EXTRAVERSION-INTROVERSION AND THE
SEXUAL BEHAVIOR OF COLLEGE STUDENTS

APPROVED:

[Signatures]

Major Professor

Consulting Professor

Chairman of the Department of Psychology

Dean of the Graduate School
The purpose of this study was to determine if a relationship exists between Extraversion-Introversion and the sexual behavior of college students.

Five predictions were proposed based on previous research which indicated the possibility of a relationship of the personality types of extraversion and introversion with some aspects of sexual behavior. The five areas of sexual behavior investigated included the age of first intercourse, the frequency of intercourse, the number of sexual partners, the positions used in intercourse, and the time spent in love play prior to intercourse.

A total of seventy-six subjects was given two questionnaires, the Myers-Briggs Type Indicator to determine Extraversion-Introversion, and a sex behavior survey to assess behavior in the five areas investigated. A statistical analysis of the data involved a Pearson product moment correlation coefficient and a test of significance set at the .05 level.

The results obtained indicated that there is little correlation between Extraversion-Introversion and most of the areas investigated for the population sampled. A correlation coefficient was performed on the five predictions.
using the male sample only, the female sample only, and the entire sample with males and females combined. Two of the fifteen coefficients proved to be significant and were discussed along with other findings of the study.

Weaknesses of the study were also cited and suggestions were given regarding the improvement of similar studies which may be done in the future.
EXTRAVERSION-INTROVERSION AND THE SEXUAL BEHAVIOR OF COLLEGE STUDENTS

THESIS

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By

Donald J. Orgeron, B.S.
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CHAPTER I

INTRODUCTION

Alfred Kinsey (12, p. 217) once wrote, "It is incomprehensible that we should know so little about such an important subject as sex, unless you realize the multiplicity of forces which have operated to dissuade the scientist, to intimidate the scientist, and to force him to cease research in these areas" (unpublished paper dated 1956).

There has been an increase in sex research in recent years, but the many authors who have been concerned with the relationship between sexual behavior and personality have for the most part been content with theoretical speculation, or single-case clinical types of study. This paper, although based on theoretical assumptions or speculation, is concerned with reported sexual behavior and the personality dimension of Extraversion-Introversion.

Extraversion and introversion have been the basis of many studies ever since Jung (10) formulated the theory of types. From these numerous studies there has resulted many descriptions of extraversion and introversion. Evans and McConnell (4) give a generally accepted description of Extraversion-Introversion in three ways: by the type of thought, by the type of socialization, and by the type of
emotionality experienced by the extravert or introvert. They feel that the thinking introvert shows a liking for reflective thought, particularly of a more abstract nature. His thinking tends to be not so dominated or oriented by objective conditions and generally accepted ideas as is the thinking of the extravert. The thinking of the extravert shows a liking for overt action. His thinking tends to be more dominated by more objective conditions and generally accepted ideas than that of the introvert.

Evans and McConnell found that the social introvert withdraws from social contacts and responsibilities. They feel he displays little interest in people. In contrast, the social extravert seeks social contacts and depends upon them for his satisfaction. He is primarily interested in people.

The last type described by Evans and McConnell is the emotional extravert or introvert. They state that the emotional introvert tends to repress and inhibit the outward expression of emotions and feelings. He tends not to make the typical response to simple, direct emotional appeals. On the other hand, the emotional extravert readily expresses his emotions and feelings outwardly. He tends to make the expected response to simple, direct emotional appeals.

The description of Extraversion-Introversion by Evans and McConnell closely approximates the generally accepted
description of the extravert or introvert. Isabel Myers, in the manual for the *Myers-Briggs Type Indicator* (15, p. 57), in defining Extraversion-Introversion states that the introvert's "main interests are in the inner world of concepts and ideas, while the extravert's main interests are in the outer world of people and things. Therefore, when circumstances permit, the introvert directs both perception and judgment upon ideas, while the extravert likes to direct both upon his outside environment ..." In a study by Deich and Emami (3), it was found that high extraversion subjects tended to view themselves as more outgoing and better looking, preferred a more active life-style and found more ease and opportunity relating to the opposite sex than did those who scored low in extraversion.

