VOLUNTEER BIAS IN SEX RESEARCH: EFFECTS OF VARIABLE STIMULI CONTENT AND INTRUSIVENESS OF MEASUREMENT

by

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(ABSTRACT)

Previous studies of volunteer bias in sex research found that volunteers for such studies differed from non-volunteers in terms of reporting increased heterosexual experience; more liberal attitudes toward sex; increased exposure to commercialized erotica; and an increase in sexual trauma. The object of this study was to investigate the effects that varying the stimuli content (i.e. heterosexual vs gay male vs lesbian) of films used in sexual arousal studies would have on volunteer rate and characteristics of the volunteers. Also investigated was the effect of varying intrusiveness of measurement (physiological vs subjective measures) and the interaction of film and measurement type. 285 female and male undergraduates volunteered for a questionnaire study of sexuality. Demographics, heterosexual and homosexual behavior, exposure to pornography, attitudes toward sexuality

and homosexuality and one's position on a sex-role continuum were assessed. Subjects were provided with a complete written description of a further study of sexual arousal, utilizing sexually explicit films, in which the stimuli content and the intrusiveness of measurement the subject would experience were randomly varied. Previous findings regarding volunteers were replicated except for reporting of sexual trauma. Volunteers reported more sexual fantasies with both heterosexual and homosexual themes. They scored higher on sensation seeking and experience seeking. No conclusions could be drawn regarding impact of sexual preference or homosexual activities due to the limited reporting of such behaviors. No significant effects were found for intrusiveness of measurement. Pseudo-volunteers for the arousal study were found to be significantly different from non-volunteers on several variables. This resulted in questioning the classification of pseudo-volunteers with non-volunteers. Possible directions for future research are presented.

DEDICATION

This thesis is dedicated with love, respect and gratitude to the memories of the two most influential men in my life. My maternal grandfather, , who taught me to love unreservedly and , whom, by his example, showed me that one can be a terrific psychologist and a fully-rounded person at the same time.

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Volunteer bias in sex research: Effects of variable stimuli content and intrusiveness of measurement

The problem of subject bias has plagued psychological research almost since its inception. Wilhelm Wundt's assistants, trained as "analytical introspectionists", posed the problem of experimenter as subject, with all of the preconceived notions that accompanys that position. Sigmund Freud, through his study of neurotic upper-middle class Victorian Viennese, gave us an example of the problems in generalizing from a very limited subject sample. By the mid-1940's and early 50's subject bias was accepted as a fundamental confound in psychological research (e.g., Rosenthal, 1965; Martin and Marcuse, 1958; Maslow and Sakoda, 1952.) Numerous studies have been done in the decades since attempting to delineate the extent of this bias. Others search for innovative methods to circumvent this problem.

Volunteer subjects for research present additional specific difficulties. Since they are self-selected it is difficult, if not impossible, to persuade those who do not want to volunteer to do so for the purpose of comparing results. These volunteers may have numerous reasons, "hidden agendas" if you will, for volunteering for a particular experiment. We are left with results from which it is

impossible to honestly generalize to the population as a whole which we are interested in studying. This can lead to making inferences about population characteristics which may or may not be applicable or results which can be either over- or under-estimation of treatment effects, to name just two of the resulting problems.

Stanley Schachter investigated this last problem in a 1982 study of maintenance of weight loss and smoking cessation. He compared the results of people in two distinct communities who had either lost weight or stopped smoking on their own, and maintained such loss, to results cited in studies of formal weight loss/smoking cessation programs devised by psychologists. Schachter found that those who lost or quit on their own had much higher success rates than those in the formal programs. He wondered if the self-selected volunteers in the formal programs were the hard-core problems, those who came in after all of their own efforts had failed, thus biasing the formal programs toward failure. Schachter's study points up the problem once again, of relying on volunteers for research purposes.

