THE RELATIONSHIP OF SEXUAL SYMBOL IDENTIFICATION AND PREFERENCE TO NEUROTICISM AND EXTRAVERSION-INTROVERSION

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ABSTRACT

THE RELATIONSHIP OF SEXUAL SYMBOL IDENTIFICATION AND PREFERENCE TO NEUROTICISM AND EXTRAVERSION-INTROVERSION

by Frederick William Rohrs

Previous research has indicated that, on the whole, people are able to differentiate between male and female sexual symbols derived from Freudian dream theory. There have also been indications that individual differences exist in the ability to correctly differentiate between sexual symbols. The present study was an attempt to extend previous findings a) by determining whether is could identify abstract Freudian sexual symbols from among other abstract symbols that had been judged sexually neutral, b) by determining whether the personality dimensions of neuroticism and extraversion-introversion were related to the ability to correctly identify Freudian sexual symbols, and c) by determining whether the personality variables of neuroticism and extraversion-introversion were related to Ss' differential preferences between conventional sexual symbols. Freudian sexual symbols and symbols that were sexually neutral by conventional and Freudian standards.

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It was hypothesized that the more neurotic a person was, the more he would respond to sexually neutral symbols in both the symbol identification and symbol preference tasks. The reasoning for this was that sexual symbols, conventional and Freudian, would be avoided because of their association with repressed sexual conflicts.

In addition, it was hypothesized that relatively introverted Ss would show more ability in correctly identifying abstract Freudian sexual symbols and would also show a greater preference for Freudian sexual symbols than relatively extraverted Ss. These hypotheses were based on Jungian theory which states that introverts have a greater interest in inner impulse life than extraverts. Conversely, relatively extraverted Ss were expected to show a greater preference for conventional symbolism and less ability in identifying Freudian sexual symbols than relatively introverted Ss.

Results showed that a sample of 188 single male (n = 98) and female (n = 90) college students could correctly identify abstract Freudian sexual symbolism from among sexually neutral symbols significantly above chance expectancy. However, neuroticism and extraversion-introversion, as derived from Freudian and Jungian theory respectively, and measured by the Maudsley Personality Inventory,

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were not significantly related to symbol identification ability possibly because of an inadequate dispersion of scores on the symbol identification task. Problems of research design related to complex theoretical propositions were also cited as possible reasons for failure to achieve expected results. In the case of neuroticism, conflicts other than sexual difficulties may have existed as the cause of the Ss' neuroticism, and for the extraversion-introversion dimension, both attributes, extraversion and introversion may have been simultaneously operating in the same person to an unknown degree.

In the case of symbol preferences between conventional, Freudian and neutral symbols, the existence of an attenuated dispersion of scores and strong, relatively uncontrolled response biases on the symbol preference task left the interpretation of results largely open to question. However, the obtained results gave some tentative indication that neuroticism and extraversion-introversion as derived from psychoanalytic theory and measured by the Maudsley Personality Inventory were not related to symbol preferences though further research is needed for confirmation of this finding.

Future research in this area must take into account the theoretical problems which were cited as well as devise

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methods for greater control of response biases than existed in the present study.

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A THESIS

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PROBLEM

Previous research has indicated that, on the whole, people are able to differentiate between male and female sexual symbols derived from Freudian dream theory. However, there have also been indications that individual differences exist in this ability to correctly differentiate between sexual symbols. The present study is an attempt to extend the findings of previous studies, first, by investigating differential responses to sexual and non-sexual (neutral) symbols, and second, by investigating the possibility that two personality variables correlate with the ability to correctly identify sexual symbols, neuroticism and extraversionintroversion. Consequently, three main questions are explored in this study:

1) Are subjects (Ss) able to identify male and female Freudian sexual symbols from among symbols that are sexually neutral?

2) Is the ability to identify sexual symbols related to the personality dimensions of neuroticism and/or extraversionintroversion?

3) Are the personality dimensions of neuroticism and extraversion-introversion related to Ss' preferential responses to symbols having conventionally social sexual meanings as

well as by their responses to symbols having Freudian sexual meanings?

These three broad questions are clarified and made more specific in the sections which follow.

BACKGROUND OF THEORY AND RESEARCH

Theoretical Background

Lessler (1962b) has compiled an extensive review of the literature on sympolism including the viewpoints of various philosophical, behavioristic, and psychoanalytic writers. Within this broad theoretical framework, the present study draws its impetus mainly from psychoanalytic thought, the main emphasis being placed upon concepts formulated by Freud, Fromm, Jung, and Fenichel. The following discussion contains theoretical considerations of symbol functions and symbol types, and also considers two personality variables which may be involved in the use of symbols, neuroticism and extraversion-introversion.

Symbol Functions

There appear to be two main types of psychological functions which symbols perform that are, in a sense, diametrically opposed. First, a symbol may perform a facilitating function with regard to the conscious recall of its referents, and second, as is the case with a Freudian symbol, it may perform an inhibitory disguise function which impedes

the conscious recall of its referents. A definition given by Morris (1927) will nelp explain the first function:

A	syr	nbol	is	an	y	giv	ven	or	e e	xpe	riend	ced	subst	itute	<u>stim-</u>
u	lus	that	t 1	eaJ	ls	to	а	rei	.ns	tat	ement	t of	tne	origi	nal
st	tim	ılus	in	а	f	orm	th	at	is	ob	serva	able	e only	r from	the
se	elf-	-inc.	lus	ive	; ;	Joir	ıt	of	vi	ew.					

Less technically stated, a symbol is any portion of experience that has become a substitute for and a reminder of some other portion of experience. (p. 284)

The key words here are "substitute" and "reminder". The facilitating function is shown by the fact that the symbol serves as the substitute vehicle by which other portions of experience are actively recalled to consciousness. Probably the best examples of this function would be spoken and written language, mathematical symbols and scientific notation.

The second type of psychological function of a symbol, the inhibitory function, is espoused mainly by psychoanalytic writers and is reflected in this definition of "symbol" given by English and English (1958):

...an idea in the conscious area of the psyche (i.e., an idea of which the person is aware) that takes the place of a mental process in the unconscious. The conscious idea becomes the object of the unconscious idea's instinctual motivation, the individual being unaware of the displacement or substitution.

When described as a wish or desire, the symbol includes not only the idea but the instinctual motive that goes with it. In Freudian psychoanalysis, the instinctual motive is a manifestation of libido. The fact that substitution of symbol for reality is necessary is ascribed to conflict or repression; the form taken by the symbol results partly from censorship. (pp. 538-39) The key words here are "substitution", "conflict", and "repression". In this case the symbol, rather than consciously reminding the person of another portion of experience, serves as a disguise in order to keep undesireable instinctual impulses from conscious awareness because of anxiety and conflict over their direct, open expression.

Freud (1930) in his <u>Die Traumdeutung</u> of 1900 emphasized the inhibitory disguise function of dream material which includes symbolic distortions:

Everyone has wishes that he would prefer not to disclose to other people, and wishes that he will not admit even to himself. On the other hand, we are justified in linking the unpleasurable character of... dreams with the fact of dream-distortion. And we are justified in concluding that these dreams are distorted and the wish-fulfilment contained in them disguised to the point of being unrecognizable precisely owing to the repugnance felt for the topic of the dream or for the wish derived from it and to an intention to repress them. The distortion in the dream is thus shown in fact to be an act of the censorship....a dream is a (disguised) fulfilment of a (suppressed or repressed) wish. (1960, p. 160)

Most of the psychoanalytic thought about symbolism has evolved from Freud's dream theories. For example, Ernest Jones (1950) draws a parallel between the psychodynamics involved in symbol formation and those involved in the formation of neurotic symptoms.

It is a well-established observation of clinical psychology that when a strong affective tendency is repressed it often leads to a compromise-formation neurotic symptoms being perhaps the best-known example - in which both the repressed and the repressing tendencies are fusel, the result being a substitutionproduct. From this it is a very slight step to infer that symbols are also of this nature, for it is known that they, like other compromise-formations, are composed of both conscious and unconscious elements... That symbolism arises as the result of intrapsychical conflict between the repressing tendencies and the repressed is the view accepted by all psycho-analysts. (p. 115)

Thus, as a compromise formation between impulse expression and inhibition, a symbol is a neurotic-like manifestation where the latent underlying meaning is excluded from conscious awareness.

In sum regarding symbol functions, symbols may perform a facilitating function in aiding active recall of other portions of experience or an inhibitory function by helping to keep the recognition of unacceptable impulses from conscious awareness. In psychoanalytic thinking, dream symbolism (which includes sexual symbolism) exemplifies the inhibitory function. It is a neurotic-like manifestation because, like the neurotic symptom, it represents a disguised compromise-formation between impulse expression and inhibition.

Symbol Types

In addition to differing symbol functions, there are also different symbol types. Fromm (1951) distinguishes between three types of symbols, <u>Conventional</u>, <u>Accidental</u>, and Universal.

Conventional symbols consist of such things as works, certain emblems, and pictures the use of which is a matter of sochetal or cultural convention taught to members of the society or culture from birth. With such symbols there is no intrinsic relationship between the symbols themselves and their referents, but rather, the link between the symbols and their referents is a matter of repeated association instilled by the demands of the particular society or culture. On the whole, conventional symbols seem to perform a facilitating function as discussed in the previous section.

Accidental symbols are personal s_o bols which have meaning to the individual person depending upon his own unique experiences. Thus in the example that Fromm gives, the name of a city may symbolize a mood, happy or sad, depending upon the given person's previous experiences in that city. The association here is accidental, and again as with the universal symbol there is no intrinsic relationship between the symbol and its referent.

The third symbol type that Fromm describes is the "Universal" symbol.

The universal symbol is the only one in which the relationship between the symbol and that which is symbolized is not coincidental but intrinsic. It is rooted in the experience of the affinity between an emotion or thought, on the one hand, and a sensory experience, on the other. It can be called universal because it is shared by all men, in contrast not only to the accidental symbol, which is by its very nature entirely personal, but also to the conventional symbol,

which is restricted to a group of people sharing the same convention. (Fromm, 1951, pp. 17-18)

Fromm's two criteria of a "Universal" symbol are that it is shared by all men and that it has an intrinsic relationship with its referent. From a theoretical standpoint, Freudian sexual symbols would meet these criteria.

Regarding the universal occurrence of sexual symbolism, including that found in dreams, Fread wrote:

... How do we profess to arrive at the meaning of these dream-symbols, about which the dreamer himself can give us little or no information.

My answer is that we derive our knowledge from widely different sources: from fairy tales and myths, jokes and witticisms, from folklore, i.e. from what we know of the manners and customs, sayings and songs, of different peoples, and from poetic and colloquial usage of language. Everywhere in these various fields the same symbolism occurs, and in many of them we can understand it without being taught anything about it. If we consider these various sources individually, we shall find so many parallels to dream-symbolism that we are bound to be convinced of the correctness of our interpretations. (Freud, 1957, p. 166)

Thus Freud infers the universality of sexual symbolism from the fact that it is found in similar form in the myths, customs and folklore of different peoples.

Regarding the intrinsic relationships between sexual symbols and their referents, Freud gives many examples including symbolic representation of the male and female genitalia.

All elongated objects, such as sticks, tree-trunks... may stand for the male organ - as well as all long, sharp weapons, such as knives, daggers and pikes... -Boxes, cases, chests, cupcoards and ovens represent the aterus, and also hollow objects, ships, and vessels of all kinds. (Freud, 1960, p. 354)

And elsewhere (Freud, 1957):

... the penis, is symbolized primarily by objects which resemble it in form, being long and upstanding, such as <u>sticks</u>, <u>umbrellas</u>, <u>poles</u>, <u>trees</u> and the like;... firearms are similarly used: <u>guns</u>, <u>pistols</u> and <u>re-</u> <u>volvers</u>, these last being a very appropriate symbol on account of their shape. (pp. 161-62)

The female genitalia are symbolically represented by all such objects as share with them the property of enclosing a space or are capable of acting as receptacles: such as <u>pits</u>, <u>hollows and caves</u>, and also jars and bottles, and boxes of all sorts and sizes, <u>chests</u>, <u>coffers</u>, <u>pockets</u>, and so forth. <u>Ships</u> too come into this category. Many symbols refer rather to the uterus than to other genital organs: thus <u>cupboard</u>, <u>stoves</u> and, above all, <u>rooms</u>.