There have also been numerous studies on sex and sexuality, but the main concern of this paper in this area is sexual behavior. There have been several studies reporting the amount of participation of unmarried individuals in sexual activities. One of the first studies, and probably the most well known and quoted, was that of Alfred C. Kinsey and his associates (13, 14). Kinsey discovered that 50 per cent of all married females admitted to engaging in premarital sexual intercourse, while approximately 80 to 95 per cent of all married males admitted to engaging in premarital sexual intercourse.
Schofield (17) made an extensive study using an English sample. He found that 34 per cent of the males at eighteen years old have had intercourse and 17 per cent of the females in the same age group had experienced intercourse (17, p. 34).

In another foreign study, Giese and Schmidt (9) found that 41 per cent of unmarried German male students and 39 per cent of unmarried German female students between the ages of twenty and twenty-one years old have engaged in premarital sexual intercourse. They found that these figures rise to 56 per cent and 48 per cent respectively for all students.

In a study of American college females, Bell and Chaskes (1) report that 50 per cent or more of the females sampled had had premarital intercourse. Kaats and Davis (11) report that the coital rate for a sophomore and junior sample of college women was 41 to 44 per cent, and 60 per cent for the college men sampled. The general findings, therefore, of recent studies into the sexual behavior of young adults, especially college students, agree that approximately half of female students engage in premarital intercourse, while the percentage for the male population is about 60 per cent or more.

Schofield (17, p. 160) found that there is an association between the level of sex activity and group membership for both males and females, that nonexperienced males and females are less likely to go around in groups. Those individuals who seek membership in a group will more likely be found to
be socially extraverted, as opposed to the social introvert, who will more likely withdraw from social contacts and therefore avoid groups (4). In seeking membership in a group, an individual is seeking arousal-producing stimuli so as to maintain some optimum level of arousal potential. This stimulus-seeking behavior was found by Farley and Farley (8) to have a very high and significant correlation with an objective measure of extraversion.

The correlation between extraversion and stimulus-seeking behavior gives support to the view of Eysenck on personality in general, and specifically on extraversion and introversion. Eysenck (5) feels that the mechanism which underlies the control of traits may be postulated as one of cortical inhibition versus excitation. In its most general form, this theory states that extraverts function with minimal levels of cortical inhibition of the central nervous system, while introverts function with maximal levels of cortical inhibition. The extravert would therefore respond behaviorally in a more impulsive, divergent manner than the introvert. Numerous studies have given support to Eysenck's theory, among those being the studies of Philipp and Wilde (16) and Casey and McManis (2). The former study demonstrated that extraverts manifest higher levels of drive and response rates than do introverts, in an experimental situation which required the individual to make a response in order to receive various
types of stimulation. The Casey and McManis study correlated Extraversion-Introversion to the salivary responses to lemon juice by children. They found that subjects in the upper one-third of the total group on extraversion showed significantly less salivation to lemon juice than did subjects in the lower third. This finding of less salivation by those classified as extraverts is consistent with Eysenck's theoretical analysis regarding the biological basis of personality.

Eysenck's theory of personality makes fairly specific deductions regarding behavior and attitudes in the sexual field. As far as Extraversion-Introversion is concerned, these deductions are based on the greater cortical arousal of introverts, leading to lower sensory thresholds (5, p. 110) and to better and quicker formation of conditioned responses in these types (5, p. 118).

In a study on hysterical personality, Eysenck (6) found that hysterics with high extraversion scores were more active sexually. They had stronger libidinal drives, were more excited by sexual stimuli, paid less regard to social taboos on sexual matters, and were more strongly affected by "perverted" thoughts than were those who were categorized as introverts. In another study, Eysenck (7) found evidence which suggests that the extravert endorses the permissive, promiscuous approach to sex, with frequent changes of sex partners and a much more "healthy appetite" for frequent sexual contacts. The introvert
on the other hand endorses the orthodox Christian approach with fidelity, stressing the importance of virginity, with less purely biological factors as the primary contents.