Sex research has not escaped this problem of subject, and more specifically, volunteer bias. A.H. Maslow and J.M. Sakoda (1952) critiqued the original Kinsey studies (Kinsey, Pomeroy, & Martin, 1948) on this basis. They concluded that

"the bias introduced into a sex study by the use of volunteers is, in general, in the direction of inflating the percentage reporting unconventional or disapproved sexual behavior..." (Maslow and Sakoda, 1952, p.261.) It was hoped that laboratory studies of sexual behavior would involve fewer confounds than the self-report questionnaire studies, but this was not the case. Masters and Johnson (1970) were initially criticized for their use of prostitutes in their studies of the human sexual response. Though they ultimately switched to volunteer medical students and graduate students, their subject population never achieved representativeness of the general population. Of course the implications of this lack of generalization are not entirely clear. We do not know if the non-volunteers for these studies differ in some important way from those who do in terms of physiological arousal mechanisms and responses. However, we do know that volunteers for sex studies, particularly physiological studies of sexual arousal, differ from non-volunteers in a number of areas relating to sexual experience and attitudes.

Previous research has shown that those who volunteer for sex research involving physiological measurements of arousal differ from those who do not volunteer. Volunteers tend to be more sexually experienced (Diamant, 1970; Farkas, Sine, & Evans, 1978; Kaats and Davis, 1971; Morokoff, 1986; Wolchik,

Spencer & Lisi, 1983); hold more permissive attitudes toward sex (Diamant, 1970; Farkas, Sine & Evans, 1978; Kaats and Davis, 1971); and have less sex fear (Farkas, Sine & Evans, 1978; Wolchik, Spencer & Lisi, 1983). If they are women, they have experienced greater sexual trauma (Wolchik, Spencer & Lisi, 1983) and have increased exposure to commercialized erotica (Wolchik, et. al., 1983; Wolchik, Braver, & Jensen, 1985). If they are men, they are more likely to have experienced erectile difficulties in the past (Farkas, Sine & Evans, 1978) and are more likely to endorse the traditional male sex-role for themselves (Diamant, 1971; Wolchik, Braver & Jensen, 1985).

These findings have implications for the generalizability of results of physiological studies of sexual arousal. Once again, the implications are not entirely clear, however it is difficult to overlook the fact that volunteers are unlike non-volunteers in the important areas of sexual attitudes and experiences. Since at this point we cannot say what these differences may means in terms of generalizing our results, it is imperative that we at least delineate as many areas as possible where these differences may, or may not, exist. Doing so will allow us to know with greater certainty which types of results may be applied outside of our immediate subject samples.

PURPOSE OF THE STUDY

This study proposes to investigate the effects of variable sexual content and perceived intrusiveness of measurement on characteristics of volunteers for a study of erotic films and sexual arousal. The primary interest is the effect that changing the content of the sexually explicit stimulus material (i.e., heterosexual versus male homosexual versus lesbian content) will have on the characteristics of the volunteers. Of secondary interest is the effect of varying the intrusiveness of the measure used to gauge sexual arousal (i.e., subjective versus physiological assessment) and its interaction with stimuli content. It is expected that, particularly with the gay male stimuli, and possibly the lesbian film, the use of physiological measurements will greatly affect the characteristics of the volunteers (of the same sex as involved in the film) for those conditions. The lowest volunteer rates are expected for all of the male homosexual conditions. Consistently across studies and sex, these types of films have elicited the least amounts of sexual arousal (utilizing both physiological and subjective measures) for both men and women. (Hatfield, et al., 1978; Nevid, 1983; Steinman, et al., 1981;Turnbull & Brown, 1977;). Additionally, they have elicited the most negative affect after viewing. It seems logical therefore, to conclude that fewer subjects would be willing to watch films dealing with a

male homosexual theme. Further, if Mosher and O'Grady's (1979) hypothesised explanation for homophobia is correct (that it consists for men, in part, of a denial of one's own homosexual feelings and desires) then we would expect that the condition involving physiological arousal measurements in combination with gay male stimuli would result in the lowest volunteer rate for men. The threat involved in this condition is that one may indeed become aroused by this stimuli and not be able to hide or deny it as one could using subjective measures of arousal.