The breasts must be included amongst the organs of sex; these, as well as the larger hemispheres of the female body, are represented by <u>apples</u>, <u>peaches</u> and <u>fruit</u> in general. (p. 163)

In these example: the main intrinsic relationship between the symbols and their referents seems to be the common property of shape.

In sum regarding symbol types, Fromm classifies symbols into three types, Conventional, Accidental and Universal. Conventional symbols are social or cultural in nature and seem to perform a facilitating function in the active recall of their referents. Accidental symbols are idiosyncratic and depend upon the individual person's unique experience. Universal symbols are theoretically common to all men. Freudian sexual symbolism can be subsumed under the "Universal" category by the criteria of universality and intrinsic relationship to its referents, and as was pointed out in the previous section on symbol functions, it performs an inhibitory function with regard to conscious recall by keeping its referents, i.e. unacceptable impulses, from conscious awareness.

Neuroticism and Extraversion-Introversion

In the previous discussion the focus was on symbols and symbolism <u>per se</u>. At this point attention will be turned toward two possible personality variables involved in the use of symbols, Neuroticism and Extraversion-Introversion.

Neuroticism

According to Fenichel (1945):

...we have in psychoneuroses, first a defense of the ego against an instinct, then a conflict between the instinct striving for discharge and the defensive forces of the ego, then a state of damming up, and finally the neurotic symptoms which are distorted discharges as a consequence of the state of lamming up a compromise between the opposing forces. The symptom is the only step in this development that becomesmanifest; the conflict, its history, and the significance of the symptoms are unconscious. (p. 20)

As a result of the "dammed up state" of instinctual libidinal impulses, ordinary normal excitations become

traumatic for the individual (Fenichel, 1945, p. 19). They are a threat to the ego's defensive structure because they might upset the precarious balance between impulse and defense and result in a discharge of the forbidden impulses.

The question arises as to the nature of these forbidden inpulses in the neurotic person and their effect upon his behavior. Fenichel (1945) gives an answer derived from Freudian (1908) thinking:

Neurotics suffer under the persistence of their Oedipus complex. The fact that this persistence necessarily disturbs object relationships of the moment by arousing misjudgments, dissatisfaction, and consequent disappointments manifests itself, first of all, in the characteristics of love life.

Because of the fact that "the behavior of a human being in sexual matters is often a prototype for the whole of his other modes of reaction to life", the manifestations of an anduly persistent Oedipus complex are not limited to love life proper but are encountered in all types of social relations. (Fenichel, 1945, p. 513)

Thus, the threatening impulses in the neurotic person are sexual in nature deriving from an unresolved Oedipus complex. The results in behavior are distortions in the sexual life and possible generalization of distorted behavior to other areas of functioning. However, these distortions are not necessarily limited solely to the behavior of neurotics for, as Fenichel (1945) points out:

...we have evidence to indicate that the statement "a neurotic person has retained his Oedipus complex, whereas a normal person has not" oversimplifies matters...the normal adult, too, still has his Gedipus complex, but there is a quantitative difference between the normal and the neurotic individual. (p. 108)

From this, one might expect some continuity of neurotic behavioral distortions between the neurotic person and the normal person depending upon the degree to which the Oedipus complex remains active.

Perhaps the best psychoanalytic statement of a continuity of neurotic behavior between normals and neurotics is given in Freud's <u>Psychopathology of Everyday Life</u> (1996). Here, Freud points out that the motivations behind such normal occurrences as the forgetting of names, clips of the tongue, mistakes in writing and errors of movement are the same as the motivations behind dream distortions ("The Dream Work") and the formation of neurotic symptoms:

The incongruities, absurdities, and errors in the dream content by virtue of which the dream is scarcely recognized as a psychic achievement originate in the same way - to be sure, through freer usage of the existing material - as the common error of our everyday life;...

The correct anderstanding of this strenge psychic work which allows the faulty actions to originate like the dream pictures will only be possible after we have discovered that the psychoneurotic symptoms, particularly the psychic formations of hysteria and compulsion neurosis, repeat in their rechanisms all the essential features of this mode of operation....

There is still another special interest for us in considering the faulty, chance, and symptomatic actions in the light of this last analogy. If we compare them to the function of the psychoneuroses and the neurotic symptoms, two frequently recurring statements gain in sense and support - namely, that the borderline between the nervous, normal, and abnormal states is indistinct, and that we are all slightly nervous....

But the common character of the mildest as well as the severest cases, to which the faulty and chance actions contribute, lies <u>in the ability to refer the</u> <u>phenomena to unwelcome</u>, <u>repressed</u>, <u>psychic material</u>, <u>which</u>, <u>though pushed away from consciousness</u>, <u>is never-</u> <u>theless not robbed of all capacity to express itself</u>. (Freud, 1956, pp. 166-68)

Thus dream distortions (which include symbols), neurotic symptoms, and the psychopathology which occurs in the everylay life of normal persons all share the commonality of the repression of andesireable impulses and the manifestation of the repressed material in disguised form. Part of the commonality of repressed material of normals and neurotics is, as has been previously pointed out, the Oedipus complex and the sexual impulses deriving from it. Distortions in behavior would be a function of the success of the repression, i.e. the less successful the repression, the greater would be the resulting defensive behavioral distortions, including distortion in the use of sexual symbols. Or, to express the situation in terms of the personality variable of neuroticism, the more neurotic an individual is, the more distortions would be expected in his use of Freudian sexual symbols. Also, the more neurotic an individual is, the more distortions would be expected in his use of conventional sexual symbols since these symbols, though not directly representative of impulse life, are indirectly related to it by association, i.e. conventional sexual symbols are related to males or remales by conventional association, and the very act of being thus related makes them

also associated with male or female sexual impulse life though not directly as is the case with Freudian sexual symbols.

Extraversion-Introversion

The second personality variable to be considered for this study is that of extraversion and introversion as developed by Jung:

In my practical medical work with nervous patients I have long been struck by the fact that among the many individual differences in almon psychology there exist also <u>typical distinctions</u>: <u>two types</u> especially became clear to me which I have termed the <u>Introversion</u> and the <u>Extraversion</u> Types. (Jung, 1946, p. 9)

However, this distinction of types is relative rather than a true dichotomy and is not limited to patients, for as Jung continues: "But every individual poscesses both mechanisms - extraversion as well as introversion, and only the relative predominance of the one or the other determines the type." (Jung, 1945, p. 10). Thus, like neuroticism, there seems to be a continuum of extraversion and introversion.

A clearer picture of extraversion and introversion is given by Jung (1946):

Extraversion means an outward-turning of the libido. With this concept I denote a manifest relatedness of subject to object in the sense of a positive novement of subjective interest towards the object. (p. 542) Introversion means a turning inwards of the libido, whereby a negative relation of subject to object is expressed. Interest does not move towards the object, but recedes towards the subject. (p. 567)

The extravert is marked by a turning of interest away from himself, the "subject", and toward the outer world, the "object". The opposite is true for the introvert. More specifically:

... the "reflective" and contemplative nature of the introvert finds compensation in an unconscious, archaic life with regard to instinct and sensation.... Conversely, we might say of the extravert that his less deeply rooted emotional life is more readily adapted to differentiation and domestication than his unconscious, archaic thought and feeling,... (p. 187)

In relation to symbolism, from the above statement it can be seen that the more a person is introverted, the more he might be expected to show a preference for "Universal" symbolism (as opposed to "Conventional" social symbolism) including Freudian sexual symbolism since it is representative of an internal, unconscious sexual impulse life. On the other hand, the more extraverted person, because of his turning outward of interest and his ready adaptation to "domestication", might be expected to show a preference for "Conventional" social symbolism (as opposed to "Universal" symbolism). The word "preference" in this context is taken to mean a positive emotional response. Thus, if faced with making a preferential choice between a "Conventional" social symbol. The word "Freudian symbol, the extravert would tend to choose (prefer) the former while the introvert would tend to choose (prefer) the latter.

Theoretical Summary and Conclusions

In the foregoin, theoretical discussion the following points were developed:

1) Symbols can perform two main functions; a facilitating function which aids in the recall of referents (Morris, 1927), and an inhibitory function which impedes referent recognition (Freud, 1960; Jones, 1950; Fenichel, 1945). Freudian sexual symbolism performs a neurotic-like inhibitory function because, similar to neurotic symptoms, it represents a disguised compromise-formation between impulse expression and inhibition in which repressed, unacceptable impulses are excluded from conscious awareness. (Freud, 1955; Jones, 1950)

2) According to Fromm (1951), symbols can be classified into three types: Conventional symbols are those in which the relationship between the symbol and its referent is a matter of learned social and cultural association. Accidental symbols are idiosyncratic and depend upon a person's own unique experience. Universal symbols are common to all men and are intrinsically related to their referents rather than related mevely by association. By inference, Freudian sexual symbolism can be subsumed under the universal category of symbolism. (Freud, 1957, 1960) 3) Based on the writings of Freud (1956) and Fenichel (1945), a continuum of neurotic behavior (neuroticism) is proposed extending from the psychopathology of everyday life in normal persons to actual neurotic symtoms of the neurotic person. Because Freudian sexual symbol formation performs the same functions as neurotic symptoms, the more neurotic a person is, the more distortion would likely exist in his response to Freudian sexual symbols due to their impact on his repressive defensive structure. Also, since conventional sexual symbols are indirectly associated with sexual impulse life, the more neurotic a person is, the more distortion would likely exist in his response to conventional sexual symbolism. 4) Based on the writings of Jung (1946), a continuum of extraversion and introversion is proposed. Because of his inwardly directed interests, the more introverted a person is, the more preference he would show for Freudian sexual symbolism since it represents inner, impulse life. On the other hand, the more extraverted and outwardly directed a person is, the more preference he would show for conventional social symbolism.

Review of Lesearch

The present review of the research literature is organized to emphasize the relationships between subject variables and the ability to respond appropriately to sexual symbolism (depending upon the task). Consequently, the number of references to a particular study coincides with the number of subject variables that it deals with. The studies are divided into two main groups, those employing dream symbolism and hypnosis and those in which 3s, in a normal waking state, are instructed either to sort or to state their preference for male and female sexual symbols.

Many of the studies in this review were included in a previous survey of the research literature by Lessler (1962b). His emphasis was upon the validity and universality of Freudian sexual symbolism, and in general, support was found for both of these hypotheses.

Subject Variables and Hypnosis Studies

Schroetter's (1951) early hypnosis experiments (1911) were concerned with the translation into dreams of content suggested by the experimenter. The subjects, presumably of high intelligence since two were students of philosophy and medicine (Male, age 22; Female, age 20) and one was a pharmacist (Female, age 24), were given dream suggestions while in deep hypnotic sleep. Sometimes subjects were instructed to dream immediately, and at other times they were instructed to dream during the night following the suggestion and to write down the dreams the next morning. The resulting dreams of both experimental conditions were taken as support for Fread's theory of latent content (the

suggested content) being translated into symbolic form in the dream itself. Schroetter gives no information on how the experimental subjects were selected, but presumably he selected only those who presented positive evidence, i.e. those whose dreams best supported Freudian theory. (Rapaport, 1951, p. 251)

Evidence for this presumption comes from Roffenstein (1951) who in 1924 attempted to replicate Schroetter's work with the general result that:

Dattner, Schilder, and the author [Roffenstein] failed in their attempts to repeat these hypnotic experiments: the subject either did not dream at all (in spite of good hypnotic and post-hypnotic suggestibility), or the dream was reproduced <u>tel quel</u> without distortion or change, frankly sexual activities being expressed in unembellished form even when symbolic representation was definitely suggested....In several cases resistance was expressed to crudely sexual, and particularly to perverse, dream contents:...This corresponds well with our present knowledge concerning the limits set by personality make-up to hypnotic and post-hypnotic suggestibility. (pp. 251-52)

koffenstein, however, finally found one subject who produced dream symbolism as prodicted while in the hypnotic state. He describes the subject as "a 28 year old totally uneducated nursemaid of sub-average intelligence, who grew up and still lives in an entirely uneducated milieu; ...she is mentally healthy..." (p. 252)

In another early hypnosis study, Nachmansonn (1951) in 1925 reported dream experiments carried out with one 24 year old ferale with organic brain disease, and two female subjects under hypnotic treatment for psychological disorders. Of the latter subjects, one, aged 45, displayed "affectlability", and the other, aged 36, at times displayed "intense and uncontrolled affectivity" (p. 260). The dreams of the first two subjects tended to lack symbolic distortion or disguise unless these processes were specifically suggested to them under hypnosis. The dreams of the third subject were always disguised whether suggestion for indirect representation was given or not. None of the subjects could produce dream-like, indirect representations of the suggested content while they were in the waking state, i.e. they could not consciously symbolize the material.