There appears to be a relationship between the personality of an individual and the sexual behavior exhibited by the individual. From the research cited above, especially that of Eysenck, it is felt that the extravert exhibits greater sexual activity. According to Eysenck's theory, extraverts, having higher sensory thresholds, seek for stronger sensory stimulation, as seen in sensation-seeking behavior. Being less easy to condition, extraverts also form the conditioned responses necessary for socialization less readily, and therefore are less likely to behave in a socially approved manner. It is felt that the theorized higher sensory thresholds and resultant lowered conditionability of the extravert lead to the following predictions regarding premarital sexual behavior:

1) Extraverts will begin having intercourse at an earlier age than introverts;
2) Extraverts will have intercourse more frequently than introverts;
3) Extraverts will have intercourse with more different partners than introverts;
4) Extraverts will have intercourse in more diverse positions than introverts;
5) Extraverts will indulge in longer pre-coital love play than introverts.
The purpose of this study was therefore to determine if there is a relationship between Extraversion-Introversion and sexual behavior as stated above in the five predictions.
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CHAPTER II

METHOD

Subjects used in the collection of data consisted of seventy-six students enrolled in freshmen psychology courses at North Texas State University, thirty-eight males and thirty-eight females. The subjects ranged in ages from eighteen to twenty-eight years old inclusively, with all but six of the subjects being single. Because of the nature of the study, it was necessary to eliminate the six married subjects from the study in order not to distort the results, since a marital state can be assumed to result in sexual behavior differing from that of being single.

The subjects were informed of what was required of them, that is, filling out two questionnaires, but because they were volunteers, the nature of the study was not revealed to them until they came to the testing room. The basis for not revealing the purpose of the study was to prevent the drawing of subjects into the study on the basis of participating in a "sex study." This was done to prevent any bias from entering into the results by the type of subject who would volunteer to participate in a "sex study."

Eysenck and Eysenck (2) found that whenever answers to a sex-attitude survey were kept anonymous there was little
dissimilation in the answering behavior of the group. Anonymity was therefore assured to those answering the questionnaires by not allowing the subjects to place their names on the answer sheets. Also, subjects were not allowed to sit within two seats from each other, in order to help eliminate the influencing of a response due to the proximity of another individual.

The subjects were tested in two groups, with thirty-six in the first group and forty subjects in the second. They were given two self-administered questionnaires, one being the Myers-Briggs Type Indicator (4), with the other questionnaire being a survey of sexual behavior. Since both surveys were self-administered, the subjects were told to read the directions on each questionnaire and answer the items as instructed. The subjects were also informed that if there were any questions regarding the questionnaires they could ask the monitor, who would answer them.

The MBTI was used to obtain an objective measure of Extraversion-Introversion. The MBTI has been shown to have a high reliability coefficient of .80 for Extraversion-Introversion, as well as measuring Extraversion-Introversion in continuous scores (5, 6). Stricker and Ross (7) feel that the Extraversion-Introversion scale of the MBTI does to a large extent measure Extraversion-Introversion scale as it has been commonly defined.
The second of the two self-administered questionnaires consisted of items regarding the subjects' sexual behavior. The sexual behavior inventory, reproduced in the Appendix, consisted of items taken from a questionnaire used by Eysenck (1), as well as some items not covered by Eysenck's questionnaire. In reviewing the literature, no standardized survey on sexual behavior could be found. Eysenck's survey was selected for the collection of data because it has been used by Eysenck in his many studies on sexual behavior and therefore appears to approach some semblance of standardization. If it can be assumed that the subjects responded to Eysenck's survey with the same reliability and validity which Eysenck has obtained, then it is hoped that the subjects responded the same to those items which were added to the questionnaire.