The lesbian stimuli is expected to provoke almost the opposite response in men. Prior studies (Hatfield, et. al., 1978; Steinman, et. al., 1981) have shown that heterosexually oriented men exhibit the greatest levels of sexual arousal when shown films of lesbian sexual activity. Therefore, the volunteer rate for these conditions is expected to at least equal that for the heterosexual conditions. Women, on the other hand, are not as aroused by lesbian films. However, they do find lesbian films slightly more arousing then male homosexual stimuli. (Hatfield, et.al., 1978; Steinman, et.al., 1981.) For this reason I am expecting the lowest volunteer rates for women in the male homosexual conditions, followed by the lesbian conditions. Overall I expect the physiological arousal conditions to generate the fewest

volunteers due to the invasive nature of the procedure as well as its interactive effects with stimuli content.

If this study achieves its expected results it also will have consequences for both sex research and psychology in general. If it is indeed true that few to no subjects volunteer for the male homosexual conditions, then we must examine the results of studies in which the stimuli content is known prior to subject's volunteering in a new and more cautious light. Subjects who volunteer for these types of experiments will be very different from the "typical" volunteer for a psychology experiment, not to mention possible differences from the vast majority of people who never participate in any psychology experiments at all. While many studies of sexual arousal may not initially specify stimuli content at this time, (though this is unclear and generally not stated in the literature), I hypothesize that given the conclusions of the recent Attorney General's Report on Obscenity and Pornography (1986), sex researchers will soon be facing even more stringent requirements regarding subject's "informed consent." (Indeed the experiementer experienced these restrictive attitudes during the course of this current study. For a discussion of this experience, see Appendix I.) Given that exposure to erotica depicting lovemaking between a heterosexually married couple has been judged to be "dangerous", materials involving what may be illegal (in many

states) sexual activity between homosexuals will be even more difficult to utilize for research purposes.

It is expected that this study will replicate many of the prior findings regarding volunteers for sex research i.e., 1. they will show greater and more varied heterosexual experience, 2. hold more liberal attitudes toward sexuality, and 3. report increased rates of sexual trauma and erectile difficulties. Additionally, since this study is aimed at gauging the effects of heterosexual versus male homosexual versus lesbian stimuli, the following further differences are hypothesized. 4. Volunteers for the homosexual/lesbian conditions are expected to hold less negative attitudes towards homosexuals; 5. have had greater experience with commercialized erotica of both heterosexual and homosexual/lesbian content; 6. show increased homosexual/lesbian content in their sexual fantasies; and 7. exhibit increased levels of homosexual/lesbian sexual activity. Subject's gender and sex-role endorsement are also expected to interact with experimental condition and thus, differentially affect volunteer rate.

The study also includes as a predictor variable a personality measure assessing an individual's level of sensation seeking, defined as "the need for varied novel and complex sensation and experiences and the willingness to take

physical and social risks for the sake of such experiences." (Zuckerman, 1979, p.10.) Previously, Zuckerman and others have found that high scores on the Sensation Seeking Scale (SSS) correlate with more permissive attitudes toward human sexuality; with an increased amount, and a greater diversity of, heterosexual activity; and in men, with a desire to view erotic films. High scores on Sensation Seeking were not correlated with male homosexual as opposed to male heterosexual activity. (Zuckerman and Myers, 1983.) Two additional hypotheses investigated in this study are 8. volunteers for all conditions will score higher on the Sensation Seeking Scale and 9. volunteers for the male homosexual and lesbian conditions are expected to score higher on the Disinhibition and Experience Seeking subscales.

That volunteers for sexual arousal studies in general, and for studies involving homosexual/lesbian stimuli in particular, are different from non-volunteers has great implications for the generalizability of studies of sexual arousal. We cannot conclude that our findings are applicable to the population at large given the differences reported. Unfortunately, this means that we must do time-consuming and costly replications of our research on as many subject samples as possible, in order to begin to generalize our findings outside of our immediate subject pool. Given the delicacy of the topics involved and the intrusiveness of the measurements

utilized, we may not be able to justifiably generalize our findings to the population at large, even using a multiple sample technique. Perhaps the future will bring more widespread sex education and the development of reliable but less-invasive techniques for measuring sexual arousal which may encourage more diverse representation from the general population among volunteers.