Farber and Fisher (1943), in another drean study using hypnosis, report that only 5 subjects (20% of a total sample) were able to translate dreams while they were in the hypnotic state. "The explanation for the failure of the remainder of the group is not clear. It can be said, however, that these individuals were quite inhibited and rigid compared to the translators." (p. 208) The authors suggest that "The reasons for both the ability and inability to translate breaks will be elicited only through careful personality studies of the individual subjects." (p. 208)

Although these early studies were poorly controlled, they give the following very tentative suggestions

regarding hypnosis, subject variables, and symbolism: 1) There are large individual differences in symbolizing activity while under hypnosis. Some people dream in symbolic form quite readily while others dream the suggested content in completely undisguised form. Still others refuse to dream the material at all because of its frank sexual content. Also, some persons are much more able than others to reverse the process and translate dream symbols into their latent content.

 Persons of low as well as high intelligence are able to produce dream symbolism while in the hypnotic state.
Normal persons as well as those exhibiting psychopathology are able to produce dream symbolism while under hypnosis.
Both males and females are able to produce dream symbols while in the hypnotic state.

5) Adults of different ages are able to produce dream symbols while under hypnosis.

The above conclusions are mostly a matter of "common sense" expectation since dreaming seems to be a universal phenomenon. However, it is interesting to note that individual differences do exist, and as Farber and Fisher (1943) point out, these differences may be related to personality variables.

Subject Veriables and Symbol Sorting and Preference Studies

In these studies Ss while in a normal waking state were presented with Freudian and/or cultural symbols and instructed either to indicate which symbols they preferred or to separate the symbols into male and female categories. Using this general methodology the relationships between symbolism and the subject variables of age, personality, sex and intelligence have been studied.

Age Differences

McElroy (1954) had 779 Scottish school children state their preferred symbol in each of twelve pairs of symbols, each pair consisting of a male and female symbol. The hypothesis that Ss would prefer sexual symbols opposite to their own sex was generally upheld. With regard to the age variable, children aged 12 and above showed greater preference for symbols of the sex opposite to their own than children under the age of 12.

Jahoda (1956) usel McElroy's method with 858 boys and girls, sges 11 to 19, from Africa's Gold Coast (Ghana). The overall results were consistent with McElroy's, i.e. the children on the whole preferred symbols of the sex opposite to their own. However, in contrast to McElroy's finding of
an increase in preference for symbols of the opposite sex by older children (adolescents), Jahoda found a decrease. He suggested that this difference might have been due to the fact that the older African children were allowed greater freedom of actual overt sexual expression than the Scottish children and therefore had less need for symbolic sexual expression. One might also reason that in terms of the relationship between symbolism and neurotic symptoms previously discussed, the African children had less of a "dammel up state" of sexual impulses than the Scottish children and thus had less need for disguised symbolic sexual expression.

In this country Levy (1954) snowed that a group of 62 fifth grade public school children here not able to successfully match a series of ten male and female first names with a series of ten male and female Freudian symbols above chance expectancy. Jones (1956) suggested that part of the reason for Levy's inability to find support for the Freudian hypothesis was the fact that he used prepublished children. Jones presented the Levy figures to a group of 20 psychology students, mean age 22.0, and a group of 20 psychology students, mean age 27.4. Both of these adult groups identified the male and female symbols according to the Freudian appothesis significantly above chance expectancy. Thus, the combined results of levy and Jones suggest as did McElroy (1954) that older Ss are better able to respond to Freudian sexual symbols than younger (prepublished).

Starer (1955) also found that older Ss were able to match names and sexual symbols in the direction predicted by Freudian theory. He used a sample of 112 adult psychotics (64 male, and 48 female, 98% schizophrenics) and a group of 30 student nurses.

Stennett and Thurlow (1958) attempted to account for the difference between Levy's (1954) and Starer's (1955) results. They obtained no difference in Latening ability between a group of 20 psychotic adults and a group of 25 university students thus concluding that psychological abnormality would not account for the difference between Levy's and Starer's results. They also found that a group of 37 student nurses could match names correctly with both Levy's and Starer's symbols, thus symbol differences could not account for the differences could not account for the differences in results. Discounting the differences in administration, the authors concluded that the age variable was the only one remaining which would account for the difference in results between the two studies.

Using the same symbols as he had used in his 1955 study with adult psychotics, Jones (1961) had four groups of children, ages 8.5 to 15.5 in school grades 2 to 8, indicate suich symbols merinded them of new and which reminded them of vomen. The results indicated a decrease to chance expectancy of ability to discriminate between the male and female symbols as the children entered and sent through

early addlesuance. Jones suggested that this loseened ability to discriminate correctly between sexual symbols may have been associated with the heightened sexual drive of puberty and early adolescence.

Acord (1962), interested in symbolism and the age variable, had 305 Ss from five school grade levels, grades 3, 6, 9, 12, and adult education, write down the first male or female name which came to mind immediately after viewing each of 5 male and 5 female symbols. The results indicated that the two oldest groups produced significantly correct sex matchings of nomes and symbols whereas the three goungest groups were unable to do so. The 14 year old 9th graders were the least able to match correctly which seeps consistent with Jones' (1961) finding that early adolescents were unable to discriminate correctly between sexual symbols.

Thus far the sorting and preference studies reviewed with respect to the age variable have employed Freudian sexual symbols which as was previously explained could be included in Fromm's "Universal" symbol category. The following studies focus in addition on "Conventional" social symbols.

Barker (1957) found that three groups of normal children of pre-latency, latency, and post latency ages were able to identify a series of symbols (line drawings of objects) in accordance with rale and female cultural expectations but not in accordance with the Freudian hypothesis. The Freudian hypothesis was not upheld even when the symbols were lacking in cultural significance. Thus, these results suggest that children are sensitive to the cultural aspects of symbols but not to the Freudian sexual implications. It is interesting to note that the younger, pre-latency group had more difficulty identifying the cultural symbols than the two older groups. This implies that some sort of cultural learning may be involved in the correct recognition of "Conventional" sexual symbols.

Using older Ss (49 introductory psychology students), Schonbar and Davitz (1960) employed a method very similar to Barker's (1957) with similar results. Symbols were identified in line with cultural expectations rather than according to Freulian thinking.

Lessler (1962a) further explored alg differences in response to cultural and Freudian sexual symbolism. Forty Ss from each of three school grade levels, 4th grade, 9th grade, and college level, were required to designate the male and female symbols in two sets of symbols. One was a series of 20 structured symbols shaped according to Freudian standards, and the other was a series of 20 unstructured symbols differing along a dark (boach, masculine) - light (smooth, feminine) dimension. The latter series was assumed to be of cultural significance. The Freudian symbols were sorted correctly by all age groups significantly above chance expectancy with no age group showing greater or lesser ability at the task. The unstructured cultural symbols were sorted correctly by the two older groups but not by the 4th graders.

Lessler (1962b, 1964) also found, as did Schonbar and Davitz (1960), that introductory psychology students identified symbols (line drawings) more according to cultural expectations than the expectations of Freudian theory. However, where cultural meanings were lacking, the symbols were identified according to Freudian expectations.

In continuition, the results of the studies reviewed concerning symbolism and the age variable give a mixed picture. Of the seven studies employing children of pre-pabescent, and vary early adolescent sgas, four indicate their ability to respond to Freudian second symbolism in accordance sith theoretical expectations - NoElroy (1954), Jahoda (1956), Jones (1961), Lessler (1962a) - and three do not indicate such an ability - Levy (1954), Acord (1962), Barker (1997). For older Ss, of a total of ten studies reviewed, seven indicate significant ability to respond in accordance with Freudian theory - EcElroy (1954), Jones (1956), Starer (1955), Stennett and Thurlow (1958), Acord (1962), Lessler (1962 a & b, 1964) - whereas three indicate either no ability or a

decrease in ability - Janoda (1956), Jones (1961), Schonbar and Davitz (1960).

While some of the inconsistency of results may be due to the fact that different symbols were used in lifferent studies, Stennett and Thurlow (1958) obtained comparable positive support for the Freudian hypothesis using both the Levy and Starer sets of symbols on the some group of student nurse Ss. This implies that as long as different sets of symbols are constructed in adherence with Freudian critera, they can be expected to give comparable results.

For cultural symbolism, Barker (1957) indicates that younger children have the ability to respond appropriately wheleas Lessler (1962a) demonstrated no such ability. For older Ss, the three studies reviewed, Schonbar and Davitz (1960), Lessler (1962 a and b), unanimously indicate ability to respond appropriately to cultural symbolism

Where Freudian and cultural symbolism conflict in the same stimulus, i.e. where the same symbol has opposing Freudian and cultural meanings, Ss tend to respond to the cultural meanings - Barker (1957), Schenbar and Davitz (1960), Lessler (1962b).

Personality Differences

Franck (1946) had 119 female undergraduate psychology students state their preference for Freudian symbols presented in pairs, a male and female symbol in each pair. This was followed by a personality questionnaire of Franck's own design. The overall conclusion was "that girls preferring male symbols were more mature, i.e. accepted their role as women and accepted pen as their counterpart, while girls preferring female symbols were less mature." (p. 117)

The remaining studies compare normal Ss with various psychiatric (neurotic and psychotic) groups.

Comparing a normal group of 12 hospital attendants and 27 student nurses with a group of 99 hospital patients, Jacobs (1954) had them indicate which of 113 words reminded them of the male sex organ and which reminded of them of the female sexual organs. The words had been taken from Freud's writings as being sexual symbols. Both the normal and patient groups identified the words in concurrence with Freudian thinking significantly above chance expectancy. However, the normals' responses agreed with the Freudian hypothesis to a greater extent than did the patients' responses. Jacobs suggested that the difference might have been due to intellectual impairment or lack of social motivation on the part of the patients.

Jones (1956), previously discussed in connection with age differences, also found that patients (mostly schizephrenics) and normals (college students) were able to identify sexual symbols in accordance with Freudian theory, and that the patients were popper at the task. He concluded, "It appears that severe impairment of personality is accompanied by a disorganization of symbolic processes." (p. 189)

Starer (1955), also discussed previously, found

similar results with his groups of adult psychotics and student narses. The groups catched male and ferale nones with mercial sympole above connect expectancy, but the more confused and disorganized patients under more errors than the patients in good remission. The author suggests that the ability to identify symbols is a cultural manifestation and that the disorganized patients either never fully accepted the prevailing cultural symbolism or have represend to a level where it no longer operates in their thinking. It is interesting to note, however, that Starer's symbols were apparently abstract deswings that could probably be classified as "Universal" in Fromm's system rather than as "Conventional" cultural symbols. Thus, Starer's suggestion that patients goorer ability to identify sexual symbols represents a deficit in cultural awareness is left suggestion in doubt.

Winter and Prescott (1957) found that 52 male and 55 female hospitalized mental patients could correctly match

male and female nones with Freudian sexual symbols. The ability to correctly match names and symbols was not correlated with any of the IMPI scales including those usually associated with psychotic thinking. This made the authors doubt whether any specific personality variables were involved in the task. An additional result was that in comparing their hospital Ss with Starer's (1955) normal group of student nurses, no deficit of performance was found.

Stennett and Thurlos (1953), previously discussed unler the age variable, also found no deficit in the performance of a group of adult psychotics as compared with a normal group of university students. Both groups successfully matched names and symbols significantly above chance expectancy.

