 Descent	86.30 Cow	91.25 Unconscious	101.30
WITCH	69.10 Prohibitions	88.15 Descent	94.65 Dragon	108.70 Unconscious	123.00 Wizard	132.25 Sword	139.75 Vase	115.80
WIZARD	54.95 Me	63.50 Conscious	66.55 Ascent	69.30 <u>Father</u>	69.95 Sword	70.55 Descent	80.00 House	68.05

*underlined concepts represent the theoretical referent for the symbol on the left. If no concept is underlined in a given row, the theoretical referent did not appear in the first seven closest distances.

AVERAGE OF INDIVIDUALS D² RELATIONSHIPS BETWEEN SYMBOLS
AND REFERENTS FOR FEMALE SS

ASCENT
CONSCIOUS
COW
DESCENT
DRAGON
ELEPHANT
FATHER
HOUSE
ME
MOTHER
PROHIBITIONS
SWORD
UNCONSCIOUS
VASE
WITCH

TABLE XVII

AVERAGE OF INDIVIDUALS D^2 RELATIONSHIPS BETWEEN SYMBOLS
AND REFERENTS FOR FEMALE SS

SUMMARY OF DISTANCES FROM SYMBOLS

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	D^2 <u>RANGE</u>
ASCENT	46.30 <u>Conscious</u> *	55.10 Wizard	55.65 Me	63.35 Mother	64.50 Sword	65.35 House	66.05 Vase	51.70
COW	46.55 Elephant	56.20 House	84.45 Conscious	85.60 Vase	86.40 <u>Me</u>	88.95 Ascent	92.50 <u>Mother</u>	83.45
DESCENT	37.45 Prohibitions	66.55 <u>Unconscious</u>	71.90 Witch	74.00 House	76.75 Conscious	81.45 Sword	83.05 Wizard	65.70
DRAGON	76.10 Sword	77.55 Witch	80.20 Wizard	84.30 <u>Prohibitions</u>	86.40 Elephant	89.55 Descent	86.40 Elephant	71.75
ELEPHANT	46.55 Cow	75.75 House	86.40 Dragon	87.70 Ascent	88.20 Conscious	93.90 <u>Father</u>	95.90 Wizard	72.00
HOUSE	56.20 Cow	62.60 <u>Me</u>	65.35 Ascent	65.70 Vase	66.55 Conscious	72.10 Mother	74.00 Descent	61.95
SWORD	64.50 Ascent	67.00 Wizard	71.35 Witch	76.10 Dragon	77.20 Conscious	81.45 Descent	81.50 Prohibitions	65.85
VASE	52.00 <u>Me</u>	63.15 Conscious	65.70 House	66.05 Ascent	70.60 <u>Mother</u>	85.60 Cow	88.00 Descent	95.85
WITCH	64.05 Wizard	67.05 Prohibitions	71.35 Sword	71.90 Descent	77.55 Dragon	87.95 Ascent	86.75 Conscious	53.80
WIZARD	55.10 Ascent	58.50 Conscious	64.05 Witch	67.00 Sword	77.60 <u>Father</u>	80.20 Dragon	83.05 Descent	50.55

*underlined concepts represent the theoretical referent for the symbol on the left. If no concept is underlined in a given row, the theoretical referent did not appear in the first seven closest distances.

AVERAGE OF INDIVIDUALS D² RELATIONSHIPS BETWEEN SYMBOLS
AND REFERENTS FOR THE COMBINED SAMPLE

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TABLE XIX

AVERAGE OF INDIVIDUALS D^2 RELATIONSHIPS BETWEEN SYMBOLS AND REFERENTS FOR THE COMBINED SAMPLE

SUMMARY OF DISTANCES FROM SYMBOLS

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	D^2 <u>RANGE</u>
ASCENT	48.32 <u>Conscious</u> *	57.93 Me	60.82 Wizard	62.05 House	67.58 Vase	69.98 Mother	72.45 Sword	59.98
COW	57.78 Elephant	59.38 House	83.30 Conscious	84.70 Descent	85.88 Ascent	85.95 Vase	89.85 Me	71.80
DESCENT	46.75 Prohibitions	64.30 <u>Unconscious</u>	76.80 Wizard	80.03 Witch	82.78 House	83.28 Ascent	84.45 Conscious	48.78
DRAGON	77.83 <u>Prohibitions</u>	85.85 Elephant	86.10 Witch	87.88 Wizard	90.70 Sword	95.53 Descent	105.11 Ascent	80.55
ELEPHANT	52.78 Cow	77.75 House	84.94 <u>Father</u>	85.85 Dragon	86.25 Ascent	91.63 Wizard	91.68 Conscious	85.07
WIZARD	60.82 Ascent	61.00 Conscious	68.48 Sword	70.91 Me	73.45 <u>Father</u>	76.80 Descent	84.58 House	44.93
HOUSE	56.28 Conscious	57.28 <u>Me</u>	59.38 Cow	62.05 Ascent	65.78 Father	70.48 Vase	72.28 Mother	87.37
SWORD	68.48 Wizard	72.45 Ascent	81.68 Conscious	84.43 <u>Father</u>	89.08 Me	89.23 Descent	90.70 Dragon	61.10
VASE	67.58 Ascent	69.10 <u>Mother</u>	70.48 House	71.15 Conscious	75.40 Me	83.75 Descent	85.95 Cow	90.80
WITCH	68.08 Prohibitions	80.03 Descent	86.10 Dragon	93.53 Wizard	99.38 Unconscious	101.80 Sword	108.30 Ascent	90.10

*underlined concepts represent the theoretical referent for the symbol on the left. If no concept is underlined in a given row, the theoretical referent did not appear in the first seven closest distances.