METHOD

OVERVIEW

This investigation was conducted in two phases. The first involved the completion of an extensive questionnaire covering all of the predictor variables. (See Appendix A). At the end of this questionnaire was a page describing a further study entitled "Erotic Films and Sexual Arousal" for which subjects were asked to volunteer. (See Appendix C). Those who agreed to do so were contacted by telephone to schedule appointments for this study. When they arrived at the site designated for this study they were told that they were part of a control group which would see an innocuous film. The purpose of this final phase was to determine who, among those volunteering, was a pseudo-volunteer, i.e., one who ultimately does not volunteer though they indicate willingness to do so. This group of subjects had previously been shown to be more similar to non-volunteers than to volunteers on a number of experimental characteristics. (Levitt, Lubin, & Brady, 1962; Rosenthal and Rosnow, 1969; Morokoff, 1986.)

DECEPTION:

This experiment involves a certain degree of deception on the experimenter's part. Ostensibly students are asked to volunteer, and then participate, in a physiological study of sexual arousal. In actuality, this final experiment will not occur. It is necessary to have students report for the "physiological experiment" to determine who, among those initially volunteering, is actually a pseudovolunteer. When students report for the "Erotic Films" experiment they will be told that they are one of the control groups who will view an innocuous film. Thus, this experiment is ultimately less "aversive" than it would be if an actual physiological study were run at this time, even though it involves deception. (See Appendix I for a further discussion of the issue of deception and its effect on receiving approval for the study from the University's Institutional Review Board.)

SUBJECTS:

A total of 507 undergraduate students in the Introduction to Psychology class at Virginia Tech participated in this study. Students received experiment participation credit for participating in each part of the study. A control condition

was created to determine if students at Virginia Tech who volunteer for sex studies are significantly different on demographic and non-sex related personality variables from those who volunteer for non-sex studies. Thus, students had the opportunity to participate in either the MULTIPLE ATTITUDES QUESTIONNAIRE (MAQ) study (control condition) or the SEXUALITY: PERSONALITY VARIABLES, ATTITUDES, BEHAVIORS AND EXPERIENCES (S&P) study (experimental condition), but not both.

Of the 221 volunteers for the MAQ study, 146 (66%) were women, 75 (34%) men. 154 (54%) women and 131 (46%) men comprised the S&P sample. Of these 285 subjects, 59 (20.6%) were volunteers (22 women, 37 men), 38 (13.3%) were pseudo-volunteers (17 women, 21 men), and 187 (65.4%) were non-volunteers (114 women, 73 men). This yields a combined total for intended volunteering of 33.9% (25.3% for women, 44.2% for men). These figures are slightly less than Wolchik, et al.'s 1985 volunteering rate and much less than Morokoff's 1986 rates. As in Morokoff's criticism of the Wolchik study, volunteers were not given the opportunity to examine the apparatus to be used for the arousal study prior to agreeing to volunteer. A possible further limiting factor for volunteering is that, to my knowledge, no sexual arousal research has ever been conducted by the Psychology Dept. (nor any other department) at Virginia Tech. Thus the students

here have no way of knowing what to expect in this type of research which may lead them to be more cautious about volunteering. Over 90% of the subjects in each sample were 20 years old or less.

Prior studies have shown that students are as willing to volunteer for survey-type sex research as they are for most other types of psychological research. (Barker and Perlman, 1975; Johnson and Delamater, 1976; and Martin and Marcuse, 1958.) Response rates for the sex study components of two of these three studies ranged from 68.5%, to 40% respectively. These rates are not significantly different from those obtained for studies on parent-child interactions (Barker and Perlman, 1975), personality, or hypnosis (Martin and Marcuse, 1958.) The Johnson and Delamater study obtained an overall volunteer rate of 88% for its student sample.

MEASURES:

The questionnaires used are a combination of several standard inventories as well as items developed specifically for this study. (See Appendix A). Standard demographic items such as age, family income, place of origin, etc. are included. A section on subject's sexual history includes an adaptation of the sexual experience scale developed by Brady

and Levitt (1965.) Additional questions focus on exposure to commercialized erotica, sexual trauma, less frequently practiced sexual activities, and erectile difficulties. Many of these questions were adapted from Morokoff, 1986. Sexual fantasy content is examined for the presence of homosexual and/or lesbian themes. Subjects are asked to state their sexual preference.