Clin (1961) compared 15 neurotic outpatients, 18 neurotic inpatients and 40 schizophrenic inpatients on a task exploying symbols which varied from pictures to word descriptions and also varied along a dimension of judged sexual significance. Results showed that the schizophrenics responded more to the underlying sexual significance of the symbols than either of the neurotic groups.

In a study employing groups of normals, neurotics and psychotics (10 in each group), equated for intelligence, Moos and Nussen (1959) found no differences in ability to

identify male and female symbols. The symbols were some of the authors' own design plus some from Levy's (1954) and McElroy's (1954) studies. In addition 40 words from Jacobs' (1954) study were used. The authors concluded that when intelligence was accounted for, differences in ability to correctly identify Freudian sexual symbols disappeared.

As with the age variable, the combination of results for personality differences gives a mixed picture. Jacobs (1954), Jones (1955), and Starer (1955) indicated that when compared with normal Ss, hospital patients, mainly schizophrenics, showed a deficit in ability to respond appropriately to Freudian sexual symbolism. Conversely, Winter and Prescott (1957), Stennett and Tharlow (1958) and Moos and Mussen (1959) found no such deficit. For neacotics, Moos and Massen (1959) found no deficit in comparison to normals or psychotics, but Olin (1961) found schizophrenics to be more responsive to sexial symbolism than heurotics. Franck (1946) found that college women who preferred male symbols were more mature than those who preferred symbols of their own sex. Winter and Prescott (1997) found no correlation between ability to match nomes and symbols and any of the MMPI scales.

Sex Differences

In the studies previously reviewed, the following information was reported concerning sex differences in response to sexual symbols.

Jones (1956) found that in the combined normal student and psychiatric patient groups, males were better able to identify symbols correctly than females. However, in his study with children and early adolescents (Jones, 1961), no sex differences appeared.

Schenbar and Davitz (1960) found no sex differences among college stadents in their ability to identify cultural sexual symbols and in their relative lack of ability to identify Freudian sexual symbols.

Acord (1952) found no sex differences at any age level (grades 3, 6, 9, 12, or adult education class) in assigning names of the sume sex as the symbols which were presented.

Lessler (19624) found no sex differences among 4th, 9th, and college grade students in the identification of structured sexual symbols, but females correctly identified more of the unstructured texture (social) symbols than did males. As part of a larger study, Lessler (1962 b, 1964) had 165 male and female general psychology students sort social and "psychological" sexual symbols as being like - or not like - themselves. The social symbols were sorted in the expected direction, i.e. males sorted male symbols as likeself and females sorted female symbols as like-self. However, both males and females sorted the female "psychological" symbols as like-self. Lessler suggests that this latter finding might be due to the passive, feminine-type psychological role which male students are required to assume in relation to college authorities.

To summarize the findings on sex differences in response to sexual symbols, Jones (1961), Schonbar and Davitz (1960), Acord (1962), and Lessler (1962 a) found no sex differences in response to Freudian symbols, whereas Jones (1956) found males better able to identify symbols correctly than females. Lessler (1962a) found females more correctly responsive to texture (social) symbols than males, but in his other study (1962 b, 1964), no unpredicted sex differences appeared in response to another set of social symbols. However, male college students sorted female "psychological" symbols as being like-self.

On the whole, the evidence suggests that in response to Freudian sexual symbols, sex differences do not appear. The evidence for social symbols is equivocal.

Differences Due to Intelligence

Only one study, previously described, considers intelligence and its relationship to personal to sexual symbols. Part of Olin's (1961) results with male neurotics and schizophrenics showed a significant positive correlation between correct sympol identification and the WAIS Verbal Iq (Short form).

Sunmary and Conclusions from Previous Research

From the previous research, the following general statements can be made regarding subject variables and symbolism:

1) The earlier hypnosis studies have offered support for the Freadien appothesis regarding drear symbol formation, but in addition they have shown that individual differences exist in symbolization activity.

2) For the age variable, results with children are equivocal, but the majority of studies indicate that older adolescents and adults respond to sexual symbolism in a manner congraent with Freudian theory. However, when conventional social symbolism and Freudian symbolism are presented simpltaneously in the same stimulus symbols, adults and children tend to respond to the conventional meanings and ignore the Freudian meanings.

3) In general no cex differences exist in ability to correctly identify sexual symbolism, but intelligence seems

positively correlated with this ability.

4) Regarding personality differences, the evidence is equivocal. Since studies indicate that psychotics show a deficit in ability to correctly discriminate between male and female sexual symbols whereas other studies have found no such deficit. One study found no deficit on the part of neurotics as compared with both normals and psychotics, and another found psychotics nore responsive to sexual symbolic meanings than neurotics. No studies were found relating symbolism to the personality variable of extraversion-introversion.

HYPOTHESES TESTED

Previous studies have generally demonstrated that As are able to distinguish between male and female sexual symbols derived from the Freudian hypothesis that elongated, upstanding or sharp objects may symbolize the male genitalia and hollow, enclosing or rounded objects may symbolize the female genitalia. However, additional support for the Freudian hypothesis would be obtained if 3s could distinguish Freudian sexual symbols from symbols which are sexually neutral. Consequently Hypothesis I represents an extension from the work of previous studies: <u>Hypothesis I</u>: Subjects will be able to identify male and female Freudian sexual symbols as masculine and feminine respectively when these symbols are presented arong sexually neutral symbols.

The research relating personality variables and ability to correctly identify Freudian sexual symbols has produced conflicting results. However, from a theoretical standpoint, certain predictions can be male. Psychoanalytic theory suggests first, that there is a continuum of increasing neurotic functioning from normal persons to neurotic patients, and second, that symbol formation is induced by the same processes which institute neurotic symptoms, i.e. conflict

over "danmed up" sexual impulses. Thus, the more neurotic a person is, the more inaccurate should be his response to sexual symbolism because such symbolism would tend to evoke the anxiety associated with neurotic conflict. If placed in a forced-choice symbol identification situation where the choice is between sexual symbols, which represent neurotic conflict, and neutral symbols which are free of conflict implications, the more neurotic person should tend to avoid the sexual symbols and choose the neutral symbols. Consequently Hypothesis II is as follows:

Hypothesis II: There will be a negative relationship between neuroticism and the ability to correctly identify male and female Freudian sexual symbols from among sexually neutral symbols.

Another personality variable which was discussed as possibly being related to the ability to correctly identify Freudian sexual symbolism is the continuum of Extraversion-Introversion. No research was found relating this variable to symbolism but certain impliestions are evident from Jang's theory. If, in fact, the introvert finds more "compensation in an unconscious, archaic life with regard to instinct and sensation" (Jung, 1945, p. 187) than the extrovert, it would be expected that the introvert might show more ability to correctly identify Freudian sexual symbols than the extravert since these symbols are very closely associated with instinctual impulses. Thus, Hypothesis III is as follows:

Hypothesis III: There will be a positive relationship between introversion and the ability to correctly identify Freudian sexual symbols from among sexually neutral symbols. The converse will be true for extraversion.

Thus far the hypotheses have been concerned exclusively with the identification of Freudian sexual symbolism. However, there are three additional hypotheses which derive from a consideration of differential preference for mutually exclusive "Conventional" sexual symbols, "Universal" Freudian sexual symbols, and neutral symbols. From what has been said previously about the nature of the personality variables of extraversion-introversion and neuroticism, it right be expected that the relatively extraverted person would show a preference for conventional sexual symbols (as opposed to Freudian and neutral symbols), the introverted person would prefer impulse representative Freudian sexual symbols (as opposed to conventional and neutral symbols), and the neurotic verson would prefer conflict-free neutral symbols (as opposed to conventional and Freudian sexual symbols). A basic assumption implied in this preliction is that the more normal a person is, whether extraverted or introverted, the more he will prefer sexual symbols as opposed to non-sexual, neutral symbols. This is because he has achieved, in Freudian terrinology, "genital primacy", i.e. the subordination of pre-genital sexual functions

"under the primacy of the genital zone" (Freud, 1957, pp. 336-37). The extravert will express his preference for sexual symbolism by choosing conventional sexual symbols, whereas the introvert will do so by choosing Freudian sexual symbols. The neurotic, not having attained genital primacy because of failure to successfully resolve the Oedipus complex, will tend to shun both conventional and Freudian sexual symbolism by choosing as his preference non-sexual, neutral symbolis. In order to assure an equal chance of selection, the three types of symbols, conventional, Freudian and neutral, must be equated for aesthetic, utilitarian, and economic value.

From these considerations the following three hypotheses can be evolved:

<u>Hypothesis IV</u>: If asked to indicate a preference for one of three types of sexual symbols, conventional, Freudian or neutral, 3s who are relatively extraverted will tend to choose the conventional symbols.

<u>Hypothesis V</u>: If asked to indicate a preference for one of three types of sexual symbols, conventional, Freudian or neutral, 3s who are relatively introverted will tend to choose the Freudian symbols.

<u>Hypothesis VI</u>: If asked to indicate a preference for one of three types of secual symbols, conventional, Freudian or neutral, Ss who are relatively neurotic will tend to choose the neutral symbols.

METHOD

Sample and Population

The Ss used in this study were 188 single, andergraduate college students (98 males, 90 females) from an introductory psychology course. They were assumed to be naive with regard to a formal knowledge of symbolism since the data for this study were collected during the first week of the school term (Spring 1964) before they had been given any lectures related to the subject of symbolism. They were also assumed to be in comparable states of wakefulness and conscious awareness since all data were collected during the hours of 8:00 A.M. to 10:00 A.M. Data on age and LQ are given in Table 1, p. 42. There were no significant sex differences in mean age or LQ.

It is assumed that the results of this study can be generalized to a student population of sex, age and intelligence characteristics similar to these of the present sample.

Procedures

Four instruments were used in this study; two symbol tests of the experimenter's own lesign and, for the measurement

Characteristic	Subjects	Nean	SD	Range
Age	Males (n=98)	19.06	1.25	17 - 24
	Females (n=90)	18.80	1.11	17 - 24
	Total (N=188)	18.94	1.19	17 - 24
I.J.	Males	121.02	9.96	93 - 148
	Females	120.30	10.80	95 - 15 4
	Tutil	120.72	10.35	93 - 1 54

TABLE 1 Sample Age and Ustimated Ia

Weensler Adult Intelligence Scale Full Scale Iss prorated from Information subtest.

of neuroticism and extraversion-introversion, Eysenck's Maudsley Personality Inventory (Jensen, 1958). The Information subtest of the Wechsler Adult Intelligence Scale (Wechsler, 1955) was used to obtain an estimate of intelligence.

Symbol Test I: (See Appendix II, pp. 83-86)

This test was used in the investigation of Hypotheses I through III and is composed of abstract male, female and neutral symbols derived from the Freudian hypothesis of sexual symbolism. They were selected by the agreement of at least three out of four clinical judges (See Table A, Appendix I). The judges were presented with a pool of eighty abstract symbols of the experimentar's own design and asked to indicate much net the criteria of Freudian sexual symbolism and which were sexually neutral by those criteria.

The resulting instrument contains twelve items, each item consisting of one sexual symbol and two neutral symbols. Placement of symbols within items was accomplished in two steps. First, symbols were assigned to items by use of a table of random numbers with the stipulation that no more than one sexual symbol could appear in any one item. Second, the resulting symbol arrangement was then rearranged where necessary to achieve an even dispersion of symbol characteristics throughout the different items in an effort to reduce possible response bias. For example, some of the neutral symbols consist of dot patterns and were arranged so that no single item contained more than one of this type of symbol.

The general instructions for Symbol Test I were: For each of the following items, check (\checkmark) only one design, and please guess if necessary.

For items containing male symbols the instructions were: Place a checkmark (\checkmark) on the line directly below the design which you think could be described as the most masculine.

Instructions for items containing female symbols merely substituted the words <u>most leminine</u> for the words <u>most mas-</u> <u>culine</u>. The word "most" was used in the instructions in an attempt to preclude response to any possible minor sexual

characteristics of the neutral symbols. (The judges pointed out that most of the neutral symbols had very minor sexual characteristics but not to the extent that they could actually be classified as male or female in the Freudian sense).

Subjects received scores of 0 to 12 according to the number of sexual symbols they correctly identified.