In order to interpret the results, the Pearson product moment correlation coefficient was used, since continuous scores were obtained from the MBTI on the Extraversion-Introversion scale as well as from the sexual behavior questionnaire. The obtained correlation coefficient was then subjected to a test of significance, with statistical significance set at the .05 level. The statistical formulas used in the computation of the correlation coefficients and in the determination of significance were supplied by McNemar (3).
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CHAPTER III

RESULTS

Although the subjects were instructed to answer all items which were applicable to them, there were several subjects who omitted some of the items in the sexual behavior survey. It was therefore necessary to omit some of the subjects in calculating the correlation coefficient on those items for which they had omitted. The number of subjects omitted for any one item did not exceed four except in one of the predictions, in which ten males and ten females failed to respond.

Three correlation coefficient calculations were performed on each of the five predictions. One coefficient was calculated on the total sample, and one each on the male sample and on the female sample. The reasoning behind the use of three different calculations on each prediction was pointed out by Kinsey (1, p. 331), who noted that males differ from females in the amount of sexual activity and experience. It was felt that the combining of the male and female data would therefore result in findings which might not show the true relationship which exists between Extraversion-Introversion and sexual behavior.
In looking at the results, it should be noted that an obtained negative correlation coefficient indicates a positive relationship between extraversion and greater participation in the particular sex behavior studied. The reason for this inversion is due to the numerical values assigned to an individual by the scoring system of the MBTI. That is, extraverts receive lower numerical values than introverts on the Extraversion-Introversion scale.

In the first prediction, which stated that extraverts would begin having intercourse at an earlier age than introverts, a high correlation coefficient of -.45 was found to exist for males in the sample taken, significant at P < .05. However, coefficients of -.14 for the female sample and -.14 for both sexes combined were obtained, which proved to be statistically nonsignificant. The males had a mean age of first intercourse of 16.3 years of age, which was lower than the mean of 17.5 years of age for the first time at which females had experienced sexual intercourse. In this case, ten male subjects and ten female subjects did not respond to this item. Of the ten male subjects, seven were extraverts and three were introverts. For the female subjects, five were extraverts and five were introverts.

The second prediction stated that extraverts will indulge in intercourse more frequently than introverts. However, a nonsignificant correlation coefficient of -.19 for the male
sample and -.01 for the female sample was obtained. For the total sample a nonsignificant correlation coefficient of -.10 was obtained. Very little differences were found in the mean frequencies of intercourse between the male sample and the female sample. The males had a mean of 3.17 and the females had a mean of 3.11 on a seven level scale, which would indicate that both sexes indulge in intercourse on the average of one to two times per month.

A significant correlation coefficient of -.26 for the entire sample was obtained between extraversion and the number of sexual partners. This was in line with the third prediction. However, the male sample produced a nonsignificant correlation coefficient of -.21, with the coefficient for the females also being nonsignificant at .16. The males were found to have averaged 7.5 sexual partners while the females had a mean of 3.5 sexual partners.

For the fourth prediction regarding the use of more varied positions during intercourse by extraverts, the male sample revealed a coefficient of -.14, with the female sample and the sexes combined revealing coefficients of .26 and .04, respectively. The mean for the number of positions used was found to be 14.5 for the male sample and 11.4 for the female sample.

The fifth prediction stated that extraverts will indulge in longer precoital love play before intercourse than will
introverts. The correlation between these two variables was, however, nonsignificant for both the male and the female samples. The male coefficient was found to be .17, and the female coefficient was found to be .23. When the data for both sexes were combined, a nonsignificant coefficient of .12 was also obtained. The mean for the amount of time spent in pre-coital love play for this sample was found to be about eighteen minutes for the males and thirteen minutes for the females.

Of the seventy unmarried subjects answering the questionnaires, eleven admitted to being virgins. Four of the eleven virgins were males, thereby resulting in about 88 per cent of the males admitting to having indulged in sexual intercourse. With seven of the females being virgins, the percentage of females admitting to being sexually experienced was 81 per cent of the thirty-seven in the sample.
CHAPTER BIBLIOGRAPHY

CHAPTER IV

DISCUSSION

It is apparent in looking at the results obtained regarding sexual behavior and Extraversion-Introversion that most of the predictions made did not result in significant correlations. Only two of the fifteen coefficients were significant.