ATTITUDES TOWARD SEXUALITY

The Hudson, Murphy, and Nurius (1983) scale measuring liberal versus conservative attitudes toward human sexuality is included among the standardized scales. This 25 item scale,resulting in one total score, utilizes a five-point Likert scale assessing level of disagreement/agreement with each item. It has a coefficient alpha of .92 indicating good internal reliability. The authors conducted three validation studies, concluding the scale has good convergent and discriminatory validity. Scores may range from 25 to 125. High scores indicate a more conservative attitude.

SEXUAL EXPERIENCE

The Brady and Levitt scale of sexual experiences (1965), a Guttman scale with a coefficient of .937, has been adapted by expanding the range of homosexual activities included, thus making them a closer reflection of the range of heterosexual activities. No attempt has been made in the current study to

utilize this scale as a Guttman scale as was its original purpose. Responses to each item are included individually in the data analysis, a total score has not been compiled. This scale has been used in a large number of studies of sexual experience, most recently in Morokoff's 1986 study of volunteer bias in sex research.

ATTITUDES TOWARD HOMOSEXUALITY

To measure subjects' attitudes toward homosexuals, the Hansen "Measuring Prejudice Against Homosexuals (Homosexism)" scale was chosen. This is a 15 item, five point Likert scale, (Agree/disagree) measure which results in one total score. It has an alpha coefficient of .96 and evidenced good discriminant validity in a study which examined the scale's ability to duplicate conclusions found in previous research on attitudes toward homosexuals. Scores on this scale may range from 30 (very homosexist) to 55 (very homosexual tolerant.)

SENSATION SEEKING

Zuckerman's Sensation Seeking Scale (SSS) is an often used, very well validated measure. Form V of the scale is used in this study. The scale results in five scores, a Total score and four subfactors: Thrill and Adventure Seeking; Experience Seeking; Disinhibition; and Boredom Susceptibility. The scale consists of 40 dual-choice

questions. Subjects indicate the choice with which s/he most agrees. Internal consistency coefficients range from a high of .86 (Total) to a low of .56 (Boredom Susceptibility.) Test-retest reliabilities done at three weeks yielded results ranging from .94 (Total) to .70 (Boredom Susceptiblity) with the other three subfactors ranging from .94 to .89. (Clearly Boredom Susceptibility is the most problematic of the subfactors and the least useful for prediction based on past studies utilizing the scale.) Total Scores may range from 0 (not a sensation seeker) to 40 (very much a sensation seeker.) Each subfactor consists of ten items so scores may range from 0 to 10, following the same classification as above.

SEX-ROLE CONTINUUM

To measure subject's placement on the femininity-masculinity sex-role continuum, the Spence-Helmreich Personal Attributes Questionnaire (PAQ) was utilized. This measure consists of 24 bipolar items. Subjects are asked to rate themselves for each attribute on a five-point scale indicating which end of the polar spectrum is most descriptive of their character. The PAQ breaks down into three subscales, M (traditional masculine), F (traditional feminine), and M-F (a mixture of traditional masculine and traditional feminine qualities), each consisting of eight items. The PAQ was

scored using Spence's median-split method which results in four categories: Masculine, Feminine, Androgynous, and Undifferentiated.)

PROCEDURE

Initial Session

Students filled out an extensive questionnaire (see Appendix A) at large group sessions. This questionnaire included a question asking the student to volunteer for a further study (for which they received additional experiment participation credit) titled "Erotic Films and Sexual Arousal: Personality Variables, Attitudes, Behaviors and Experience". The stimuli for this study was described as either explicit heterosexual, male homosexual or lesbian content. (See Appendix C). Further, the subject was instructed that the experiment involved either subjective (pen and paper) rating of arousal while clothed, or physiological rating of arousal while partially undressed (from the waist down). If they were willing to participate, they filled in the box marked "Yes, I would be interested in participating in the "Erotic films and Sexual Arousal" study on this final sheet of the questionnaire. In addition they were asked to fill out their name and phone number on a separate, tear-off

sheet which they gave to the experimenter. (This sheet was discarded after appointments were made for the "sexual arousal experiment".) If they were not willing to participate they filled in the box on the final page of the questionnaire marked "No, I do not wish to participate in the "Erotic Films and Sexual Arousal" study" and they gave the blank sign-up sheet to the experimenter.