Symbol Test II: (See Appendix II, pp. 87-89)

This test was used in the investigation of Hypotheses IV, V and VI. It is composed of twelve items, each iter consisting of three symbols: a conventional symbol, a Freudian sexual symbol and a neutral symbol. The symbols (line drawings of objects) were selected by judges from a pool of 120 symbols of the experimenter's own design (See Table B, Appendix I). They were selected by the agreement of three out of four judges on the following criteria: 1) The conventional symbols are associated with males or females in our society and are neutral from a Freudian standpoint. (Symbol designation = MN for culturally male, Freudian neutral; FN for culturally female, Freudian neutral). 2) The Freudian symbols meet the criteria of Freudian sexual symbolism but have no predominant conventional sexual associations, i.e. they are neutr 1 from a conventional standpoint. (Symbol designation = NN for culturally neutral, Freudian male; NF for culturally neutral, Freudian ferale).

3) The neutral symbols have neither conventional nor Freadian sexual associations (Symbol designation = NN).

In addition the judges mated the symbolic objects from 1 to 6 according to the value they might have for the college Ss of this study. By "value" is meant any sort of aesthetic, utilitatian, recreational or economic appeal that the objects might have. The judges' value ratings were then averaged in order to produce a mean value mating for each symbolic object. MN (FN), NF (NF) and NN objects of similar mean value ratings (mean ratings within one point of one another) were assigned to the same items. Position of symbolic objects within items was accomplianed by means of a table of random numbers with the stipulation that conventional and Freudian symbolic objects within an item be of the same sex and that all three objects within an item be equated for value. This procedure was an attempt to preclude responses based on sex differences and/or value.

The instructions were as follows:

Below are 12 groups of three objects. For each group, place a checkmark (~) on the line directly below the object that you most prefer. Check only one object per group, and please guess if necessary.

The number of responses in each category, conventional, Freudian and neutral, determined the scores for those respective categories. Since there were twelve items, a subject could have obtained a score of from 0 to 12 for any one category. Maudsley Personality Inventory (MFI): (See

Appendix II, pp. 90-93)

The MPI was developed by H. J. Eysenck specifically

to measure the personality variables of neuroticism and extraversion-introversion. For the present study it was used in the investigation of Hypotheses II through VI.

Jensen (1958) has published the MPI and has given a description of its development and use:

It is intended to ressure on the verbal level two dimensions of personality: Introversion-Extraversion and Neuroticism. (p. 314)

The E (extraversion) and N (neuroticism) scales of the NOI were derived from rather elaborate procedures involving item analysis and factor analysis of other personality inventories, principally the Guilford inventory of factors CTDCR and the Maudaley Medical questionnaire. The two scales, E and N, nave high "construct validity", that is, the items making up the scales are highly correlated with the factor they are said to reasure and they have insignificant correlations with other factors. The items have been selected so us to minimize the correlation between the E and N scales. The two factors are thas represented as orthogonal, i.e., uncorrelated with one whother.

[The NPI] consists of 24 E-scale iters, 24 N-scale iters, 20 Lie-scale iters, and 12 "buff-r" items which help in concealing the nature of the questionnaire from the subject. The Lie scale was intended to detect subjects who tend to present thereselves in a favorable light to such an extent as to make the validity of their scores questionable. A record may be regarded as definitely suspect in this respect if more than 10 of the Lie scale items are answered in the keyed direction.

Scoring. Two points are given to the designated scale for the keyed responses, and one point to the designated scale for the "?". Thus the possible page of scores on the E and N scales is from 0 to 48. (p. 315)

Control Leasures

Because \circ previous study (Olin, 1961) demonstrated a positive relationship between intelligence and the ability to connectly respond to Freudian symbolism, a control reasure of intelligence, was used, the Information subtest of the Wechsler Adult Intelligence Scale. This subtest was chosen because it takes a relatively short time to complete; it is easily scored; but more important, it correlates more highly with the Full Scale Iq than any other of the subtests, r = .64. (Wechsler, 1955, p. 15)

The Information questions were administered in written form (see Appendix II, pp. 94-95) with the following written instructions:

Below are a series of 20 general information questions. The first ones are very easy but the later ones become increasingly more difficult. Please write a brief answer for each question, and guess if theresary. If you definitely do not know an answer, just write "don't know" next to the question.

Allitional control information was obtained by naving the Ss indicate their sex, Age, and marital status.

General Instructions and Administration

The four instruments previously lescribed, Symbol Test I, Symbol Test II, Maudsley Personality Inventory and WAIS Information subtest, were group administered to three classes of introductory psychology staleats. The instruments were arranged in a counter-balanced order so as to preclude any response bias arising from order effects. It was assumed that this arrangement also interfered with "cheating" since at any given time adjacent Ss were working on different instruments. The general instructions on the face sheet ware as follows:

- Please indicate your age, sex and marital status at the top of this sheet. (Your name is not neeled). Disregard the letters at the right of this page and at the bottom of succeeding pages. They are for purposes of tabulation.
- 2. In this booklet are a series of tasks designed for a research project. Pleas follow the instructions for each task and continue through the booklet until you are finished.

Thank you for your cooperation.

RESULTS

Results Pertaining to Hypotheses

The main results of this study are presented in Tables 2 and 4 (pp. 50 and 52), and are arranged in the text in the order of the hypotheses. The raw data for individual Ss are presented in Appendix III (pp. 96-101).

Hypothesis I: Subjects will be able to identify male and female Freudian sexual symbols as masculine and feminine respectively when these symbols are presented among sexually neutral symbols.

Support for Hypothesis I was obtained from male and female subjects considered both separately and as a total sample. Chance probabilities for obtaining the scores of 0 to 12 were computed by means of the binomial expansion (Siegel, 1950) and are shown in Table 3 (p. 51). Comparing the mean ST I scores of Table 2 (p. 50) with the probabilities of obtaining those scores shown in Table 3 (p. 51), it can be seen that males obtained a mean ST I score of 8.01 (p < .015), females obtained a mean ST I score of 7.52 (p < .048) and the total sample obtained a mean ST I score of 7.78 (p < .048).

TABLE 2 Medians, Means, Standard Deviations and Ranges of Scores Obtained on the Maudsley Personality Inventory and Symbol Tests I and II

		Median	Mean	SD	Range
Males (n	= 98)				
MPI	Extraversion	31. 91	31.21	8.32	12 - 46
	Neuroticism	29.67	28.97	9.10	4 - 47
ST I		8 .7 0	8.01	2.34	1 - 12
ST II	Conventional	2.60	2.60 2.34		0 - 8
	Freudian	5.18	4.64	1.63	0 - 10
	Neutral	5.59	5.02	1.60	1 - 9
Females (n = 90)				
MPI	Extraversion	31.17	29.89	8.09	11 - 46
	Neuroticism	30 .3 3	28.58	9.24	8 - 46
ST I		8.10	7.52	2.21	2 - 12
ST II	Conventional	3.30	3.06	1.77	0 - 8
	Freudian	4.83	4.26	1.47	0 - 8
	Neutral	5.15	4.69	1.68	1 - 8
Total (N	= 188)				
MPI	Extraversion	31.54	30.58	8.21	11 - 46
	Neuroticism	30.00	28.78	9.61	4 - 47
ST I		8.40	7.78	2.29	1 - 12
ST II	Conventional	2.95	2.68	1.75	0 - 8
	Freudian	5.01	4.46	1.57	0 - 10
	Neutral	5.31	4.86	1.64	1 - 9

TABLE 3	5	Chance Probabilities for Obtaining Scores
		of 0 to 12 on Symbol Test I

Score	р	Score p
0	•00 7707	7.047689
1	.046244	8 .014903
2	.127171	9 .003312
3	•21 1 952	10 .000497
4	•23844 6	.000045
5	.190757	.000002
6	.11 12 75	Total $p = 1.000000$

Hypothesis II: There will be a negative relationship between neuroticism and the ability to correctly identify male and female Freudian sexual symbols from among sexually neutral symbols.

Hypothesis III: There will be a positive relationship between introversion and the ability to correctly identify Freudian sexual symbols from sexually neutral symbols.

Neither of these hypotheses was supported by the data as is shown in Table 4 (p. 52). For males, females and total sample, the Pearson <u>rs</u> between the Maudsley Personality Inventory Extraversion and Neuroticism scales and Symbol Test I were all low, non-significant, positive correlations which were in the direction opposite from that

TABLE 4 Relationships Between the Maudsley Personality Inventory and Symbol Tests I and II (Pearson <u>rs</u> and Contingency Coefficients)

		MPI	ST I		ST II	
		N		C	F	NN
Pearson rs					·• ·• ·• ·• ·• ·• ·• ·• ·• ·• ·• ·• ·• ·	
Males	MPI					
	E	019	.126	•039	.122	165
	N		.091	089	052	.147
Females	MPI					
	Έ	100	.126	180	032	.219*
	N		.024	.205	221*	024
Total	MPI					
	Έ	054	.133	083	.062	.029
	Ν		.063	•045	122	.068
Contingency	Coef	ficients				
Males	MPI					
	Έ	•04	•03	•02	•02	•02
	N		•02	•02	•03	•04
Females	MPI					
	E	•02	.14	.17	•02	.17
	N		.14	.14	.14	•02
Total	MPI					
	Έ	.01	•02	.02	.01	.02
	N		•01	.01	•02	.01

* .05 level of significance

predicted. (Note: Hypothesis III would have been supported by a negative correlation because a low MPI E-scale score is taken to be indicative of introversion).

Further statistical tests of Hypotheses II and III were carried out by means of non-parametric contingency coefficients (Siegel, 1956, pp. 196-202). Frequencies of Ss scoring above and below the medians of the MPI N- and E-scales were compared with the frequencies of the same Ss scoring above and below the median score of Symbol Test I (See Table 2, p. 50 for medians). No significant relationships were found for males, females or the total sample (see Table 4, p. 52).

Hypothesis IV: If asked to indicate a preference for one of three types of sexual symbols, conventional, Freudian or neutral, Ss who are relatively extraverted will tend to choose the conventional symbols.

Hypothesis V: If asked to indicate a preference for one of three types of sexual symbols, conventional, Freudian or neutral, Ss who are relatively introverted will tend to choose the Freudian symbols.

<u>Hypothesis VI</u>: If asked to indicate a preference for one of three types of sexual symbols, conventional, Freudian or neutral, Ss who are relatively neurotic will tend to choose the neutral symbols.

Hypotheses IV, V and VI were not supported by the data as is shown in Table 4, p. 52. The correlations pertaining to the specific hypotheses were all non-significant and their directions showed no consistent pattern. The contingency coefficients were also all non-significant. Additional analyses showed two significant correlations for Female Ss. One was a negative correlation between the MPI N-scale and the Freudian symbol scores of Symbol Test II (r = -.221, p < .05), and the other was a positive correlation between the NPI E-scale and the neutral symbols of Symbol Test II (r = .219, p < .05). However, little practical consequence is attributed to these correlations since one of then would be expected on a chance basis from the total of twenty-seven correlation coefficients that were computed, and also since their respective contingency coefficients were both non-significant (See Table 4, p. 52).

Because significant sex differences appeared in Ss' responses to Symbol Test II (See below, pp. 55-58) which might have masked the predicted results, further tests of Hypotheses IV, V and VI were made by considering male and female Ss' performance on the male and female items of Symbol Test II taken as separate groups of items. Contingency coefficients computed between the frequencies of Ss scoring above and below the medians of the MPI E- and N-scales and frequencies of the same Ss scoring above and below the medians of the conventional and Freudian scores on the

separate groups of male and female items of Symbol Test II were all non-significant for both male and female Ss (See Table 5, p. 56). Thus, these further statistical tests also failed to produce support for Hypotheses IV, V and VI.

Supplementary Results

Contrary to the findings of some previous studies (Jensen, 1958), no significant negative correlation was found between the MPI E- and N-scales (See Table 4, p. 52).

No significant correlations were found between age (r = .093) or IQ (r = .065) and the ability to correctly identify the Freudian sexual symbols of Symbol Test I. Also, no sex differences were found in this ability, i.e. a t-test of the difference between the mean symbol scores of male and female Ss on Symbol Test I was not significant, and chi squares comparing frequencies of correct and incorrect responses of male and female Ss to masculine and feminine symbols of Symbol Test I were also non-significant. Symbol Test I had an odd-even, split-half reliability coefficient of .637, p<.01, (Spearman-Brown formula).