One of the predictions, which was supported by a significant correlation, was that extraverts would have more sex partners than introverts. A significant correlation occurred when the entire sample, both males and females, was used. This means that extraverts reported having a significantly higher number of sex partners than introverts. However, in looking at the results of the male and female samples separately, it can be seen that no significant results were obtained. A possible explanation for this finding is that with a larger number of subjects the coefficient needed for significance becomes smaller.

The other significant correlation was that between Extraversion-Introversion and age of first intercourse. This correlation was significant only for the male sample. This means that extraverted males reportedly begin having sexual intercourse before introverted males begin engaging in intercourse. It should be noted that for this item it was
necessary to eliminate ten subjects from the male sample due to a failure by these subjects to respond to this item. Since seven subjects were extraverts and three were introverts, it is felt that the elimination of these subjects did have an effect upon the obtained results. However, it is impossible to determine whether their elimination resulted in a coefficient which shows a higher correlation than actually exists, or one which does not adequately show the existence of a higher correlation. The same is also true of the female sample, from which five extraverts and five introverts had to be eliminated. Although the female sample did not reveal any significant correlation, it is impossible to determine what effect the elimination of the ten females had on the obtained coefficient. Thus, the results seem to support this prediction for male subjects only.

A finding which it is felt should be mentioned was the discovery of the extremely low incidence of virgins in the sample for females, as well as for males. Previous studies (2, 3, 4) have indicated the percentage for premarital sexual intercourse to be about 65 per cent for males and 50 per cent for females. The present study discovered a percentage of 88 per cent for males and 81 per cent for females who reported having engaged in premarital sexual intercourse. If it can be assumed that the reported behavior is valid, then this finding of a higher incidence of sexual behavior could
possibly explain the nonsignificant results obtained. For a
correlational study one needs to assume that the subjects
will fall at the two extremes studied as well as at points
in between. However, according to the obtained data, most of
the subjects fell in a small range, which made the obtaining
of a significant correlation more difficult to achieve for
this sample.

The subjects used in the study were taken from a population
of college students and thus might be atypical of the general
population as far as sexual behavior is concerned. It may be
that the college student has a more liberal view of premarital
sex than the general population. Also, in combination with a
more liberal view of premarital sex, the close proximity and
availability of the large number of college students increases
the incidence of premarital sex. It is therefore suggested
that, should any future study be made similar to the present
study, a more representative sample be taken from the
general population, if possible, in order to possibly increase
the validity of the results as well as the generalizations
which could be made.

A weakness of the present study which needs to be
discussed concerns the reliability and validity of the data.
It is believed that the reliability and validity for the MBTI
would be similar to those reported in previous studies.
However, the reliability and validity of the sexual behavior
questionnaire are questionable due to its lack of standard-
ization and previous usage to establish norms. For this
reason, Eysenck's questionnaire (1) was included to lend
stability to the data and to help compensate for the lack of
any established reliability and validity data for the items
used to obtain the needed sex information.

However, Eysenck's questionnaire, which supposedly added
strength to the reliability and validity to the study, was
actually a weakness for the fourth prediction, regarding
the positions used in sexual behavior. Eysenck used this
questionnaire as a measure of positions used by couples during
sexual activity. Although the questionnaire does have items
in it regarding positions used during intercourse, it also
has items in it which do not involve intercourse at all, but
rather pertain to activities generally referred to as "petting"
behavior. For this reason, it is felt that the coefficients
obtained do not adequately reflect the possible existence of
any relationship which may be present between Extraversion-
Introversion and the number of positions used during intercourse.

Another weakness which should be noted is the small
number of subjects used in the study. In order to strengthen
the results it would be an advantage to increase the number
of subjects sampled. As stated earlier, some subjects did
not answer some of the items and therefore had to be eliminated
from the data for that item. This resulted in a decrease in
the number of subjects in an already small sample. Besides
decreasing the number of subjects used, having to eliminate subjects creates a bias which will definitely affect the results in a direction which is impossible to predict at this time.