Second Session:

Students who indicated willingness to participate in the "Erotic Films and Sexual Arousal" study were contacted by telephone by either the experimenter or a female undergraduate assistant approximately one week later. Callers were blind to the experimental condition of the subjects. They were asked if they were still interested in participating and, if so, an appointment was made for a session a few days hence. They were also told that there would be a group briefing with other volunteers for a "few minutes" prior to everyone's individual experimental session.

When students arrived for the "physiological arousal experiment" they were told that they were part of a control group which would see a non-sexual film. This film consisted of a ten-minute segment of a soothing piano music videotape accompanied by nature scenes. After viewing the film, they

were told to circle the adjectives on the Mood Adjectives Check List (MACL) (see Appendix D) which best described their present mood state. The MACL data was discarded after the identifying partial social security numbers are recorded to verify the actual volunteers.

RESULTS

Of the 285 students who participated in the "Sexuality: Personality Variables..." questionnaire study, 97 (33.9%) agreed to participate in the "Erotic Arousal..." study while 187 (65.4%) did not. Of the 97 intended participants, 59 (20.6%) actually showed up for the second study while 38 (13.3%) did not. For a breakdown of volunteer status by experimental condition and sex, refer to Appendix I.

Two separate two-way multivariate analyses of variance (MANOVA) were conducted on the 63 variables included in the S&P questionnaire. (For a copy of the questionnaire, including response values, see Appendix A). Two-way analysis of variance (ANOVA) were conducted on the variables found to be significant at the .05 level or less in the MANOVA. Where significant interactions occured, tests of simple main effects were conducted.

Insert Table 1 about here.

The first two-factor analysis included as factors Film Type (stimuli content - heterosexual vs gay male vs

lesbian films) and Volunteer Status (pseudo-volunteers were included with the volunteers). The main effect of Volunteer Status was significant, $F(53, 215) = 1.89248$, $p<.001$, Wilk's Lambda = .68189. As Table 1 indicates, of the 63 dependent variables included in the analysis, 25 were found to be significant at the .05 level in subsequent two-way ANOVAS. Significant two-way interactions were found, $F(12, 542) = 1.82092$, $p<.05$, Wilk's Lambda = .92400. Tests of simple effects found significant interactions for three of the dependent variables including manual stimulation of clad female breast, $F(2, 275) = 3.678$, $p=.027$; read gay male pornography, $F(2, 276) = 3.728$, $p=.025$; and view lesbian pornography, $F(2, 276) = 3.955$, $p =.020$. The main effect of Film Type was not significant, thus refuting the hypothesis that volunteer's characteristics would differ depending on the film for which they volunteered.

Insert Table 2 about here.

In the second two-factor analysis, shown in Table 2, Measurement Type (physiological vs subjective) and Volunteer Status were included as factors. In the MANOVA the Volunteer Status main effect was again significant, $F(53, 217) = 1.91671$, $p<.001$, Wilk's Lambda = .68114. Using the same 63

dependent variables as above, 23 were significant at .05 or less in the two-way ANOVA. No interactions were found to be significant. Contrary to expectations, there were no significant effects due to measurement type, refuting the hypothesis that characteristics of volunteers would vary depending on the measurement type with which they agreed to have their arousal assessed. Additionally, this finding does not support the conclusions of previous research done by Wolchik, et al. (1985).

Due to linear dependency in the variables comprising the SSS total score and its subfactors, only two-way ANOVA's, using Film Type by Volunteer Status or Measurement Type by Volunteer Status as factors, were run. SSS total score, experience seeking and boredom susceptibility were significant at less than the .05 level in both two-way ANOVA's, as can be seen in Table 3. This effect was shown only for Volunteer Status, not for either Film Type nor Measurement Type.

Insert Table 3 about here.