As shown by the chi squares in Table 6, p. 57, highly significant sex differences in symbol preference were elicited on Symbol Test II. Male Ss showed a greater preference than female Ss for masculine conventional and

TABLE 5 Contingency Coefficients Between MPI N-Scores, E-Scores and ST II Conventional (C) and Freudian (F) Scores for Separate Groups of Masculine and Feminine Items

	Masculine Items (3)	Feminine Items (9)
Male Ss		
MPIN VS ST II	c .27	.02
MPIN VS ST II	F .02	.12
MPI E vs ST II	c .02	•04
MPI E vs ST II	F .16	.02
Female Ss		
MPI N vs ST II	C not calculated ¹	•03
MPI N vs st II	F .14	.02
MPI E vs ST II	C not calculated ¹	.17
MPI E vs ST II	F .22	.02

¹Contingency coefficients were not calculated because no median could be determined since 82 out of 90 females received a preference score of zero on the masculine conventional symbols.

TABLE 6 Differential Preference Choice Frequencies for Symbols of Masculine and Feminine Items of Symbol Test II by Male and Female Ss¹

Preference Choices	Male		Fer	Female		tal	Chi	p
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						Square	
Masc. Items Conven. Symbols	85	(17) ²	10	(02)				
Fem. Items Conven. Symbols	144	(28)	265	(53)	_		89.40	.001
Total Conven. Symbol Choices	229	(45)	275	(55)	504	(100)		
Masc. Items Freudian Symbols	120	(14) ³	<b>1</b> 45	(17)				
Fem. Items Freudian Symbols	335	(40)	238	(29)	_		12.16	.001
Total Freudian Symbol Choices	455	(54)	383	(46)	838	<b>(1</b> 00)		
Masc. Items Neutral Symbols	89	(09) ⁴	115	(13)				
Fem. Items Neutral Symbols	403	(44)	307	(34)			25.21	.001
Total Choices Neutral Symbols	492	(53)	422	(47)	914	(100)		
Total Preference Choices	1176		1080		2256			
¹ Total preference choices = 188 Ss x 12 items = 2256. ² Percent of total conventional symbol choices.								

³Percent of total Freudian symbol choices.

⁴Percent of total neutral symbol choices.

feminine Freudian symbols, whereas the opposite was true for females, i.e. they showed a greater preference than males for feminine conventional and masculine Freudian symbols. The females also received a mean conventional symbol score (Mean = 3.06) that was significantly higher than the mean conventional symbol score obtained by the males (Mean = 2.34, t = 2.89, p<.01).

Both males and females showed a greater preference for the neutral symbols on items where the sex of the conventional and Freudian symbols was opposite to their own, i.e. males preferred neutral symbols to a greater extent than females on items where the conventional and Freudian symbols were feminine, and female Ss showed a greater preference than males for neutral symbols on items where the conventional and Freudian symbols were masculine. For Symbol Test II as a whole, both males and females showed the greatest preference for neutral symbols (914 out of a total of 2256 possible preference choices for all subjects on all items), next greatest preference for Freudian symbols (838 out of 2256 possible preference choices) and least preference for the conventional symbols (504 out of 2256 possible preference choices). These preference choice differences were statistically significant, the chi square for the total sample being 125.87, p<.001.

Item analyses for sex differences are presented in Tables 7 and 8 (pp. 59 and 60) for Symbol Tests I and II
TABLE 7 Sex Difference Item Analysis for Symbol Test I (Frequencies of correct and incorrect symbol identification)

	Sex of	Mal	es	Fem	ales	Chi	
Item	Item	Correct	Incorrect	Correct	Incorrect	Square	1 p
1	М	64	34	52	38	.83	ns
2	F	62	36	41	49	5.27	•025
3	F	88	10	88	2	3.76	ns
4	M	85	13	69	21	2.57	ns
5	M	69	29	59	31	.31	ns
6	Μ	40	58	37	53	.01	ns
7	F	78	20	65	25	1.02	ns
8	M	36	62	39	51	•60	ns
9	M	60	38	47	43	1.20	ns
10	F	78	20	69	21	.10	ns
11	F	52	46	34	56	3.82	.05
12	F	73	25	77	13	2.91	ns

¹Corrected for continuity.

	Sex of .		Male	3		Femal	es	Chi	
Item	Item	Cl	F	NN	C	F	NN	Square ²	p
1	Μ	30	64	4	4	<b>6</b> 6	20	30.30	.001
2	F	28	29	41	63	10	17	32.37	.001
3	F	15	32	51	20	49	21	16.61	.001
4	F	16	52	30	31	25	34	14.92	.001
5	F	15	30	53	24	11	55	10.60	.01
6	Μ	25	11	62	4	20	66	17.64	.001
7	F	11	28	59	36	14	40	21.31	.001
8	Μ	30	45	23	2	<b>5</b> 9	29	26 <b>.7</b> 9	.001
9	F	5	76	17	26	59	5	22.61	.001
10	F	28	31	<b>3</b> 9	14	11	65	20.39	.001
11	F	10	20	68	14	28	48	12.63	.005
12	F	16	37	45	37	31	22	16.44	.001

TABLE 8 Sex Difference Item Analysis for Symbol Test II (Response frequencies)

¹C = Conventional

F = Freudian

NN = Neutral

²Corrected for continuity.

respectively. For Symbol Test I, items 2 and 11 showed a sex difference, males being correct significantly more often than females on both items (Item 2,  $X^2 = 5.27$ , p<.025; Item 11,  $X^2 = 3.82$ , p<.05). Highly significant sex differences in symbol preference appeared on all individual items of Symbol Test II.

# Comparison with MPI Normative Data

Comparisons of present findings with normative data (Jensen, 1958) are shown in Table 9 (p. 62). With regard to extraversion, except for the comparison of the female Ss with a normative sample of 350 female American university students, Ss of the present study are significantly more extraverted than two other samples of American university students, 714 males and 145 mixed males and females, and a sample of 148 British neurotic patients. Regarding neuroticism, the present sample is significantly more neurotic than the normative samples of American university students, but significantly less neurotic than the normative sample of neurotic patients. However, it is worth noting that 68 Ss of the present sample (39.4%) obtained MPI N-scale scores higher than the mean N-scale score of 33.75 obtained by the total normative sample of neurotic patients (See Appendix III, p. 96).

	Ameri	can Univ.	Students ²	Neur	ents	
	Males	Females	Mixed	Males	Females	Total
N	714	350	145	83	65	148
E-scale						
Mean	28.40	29.41	2 <b>7.</b> 77	19.09	18.67	18.91
SD	8.06	8.37	7.60	10.33	9.21	9.86
t ³	3.18	•50	3.23	8.59	7.89	10.81
p	.01	ns	.01	.01	.01	.01
N-scale						
Mean	20.19	21.63	2 <b>1.57</b>	32.98	34•75	33 <b>•75</b>
SD	10.71	10.45	9•75	10.78	11.83	11.29
t ³	8.09	6.19	6.73	2.58	3.50	4.27
р	.01	•01	.01	•05	•01	.01

TABLE 9 Comparison of MPI N and E Scores of Present Sample with MPI Normative Data¹

¹Normative data from Jensen (1958, p. 319) compared with data from Table 2, p. 50.

²Comparisons are made between males of the present sample and the male student norms, females of the present sample and the female student norms, and the total present sample and the norms from the sample of mixed male and female students. Note: The mixed normative sample is a separate sample with an N of 145 and not a summation of male and female norms.

³<u>t</u>-tests between normative means and means of present sample as shown in Table 2, p. 50.

### DISCUSSION

### Hypotheses

<u>Hypothesis I</u>: Subjects will be able to identify male and female Freudian sexual symbols as masculine and feminine respectively when these symbols are presented among sexually neutral symbols.

The finding that Ss could identify the Freudian symbols of Symbol Test I significantly above chance expectancy is consistent with the results of the previous studies which found support for the Freudian sexual symbolism hypothesis. In addition, the present study has given the hypothesis a different type of test than did the previous studies using abstract symbols. In this study, Ss had to identify the sexual symbols from among sexually neutral symbols, whereas in previous studies Ss were required to separate male and female symbols.

Taken together with previous studies, the present findings for Hypothesis I offer a demonstration of the continuity of unconscious mental functioning between dream states and states of unconsciousness. Although Freud set forth his ideas concerning sexual symbolism in connection

with dream interpretation (See above pp. 8 and 9), the Ss in the present study and all of the previous studies except those employing hypnosis, were in a conscious, waking state. Although it is possible that some of the present Ss may have had some previous knowledge of Freudian sexual symbolism, the bulk of them were assumed to be naive Ss due to the fact that data were collected before they received any lectures on the subject. Thus, their correct identification of the symbols can be an inferred result of unconscious associations. This is consistent with Freud's statement regarding the continuity between symbol formation in dreams and the psychopathology of everyday life (See above p. 12), i.e. the unconscious is operative in both circumstances.

Hypothesis II: There will be a negative relationship between neuroticism and the ability to correctly identify male and female Freudian sexual symbols from among sexually neutral symbols.

<u>Hypothesis III</u>: There will be a positive relationship between introversion and the ability to correctly identify Freudian sexual symbols from sexually neutral symbols.

Because of the consistency of the results of Hypothesis I with those of previous studies, Symbol Test I may be assumed to possess a reasonable degree of validity as a measure of Freudian sexual symbolism. Likewise, according to data cited by Jensen (1958) the MPI may also be considered

to be reasonably valid as a measure of neuroticism and extraversion-introversion. The subject sample, though more neurotic and extraverted than the normative samples of American college students, appeared to give an adequate dispersion of MPI scores, but its dispersion of scores on Symbol Test I was quite attenuated, S.D. = 2.29 (See Table 2, p. 50). It is possible that this small dispersion of scores would account for the failure to achieve support for the relationships posited by Hypotheses II and III, and it indicates that an instrument of more items than the 12 of Symbol Test I may be needed for a more adequate test of the hypotheses.

In addition to the structural deficiencies of Symbol Test I, certain theoretical problems also arise in connection with the testing of Hypotheses II and III. In the derivation of Hypothesis II the reasoning was that if neurosis results from sexual conflict stemming from an unresolved Oedipus complex (See above pp. 10-14), then the more neurotic a person is, the more he would tend to avoid the anxiety arousing sexual symbols of Symbol Test I. Since no inverse relationship was found between degree of neuroticism and the ability to identify the sexual symbols correctly (consistent with the findings of Moos and Mussen, 1959. see above pp. 31-32), one might question whether neuroticism is always the result of sexual conflict arising from an unresolved Gedipus complex. For example, Dollard and Miller (1950, pp. 132-152) discuss three areas in addition to early

genital sex experience in which neurotic conflict can be learned: the feeding situation, cleanliness training, and training in the expression of anger.

Blum (1955) has indirectly given some experimental support for this position. In a study concerned with perceptual defense, he obtained measures of Ss' conflict and repression in the various personality areas represented by his Blacky pictures. The Ss were then shown some of the picture cards by a tachistoscopic procedure at speeds well below recognition threshold and asked to try to identify them by calling out which ones they thought they saw. This process of verbalization was hypothesized to elicit defensive behavior with regard to the repressed conflict areas. Results supported this view, i.e. Ss verbalized ("called out") less often the names of the cards representative of their own areas of conflict and repression than the names of the more neutral, personally conflict-free cards. Though Blum does not relate these findings to Dollard and Miller's theories of origin of neurotic conflict, the fact that Ss demonstrated conflict and repression on cards other than the strictly Oedipal and sexual cards offers support for the idea of more divergent origins of neurotic conflict than Oedipal sexuality alone.

The present study was in some ways analogous to the idea of perceptual defense since Ss were presented with

symbols and were hypothesized to avoid the sexual symbols if these were representative of neurotic conflict. Thus, the argument of diversity of origin of neurotic conflict in connection with the failure to find support for Hypothesis II may have some credence.