Although only two of the coefficients proved to be significant, it does not mean that no relationship exists for the remaining thirteen. It was shown that no significant relationship was discovered for those thirteen items, using the present measuring instruments. However, with better and more sophisticated measuring instruments, or with a different population, it may be shown that significant relationships do exist which the present study was unable to detect.
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FOR FEMALES ONLY

HERE ARE BRIEF DESCRIPTIONS OF SEXUAL BEHAVIOR PATTERNS IN WHICH PEOPLE INDULGE. INDICATE BY PUTTING A CROSS (X) NEXT TO THE ITEMS IN WHICH YOU HAVE EVER INDULGED:

(Note: Manual = By Hand. Oral = By Mouth.)

_____ 1 One minute continuous lip kissing
_____ 2 Manual manipulation of male genitals, over clothes
_____ 3 Kissing nipples of female breasts, by male
_____ 4 Oral manipulation of female genitals, by male
_____ 5 Sexual intercourse face to face
_____ 6 Manual manipulation of female breasts, over clothes, by male
_____ 7 Oral manipulation of male genitals
_____ 8 Manual manipulation of male genitals to ejaculation
_____ 9 Manual manipulation of female breasts, under clothes, by male
_____10 Manual manipulation of male genitals, under clothes
_____11 Sexual intercourse, man behind woman
_____12 Manual manipulation of female genitals, over clothes, by male
_____13 Manual manipulation of female genitals to massive secretions, by male
_____14 Mutual oral manipulation of genitals to mutual orgasm
_____15 Manual manipulation of female genitals, under clothes, by male
_____16 Mutual manual manipulation of genitals

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17 Oral manipulation of male genitals to ejaculation
18 Mutual manual manipulation of genitals to mutual orgasm
19 Mutual oral-genital manipulation
FOR MALES ONLY

HERE ARE BRIEF DESCRIPTIONS OF SEXUAL BEHAVIOR PATTERNS IN WHICH PEOPLE INDULGE. INDICATE BY PUTTING A CROSS (X) NEXT TO THE ITEMS IN WHICH YOU HAVE EVER INDULGED:

(NOTE: MANUAL = BY HAND. ORAL = BY MOUTH.)

_____ 1 One minute continuous lip kissing
_____ 2 Manual manipulation of male genitals, over clothes, by female
_____ 3 Kissing nipples of female breasts
_____ 4 Oral manipulation of female genitals
_____ 5 Sexual intercourse face to face
_____ 6 Manual manipulation of female breasts, over clothes
_____ 7 Oral manipulation of male genitals, by female
_____ 8 Manual manipulation of male genitals to ejaculation by female
_____ 9 Manual manipulation of female breasts, under clothes
_____ 10 Manual manipulation of male genitals, under clothes, by female
_____ 11 Sexual intercourse, man behind woman
_____ 12 Manual manipulation of female genitals, over clothes
_____ 13 Manual manipulation of female genitals to massive secretions
_____ 14 Mutual oral manipulation of genitals to mutual orgasm
_____ 15 Manual manipulation of female genitals, under clothes
_____ 16 Mutual manual manipulation of genitals
17 Oral manipulation of male genitals to ejaculation, by female

18 Mutual manual manipulation of genitals to mutual orgasm

19 Mutual oral-genital manipulation
ANSWER THE FOLLOWING ITEMS BY EITHER FILLING IN THE BLANKS OR PLACING A CIRCLE AROUND THE APPROPRIATE ITEM:

What is your age? _______

What is your marital status? Single Married Divorced Widowed

With how many persons have you had premarital sexual intercourse? _______

None One Two Three Four Five Six Seven

If more than seven, how many? _______

Your age at first intercourse: _______

In the last six months, how often on the average have you engaged in sexual intercourse?

1. Not at all
2. A few times
3. Once or twice a month
4. Once or twice a week
5. Three or four times a week
6. Five or six times a week
7. Daily or more often

How much time, on the average, do you usually spend in precoital love play (i.e., the time spent in love play before actual intercourse)?

1) 0 to 5 min. 2) 5 to 10 min. 3) 10 to 15 min.
4) 15 to 20 min. 5) 20 to 25 min. 6) 25 to 30 min.

If more than 30 minutes, how long? _______
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