Table 4 shows significant differences by sex among the experimental (S&P) sample. Mean scores for each group were compared using a series of T-tests using gender as the

grouping variable. 27 of the 63 dependent variabless were found to significantly differentiate by sex. Results were significant at the .05 level or better.

Insert Table 4 about here.

To ascertain proper classification of the pseudo-volunteers, a MANOVA was run on the dependent variables using Volunteer Status as the independent variable. Multivariate tests were significant at the .05 level or less, $F(96, 450) = 1.64387$, $p<.001$, Wilk's Lambda = .54687. One-way ANOVA's with contrast effects were run on the resulting significant variables. Student-Neuman-Keuls post hoc comparison tests on these variables were found to be significant at the .05 level. Table 5 displays these results. Volunteers were significantly different from non-volunteers on 25 of the dependent variables. Eleven variables significantly differentiated pseudo-volunteers from the non-volunteers. On only three variables were pseudo-volunteers significantly different than volunteers.

Insert Table 5 about here.

For an examination of the conclusions regarding the original hypotheses and the data supporting/refuting them, see Table 9. Additional information on issues involved in, and decision making regarding the data analysis are found in Appendix H.

DISCUSSION

The present study replicated many of the previous findings regarding differences between volunteers and non-volunteers for sex research. The volunteers for this study reported that they participated in greater, and more varied, heterosexual activities; had an increased exposure to commercial erotica, of both homosexual and gay/lesbian themes, and had more liberal attitudes toward sexuality. There were no differences in attitudes toward homosexuals. Most subjects expressed relatively non-homosexist views. Volunteers were less religiously devout than non-volunteers. Men were more likely than women to volunteer for sex studies.

The current study failed to replicate the findings of Farkas, et al., (1978) and Wolchik, et al., (1983) regarding an increase in reporting of sexual trauma (for women) and erectile difficulties (for men) among the volunteers. It may be that the absence of erectile dysfunction in the male volunteer sample is largely due to the very young age (94% were 20 years old or younger) of this sample. There is no apparent reason why the women volunteers failed to report increased instances of sexual trauma. This may be an artifactual result of this particular sample.

A new finding distinguishing volunteers from non-volunteers is the increased reporting of sexual fantasies by volunteers. Volunteers were significantly more likely to have sexual fantasies with heterosexual as well as gay and bisexual themes. Additionally, volunteers were more likely to report having sexual fantasies which had themes other than those covered in the questionnaire. Thus, there is evidence of a cognitive difference in volunteers for sex research.

Though they did not reach the .05 level of significance, three of the six variables assessing homosexual activity approached significance ($p = .058$) in the measurement by volunteer status MANOVA, and achieved significance at the .05 level or less in subsequent ANOVA's. Same sex kissing with tongue contact was significant for main effects of volunteer status ($F = 4.338$, $p < .05$) and showed a significant interaction. Volunteers for the studies involving physiological measurement of arousal showed an increase in this behavior ($F = 11.486$, $p < .01$). Oral contact with same sex partner's genitals showed a main effect for measurement type ($F = 8.30$, $p < .01$) and displayed the same interaction ($F = 7.14$, $p < .01$) as same sex kissing with tongue contact. Finally, oral contact with one's genitals by a same sex partner exhibited the same interaction as the above two variables ($F = 5.55$, $p < .05$).

Once again the youthfulness of this sample may have played a role in the behaviors reported by the subjects. Subjects a few years older (upper level undergraduates) may very well report an increased incidence of homosexual behaviors, due to having more time to explore their sexuality and being at a greater distance from any restraining influences of their family's teachings about acceptable sexual behavior. The low number of subjects reporting gay behaviors (ranging from 2 to 9% of subjects) and identifying their sexual preference as other than heterosexual (either gay, bisexual or do not label, less than 8% of the total sample), did not allow for exploration of the hypothesis that volunteers for the gay and lesbian film conditions would show increased gay sexual activities.

Measurement type did not result in any significant differences between characteristics of volunteers vs non-volunteers nor did it significantly affect rate of volunteering. This runs counter to the findings of Wolchik, et al., (1985) who found differences due to the state of undress required for each measurement type. Intuitively these findings do not seem reasonable. They are perhaps due to the compostition of this particular group of subjects, though I am at a loss to explain why this might be.