Another writer, Wolpe (1958), after reviewing studies of experimental neuroses in animals, made the statement that "all human neuroses are produced, as animal neuroses are, by situations which evoke high intensities of anxiety" (p. 78). Presumably the exact nature of such anxiety arousing, neurosis producing situations can be quite variable. If the contentions of Dollard and Miller, and Wolpe are true, and if the present study can be taken as being somewhat analogous to Blum's study, the neuroticism of the present Ss may have arisen from a diversity of sources in addition to sexual conflicts. Since the MPI N-scale does not distinguish between various origins of neuroticism, it could not distinguish subjects having "sexual" neuroticism from subjects whose neuroticism had other origins. If subjects having "sexual" neuroticism could be identified and be given an extended version of Symbol Test I, Hypothesis II might yet be upheld.

The failure to confirm Hypothesis III which predicted a positive relationship between introversion and the ability to correctly identify Freudian sexual symbols raises

another theoretical problem. Jung proposed that every individual possesses the attitudes of both introversion and extraversion (See above p. 14) and that the predominance of one over the other produces the psychological type, introvert or extravert. However, by the mechanism of <u>compensation</u> (Jung, 1946, pp. 422 and 533) the predominant attitude, introversion or extraversion, is unconsciously balanced in degree by its counterpart.

Bash (1955) has offered some evidence for this theoretical position by use of the Rorschach experience balance (M: sum C ratio). Using M as a representation of introversion and C as a representation of extraversion, he found that when 3s were exposed to 200 consecutive exposures of Card IX, their responses would undergo a progressive change from a predominance of M to a predominance of C, or vice versa. Subjects who initially did not show a predominance of one type of response over another (ambiverts), did not tend to develop a predominance during the repeated exposures. The reasoning was that as time went on during the experiment, if one personality type was dominant, introversion (M) or extraversion (C), its unconscious counterpart began more and more to exert its influence.

In the present study, which does not appear to be closely analogous to the Bash (1955) study, it was assumed that the predominant attitude, introversion or extraversion

would influence the ability to identify the sexual symbols. The failure to find support for Hypothesis III might be attributable to the functioning of the counterpart of the predominant attitude in some unknown manner and degree. Any future test of Hypothesis III would have to make provision for partialing out the separate influences of the dominant attitude as well as its counterpart.

<u>Hypothesis IV</u>: If asked to indicate a preference for one of three types of sexual symbols, conventional, Freudian or neutral, Ss who are relatively extraverted will tend to choose the conventional symbols.

<u>Hypothesis V</u>: If asked to indicate a preference for one of three types of sexual symbols, conventional, Freudian or neutral, Ss who are relatively introverted will tend to choose the Freudian symbols.

<u>Hypothesis VI</u>: If asked to indicate a preference for one of three types of sexual symbols, conventional, Freudian or neutral, Ss who are relatively neurotic will tend to choose the neutral symbols.

The small dispersion of conventional, Freudian and neutral scores noted in Table 2 (p. 50), and the response biases noted in Table 6 (p. 57) raise the question as to whether Hypotheses IV, V and VI were adequately tested by Symbol Test II. While the analyses based on male and female Ss' responses to masculine and feminine items taken separately (See Table 5, p. 55) ameliorated to some extent the response bias due to sex differences in symbol preference, the small number of items on which the separate analyses were based, three masculine and nine feminine, make any conclusions very tentative.

There is also the problem of the neutral symbols being preferred more than either the conventional or Freudian symbols. It may be that the relative values assigned to the symbols by the original clinical judges were in error, and that the neutral symbols as a whole had more intrinsic value for college Ss than either the conventional or Freudian symbols.

With the above reservations in mind, it may be very tentatively concluded that neuroticism and extraversionintroversion as measured by the MPI are not related to relative preference for conventional, Freudian or neutral symbols, but additional research with a more adequate instrument than Symbol Test II is required for confirmation. In addition, the same theoretical problems that existed in connection with Hypotheses II and III would also apply here, i.e. the problems of diversity of origin of neurotic conflict and the mechanism of compensation with regard to introversion and extraversion (See above pp. 65-69).

### Supplementary Analyses

With the minor exception of two items on Symbol Test I, no over-all sex difference was found in the ability to correctly identify Freudian sexual symbolism. This is consistent with the majority of previous findings (See p. 34).

The restricted age range of the present sample (17 - 24) precluded any detailed examination of the relationship of age to symbol identification ability. However, the fact that the present sample showed significant symbol identification ability is consistent with the findings of the majority of previous studies using late adolescent or adult 3s (See p. 27).

The dispersion of estimated WAIS Full Scale LQs (hange = 93 - 154, SD = 10.35) should have been sufficient for the detection of any significant relationship between intelligence and symbol identification ability. Since none was obtained, the present results are contrary to Olin's (1961) finding of a significantly positive relationship (See pp. 31 and 35 above). This difference of results may be in some manner due to the fact that Olin used definite psychopathological groups, neurotics and schizophrenics, as opposed to the present normal groups of Ss.

# Comparison with MPI Normative Data

On the whole the present sample was more extraverted and neurotic than the normative group of American university students. Additional F tests for homogeneity of variance between the present sample and the normative student group were all non-significant. Thus, the groups did not differ in degree of dispersion as measured by the standard deviations. Although they scored significantly higher on neuroticism than the normative students, and although a high percentage (39.4%) of Ss scored above the mean neuroticism score of the normative neurotic group, the present sample can still be considered as a normal group since as a group they showed significantly less neuroticism than the normative neurotic group. SUMMARY

Previous research has indicated that, on the whole, people are able to differentiate between male and female sexual symbols derived from Freudian dream theory. There have also been indications that individual differences exist in the ability to correctly differentiate between sexual symbols. The present study was an attempt to extend previous findings a) by determining whether Ss could identify abstract Freudian sexual symbols from among other abstract symbols that had been judged sexually neutral, b) by determining whether the personality dimensions of neuroticism and extraversion-introversion were related to the ability to correctly identify Freudian sexual symbols, and c) by determining whether the personality variables of neuroticism and extraversion-introversion were related to differential preferences between conventional sexual symbols, Freudian sexual symbols and symbols that were sexually neutral by conventional and Freudian standards.

It was hypothesized that the more neurotic a person was, the more he would respond to sexually neutral symbols in both the symbol identification and symbol preference tasks. The reasoning for this was that sexual

symbols, conventional and Freudian, would be avoided because of their association with repressed sexual conflict.

In addition, it was hypothesized that relatively introverted Ss would show more ability in correctly identifying abstract Freudian sexual symbols and would also show a greater preference for Freudian sexual symbols than relatively extraverted Ss. These hypotheses were based on Jungian theory which states that introverts have a greater interest in inner impulse life than extraverts. Conversely, relatively extraverted Ss were expected to show a greater preference for conventional symbolism and less ability in identifying Freudian sexual symbols than relatively introverted Ss.

Results showed that a sample of 188 single male (n = 98) and female (n = 90) college students could correctly identify abstract Freudian sexual symbolism from among sexually neutral symbols significantly above chance expectancy. However, neuroticism and extraversion-introversion, as derived from Freudian and Jungian theory respectively, and measured by the Maudsley Personality Inventory, were not significantly related to symbol identification ability possibly because of an inadequate dispersion of scores on the symbol identification task. Problems of research design related to complex theoretical propositions were also cited as possible reasons for failure to achieve expected

results. In the case of neuroticism, conflicts other than sexual difficulties may have existed as the cause of the Ss' neuroticism, and for the extraversion-introversion dimension, both attributes, extraversion and introversion may have been simultaneously operating in the same person to an unknown degree.

In the case of symbol preferences between conventional, Freudian and neutral symbols, the existence of an attenuated dispersion of scores and strong, relatively uncontrolled response biases on the symbol preference task left the interpretation of results largely open to question. However, the obtained results gave some tentative indication that neuroticism and extraversion-introversion as derived from psychoanalytic theory and measured by the Maudsley Personality Inventory were not related to symbol preferences though further research is needed for confirmation of this finding.

Future research in this area must take into account the theoretical problems which were cited as well as devise methods for greater control of response biases than existed in the present study.

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# APPENDIX I: Symbol Selection (Judgments)

Table	A	Frequency	of Agree	ement	Among	Judges	for
		Symbols of	Symbol	Test	I		

Sym	bol ¹	<b>™</b> 2	F	N	Nost Agreement ³	Sym	bol	M	F	N	Most Agreement
l	a	1	-	3	N	7	a	-	4	-	F
	b	-	-	4	N		Ъ	-	-	4	N
	с	4	-	-	M		с	1	-	3	N
2	а	-	-	4	N	8	а	4	-		M
	b	-	4	-	F		Ъ	1	-	3	N
	с	-	1	3	N		с	1	-	3	N
3	a	l		3	N	9	а	-	-	4	N
	Ъ	1	-	3	N		ъ	1	-	3	N
	с	-	4	-	F		с	4	-	-	M
4	а	1	-	3	N	10	a	-	1	3	А
	Ъ	-	1	3	N		b	-	-	4	N
	с	4	-	-	M		с	-	4	-	F
5	a	-	1	3	N	11	а	-	4	-	F
	ő	4	-	-	M		b	-	1	3	N
	с	1	-	3	N		с	1	-	3	N
6	а	4	-	-	M	12	а	-	1	3	N
	Ъ	1	-	3	N		Ъ	-	4	-	F
	с	1	-	3	N		с	-	-	4	N

1 Symbols in order of appearance on test.

 2  M = masculine, F = feminine, N = neutral

³ A minimum of 75% agreement (three out of four judges) required.

# Table B: Frequency of Agreement Among Judges for

# Symbols of Symbol Test II

It	em Symbol ¹ (	Conve	nti	onal	Fre	udi	an	Desig-3 nation	Mean Value
		<u>I</u> ti	F.	N	M	F	N		
1	Banana Wood Plane Mask	- 4 -		4 - 4	z 1 -	1 1	- 33	N M MN NN	2.00 1.75 2.00
2	Paper Bag Cook Book Pedal	- - 1	1 4 -	3 - 3	- - 1	4 1 -	- ろっ	N F FN NN	1.75 1.50 2.00
3	Home Utility Cart Mailbox Table		3	1 4 4	-	1 4 -	3 - 4	FN NF NN	3.25 2.25 3.00
4	Window Doorway Dresser Mirror		- - 4	4+ 4+ 	-	1 4 1	3 3 3	NN NF FN	3.50 3.50 4.00
5	Waffle Iron Ashtray Wall Clock	1	4 - -	- 3 4		1 4 1	3 - 3	FN NF NN	4.25 3.25 4.00
б	Pen Telephone Shaver	- - 4	-	4 4 -	4 - 1	1	ーろう	nm Nn Lin	5.25 5.00 5.00
7	Pencil Sharpener Chair Iron	-	- - 4	4 4 -	- 1	3 1 -	1 3 3	n F NN FN	4.25 4.25 4.00
8	Fir Tree Stairway Electric Sander	- - 4	- 1 -	4 3 -	4 1 1		- 33	NM NN LIV	2 <b>.50</b> 2 <b>.50</b> 2.50
9	Shingles Pot Holder Box	1 - -	- 4 -	3 - 4	-	- 1 4	4 3 -	NN FN NF	1.75 1.50 1.75
10	Can Stove Burner Grate Leaf	-	13-	3 1 4	- - 1	4; 	- 4 7	n F Fn Nn	2.25 3.00 2.50

Ite	em Symbol ¹	Conver M ²	nti F	onal N	Fre N	udi F	an N	Desig-3 nation	Mean 4 Value
11.	Mop Button Alarm Clock	- - -	4 1 -	- 3 4	-	1 4 1	3-3-	FN NF NN	3.00 3.25 4.00
12	Basket Clothes Drying R Tile	- ack - 1	- 4 -	4 - 3	- - 1	4 1 -	- 33	NF FN NN	2.25 2.00 2.25

¹ Symbols in order of appearance on test.

² M = masculine, F = feminine, N = neutral

- ³ First letter designates conventional sexual meaning. Second letter designates Freudian sexual meaning. A minimum of 75% agreement (three out of four judges) required in both categories.
- 4 Mean value rating of symbols on a scale of 1 through 6 by four judges.

APPENDIX II: Sample Instrument

Age
Sex
Marital Status (check one) Single Married
т
±
MPI E
N
L
3T I M
F
Τ
JT II
1 N
FN:
TC
NI
NF
TF
NN

•,•

## GENERAL INSTRUCTIONS

- 1. Please indicate your age, sex and marital status at the top of this sheet. (Your name is not needed). Disregard the letters at the right of this page and at the bottom of succeeding pages. They are for purposes of tabulation.
- 2. In this booklet are a series of tasks designed for a research project. Please follow the instructions for each task and continue through the booklet until you are finished.

Thank you for your cooperation.

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. . **EXERUCTIONS:** Symbol Test I¹ For each of the following items, check (~) only one design, and please guess if necessary.

1. Place a checkmark (~) on the line directly below the design which you think could be described as the most masculine.



2. Place a checkmark (.) on the line directly below the design which you think could be described as the most feminine.



3. Place a checkmark (~) on the line directly below the design which you think could be described as the most feminine.



4. Place a checkmark (./) on the line directly below the design which you think could be described as the most masculine.



5. Place a checkmark (...) on the line directly below the design which you think could be described as the most masculine.



6. Place a checkmark (~) on the line directly below the design which you think could be described as the most masculine.



7. Place a checkmark (...) on the line directly below the design which you think could be described as the most feminine.



2. Place a checkmark (/) on the line directly below the design which you think could be described as the most masculine.



9. Place a checkmark () on the line directly below the design which you think could be described as the most masculine.



M F

10. Place a checkmark (...) on the line directly below the design which you think could be described as the most feminine.



11. Place a checkmark (...) on the line directly below the design which you think could be described as the most feminine.



12. Place a checkmark (...) on the line directly below the design which you think could be described as the most <u>feminine</u>.



M  $\mathbf{F}$ 

### INSTRUCTIONS:

Below are 12 groups of three objects. For each group, place a checkmark (~) on the line directly below the object that you most prefer. Check only one object per group, and please guess if necessary.







Maudsley Personality Inventory¹

**IN STRUCTIONS:** Please answer each question by putting an 'X' through the "Yes" or the "No," whichever applies to you; if you simply cannot make up your mind, put an 'X' through the "?". Work quickly and do not ponder too long about the exact shade of meaning of each question. There are no right or wrong answers, and no trick questions. Remember to answer each question. 1. Are you inclined to limit your acquaintances to a ? No 2. Do you prefer action to planning for action? . . . . Yes ? No 3. Do you nearly always have a "ready answer" for remarks ? directed at you? . . . . . . . . . . . . . . . . . Yes No 4. Are your daydreams frequently about things that can ? never come true? . . . . . . . . . . . . . . . . . . Yes No 5. As a child, did you always do as you were told, immed-? No 6. Are you inclined to be quick and sure in your actions? Yes No ? No 7. Do you have difficulty in making new friends?.... Yes 8. Do you sometimes put off until tomorrow what you ought ? No 9. Are you inclined to take your work casually, that is, as a matter of course? . . . . . . . . . . . . . . . . Yes ? No 10. Do you often feel disgruntled? . . . . . . . . . . . Yes ? No 11. Are you inclined to ponder over your past? . . . . . Yes ? No 12. If you say you will do something do you always keep your promise, no matter how inconvenient it might be ? No 13. Do you like to mix socially with people? . . . . . . Yes ? No 14. Are you inclined to be shy in the presence of the ? No ? No 16. Do you often experience periods of loneliness? . . . Yes ? No ? No 18. Do you often find that you have made up your mind too No 19. Are you completely free from prejudice of any kind?. . Yes ? No ¹See Jensen, 1958 for scoring key.

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E____N___L____

20.	Are you inclined to be overconscientious? Ye	<b>s</b> ?	No
21.	Do you often 'have the time of your life' at social affairs?	es ?	No
22.	Do you ever change from happiness to sadness, or vice versa, without good reason?	es ?	No
23.	Do you like to play pranks upon others?Ye	es ?	No
24.	Do you sometimes laugh at a dirty joke?	es ?	No
25.	Does your mind often wander while you are trying to concentrate	es ?	No
26.	Would you rate yourself as a tense or "high strung" individual?	es ?	No
27,	After a critical moment is over, do you usually think of something you should have done but failed to do? Ye	es ?	No
28.	Could you much rather win, than lose, a game? Ye	es ?	1.0
29.	Do you find it easy, as a rule, to make new acquaintances? Ye	es ?	No
30,	Do you ever have a queer feeling that you are not your old self?Ye	s?	No
31.	Do you ever take your work as if it were a matter of Life or death?	es ?	No
32.	Are you frequently "lost in thought" even when sup- posed to be taking part in a conversation? Ye	es ?	No
33.	Do you always feel genuinely pleased when a bitter enemy achieves a merited success?	es ?	No
34.	Do you derive more real satisfaction from social activities than from anything else?	es ?	No
35.	Do ideas run through your head so that you cannot sleep?	es ?	No
36.	Do you sometimes boast a little? Ye	s?	No
37.	Can you usually let yourself go and have a hilariously good time at a gay party?Ye	s?	No
38.	Do you like to indulge in reverie (daydreaming)? Ye	s?	No
39.	Have you often felt listless and tired for no good reason?	s ?	No
40,	Are all your habits good and desirable ones? Ye	s ?	No

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E____ N____ L____

41.	Are you inclined to keep quiet when out in a social group?	Yes	?	No
42,	Are you sometimes bubbling over with energy and some- times very sluggish?	Yes	?	No
43.	Do you <u>always</u> answer a personal letter as soon as you can after you have read it?	Yes	?	No
<i>'</i> <del>'</del> 4.	"ould you rate yourself as a talkative individual?	Yes	?	No
45.	Do you occasionally have thoughts and ideas that you would not like other people to know about?	Yes	?	No
46.	Would you be very unhappy if you were prevented from making numerous social contacts?	Yes	?	No
47.	Are you happiest when you get involved in some project that calls for rapid action?	Yes	?	No
48.	Do you spend much time in thinking over good times you have had in the past?	Yes	?	No
49.	Do you sometimes talk about things you know nothing about?	Yes	?	No
50.	Have you ever been bothered by having a useless thought come into your mind repeatedly?	Yes	?	No
51.	Do other people regard you as a lively individual?	Yes	?	No
52.	Do you sometimes gossip?	Yes	?	No
53.	Do you usually keep in fairly uniform spirits?	Yes	?	No
54.	Are your fellings rather easily hurt?	Yes	?	No
55.	At times, have you ever told a lie?	Yes	?	No
56.	Do you generally prefer to take the lead in group activities?	Yes	?	No
57.	Would you rate yourself as a happy-go-lucky individual?	Yes	?	No
58.	Have you money worries at times?	Yes	?	No
59.	Do you have periods of such great restlessness that you cannot sit long in a chair?	Yes	?	No
60.	Are you usually a "good mixer"?	Yes	?	No
61.	Would you rate yourself as a lively individual?	Yes	?	No
62.	Have you ever been late for an appointment or work?	Yes	?	Nо

92 E____N___L___
E3.	Do you ever feel "just miserable" for no good reason	2	Mo
		:	1.0
64.	Are you often troubled with feelings of guilt? Yes	?	No
65.	Are you inclined to be moody?	?	Νo
56.	Do you like to have many social engagements? Yes	?	No
F7.	Once in a while, do you lose your temper and get angry?	?	No
68.	Do you sometimes feel happy, sometimes depressed, without any apparent reason? Yes	?	No
69.	Is it difficult to "lose yourself" even at a lively party?	?	No
70.	Fre you ordinarily a carefree individual? Yes	?	No
71.	bo you have frequent ups and downs in mood, either with or without apparent cause?	?	No
72,	would you always declare everything at the Customs, even if you knew that you could never be found out? Yes	?	No
73.	Do you like work that requires considerable attention to details?	?	No
74.	Are there times when you seek to be alone and you cannot bear the company of anyone? Yes	?	No
75.	Are you inclined to keep in the background on social occasions?	?	No
76.	Have you often lost sleep over your worries? Yes	?	No
77.	Of all the people you know are there some whom you definitely do not like?Yes	?	No
78.	Do you usually feel disappointments so keenly that you cannot get them out of your mind?	?	No
79.	Do you usually take the initiative in making new friends? Yes	?	No
80.	Do you enjoy participating in a showing of "Rah Kah" enthusiasm?	?	Ho

· 93 E___ N___ L____

INSTRUCTIONS:

Below are a series of 29 general information questions. The first ones are very easy but the later ones become increasingly more difficult. Please write a <u>brief</u> answer for each question, and guess if necessary. If you definitely do not know the answer, just write "don't know" next to the question.

- 1. What are the colors in the American flag?
- 2. What is the shape of a ball?
- 3. How many months are there in a year?
- 4. What is a thermometer?
- 5. What loes rubber come from?
- 6. Name four men who have been presidents of the United States since 1900.
- 7. Longfellow was a famous man; what was ne?
- 8. How many weeks are there in a year?
- 9. In what direction would you travel if you went from Chicago to Panama?
- 10. Where is Brazil?
- 11. How tall is the average American woman?
- 12. What is the capital of Italy?
- 13. Why are dark clothes warmer than light-colored clothes?
- 14. Then is Tashington's birthday?
- 15. Who wrote Hamlet?
- 16. What is the Vatican?

¹See Wechsler, 1955 for scoring criteria.

- 17. How far is it from Paris to New York?
- 18. Where is Egypt?
- 19. How does yeast cause dough to rise?
- 20. What is the population of the United States?
- 21. How many senators are there in the United States Senate?
- 22. What is the main theme of the Book of Genesis?
- 23. At what temperature does water boil?
- 24. Who wrote the Iliad?
- 25. Name three kinds of blood vessels in the human body.
- 26. What is the Koran?
- 27. Who wrote Faust?
- 28. What is ethnology?
- 29. What is the Apocrypha?

RS_____ 33____

## APPWNDIX III: Individual Subject Scores

Subject Age, I., and Scores on MPI, Symbol Wests I and II

Abreviations of the Table:

- 3 Subject number
- MPI Maudsley Personality Inventory
  - E Extraversi n Score
  - N Neuroticism Score

ST I Symbol Test I

- M Male Score (number of male symbols correctly identified)
- F Female Score (number of female symbols correctly identified)
- T Total Number of Symbols Correctly Identified

ST II Symbol Test II

- NN Number of Culturally Male, Freudian Neutral Symbols Preferred
- FN Number of Culturally Female, Freudian Neutral Symbols Preferred
- TC Total Number of Conventional Symbols Preferred
- NM Number of Culturilly Neutral, Freudian Male Symbols Proferred
- NF Number of Culturally Neutral, Freudian Fenale Symbols Preferred
- TF Total Number of Freudian Symbols Preferred
- MN Total Number of Neutral Symbols Preferred

						FEM.	LES							
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44 45	19 19	102 102	31 20	<b>4</b> 2 45	2	6 4	8	0	1 4	1	1	2	32	8 5
46	19	<b>9</b> 5	15	25	1	2	3	1	3	, /t	1	- 3	4	4
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49 49	18 18	128	37	36	4	6	10	0	ころう	3	2	2	4	5
50	18	128	11	17	3	4	7	1	3	4	2	2	4	4
51 52	18 18	128 128	57 ⊇4	29 25	ら 4	2	0 6	0	4 3	4 3	1	3	ے 4	ь 5
53 54	18 18	128 128	29 36	22 17	3	3	65	0	5	5	2	2 4	4	3
55	18	128	19	37	Ō	2	2	ŏ	õ	õ	3	4	7	5
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61	18	122	36	20	2	6	8	0	3	3	3	4	7	2
62 63	18 18	122 122	-43 - 37	14 38	3 5	5 3	8 3	<b>0</b> 0	1 0	1 0	2	3 4	5 5	6 7
64 65	18 18	122 122	32 24	32 32	3	4	7	0	<b>5</b>	5	2	1	3	4
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0 7 8 9 10	21 21 21 21 21 21	133 126 126 120 106	32 40 26 32 41	4 35 22 37	35336	0 5 4 4 4	3 10 7 7 10	2 1 2 1	40333	6 1 4 5 4	0 1 1 2	54 22 1	55333	<b>1</b> 6 5 4 5
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