Insert Figure 1 about here.

There were no significant main effects for film type in any of the analyses. This was very surprising given that one would at least expect significant differences in rates of volunteering depending on what film a subject thought s/he would see. However, if this result is not just an artifact of this particular sample (a replication of this study might ascertain this), than this is an area in which we may feel free to generalize our results to a larger population. Thus, we may conclude that subjects who are willing to volunteer for a study using gay male stimuli are no different from those who are willing to volunteer for studies using either lesbian or gay male stimuli. Three variables (manual stimulation of clad female breast, read gay male pornography and view lesbian pornography) resulted in significant film by volunteer status interactions. As can be seen in Figure 1, volunteers for both the heterosexual and gay male conditions reported more experience with clad breast stimulation than did non-volunteers at those conditions. The increased experience at the gay male and heterosexual film types for volunteers follows from the increased heterosexual behavior shown by all volunteers.

Insert Figure 2 about here.

Shown in Figure 2, reading pornography with a gay male theme interacted with volunteer status for the lesbian and gay male conditions. Volunteers for the gay male condition read more gay male erotica than did non-volunteers. Perhaps previous exposure to explicit gay male materials de-sensitized the volunteers to the visual depiction of gay male sexuality. (For a discussion of heterosexual reactions to homoerotic stimuli, see the literature review, Appendix F). Since lesbian themes are commonly found in heterosexual pornography, volunteers for the more familiar lesbian films would not necessarily be expected to have had increased exposure to gay male materials. While heterosexual pornography (including that with lesbian themes) is widely available through "adult" book and video stores as well as the local convenience store, gay male- oriented materials are found in specialty shops catering to gay men and through mail order catalogs. In other words, a special effort must be made to acquire gay male materials. If indeed, the people reading the gay male porn are more likely to be gay men themselves, they may feel less comfortable with depictions of sexuality involving two women. This would lead to the higher incidence of gay male porn consumption among non-volunteers for the lesbian condition.

Insert Figure 3 about here.

Finally, as shown in Figure 3, volunteers for the heterosexual stimuli condition reported much greater exposure to lesbian visual erotica than did non-volunteers at the same condition. Again, this may be due to the presence of lesbian themes in pornography made for a predominantly heterosexual audience.

Regarding the initial hypotheses concerning volunteers for the gay and lesbian conditions, except for the increased reading of gay male pornography by volunteers for the gay male studies, at this time no definitive conclusions may be drawn. As noted previously, there were no differences in attitudes toward gays; all volunteers reported more gay and lesbian sexual fantasies, however there was no signifiant interaction with stimuli content; and though all volunteers scored higher on the experience seeking sub-factor of the SSS, again there was no interaction with film type. Disinhibition did not differentiate volunteers from non-volunteers.

As predicted, volunteers were found to score significantly higher on the SSS than non-volunteers. Additionally, volunteers for sex research scored higher on the experience seeking subscale. This was predicted by the factor's stated assessment of seeking "new experiences through the mind and senses by living in a non-conforming lifestyle..." (Zuckerman, 1986(?), p.1). Participating in a sex study is certainly more of a mental activity than a physical one (as compared to skydiving, for example). Volunteers are more non-conforming in their lifestyle as can be seen by their increased incidence of reporting numerous types of sexual behaviors and experiences. Volunteers were also distinguished from non-volunteers on the basis of their boredom susceptibility scores. Research in which one is required to watch sexually explicit films cannot be classified as "boring" in the traditional sense. The studies as described were neither repetitive in nature, dull, nor predictable.

The women and men who participated in the S&P study scored significantly different from each other on almost one-half of the variables examined. Differences regarding sex differences were rather puzzling. The women in the sample tended to experience more kissing (with or without tongue contact) and they were more likely to experience genital stimulation (using oral or manual stimulation) as well as

stimulating their partner's genitals more frequently (again using either technique). The men, on the other hand, report more contact with women's breasts, whether they be clad or nude, using manual or oral stimulation; have a higher incidence of orgasm via vaginal intercourse; and show an increased frequency of masturbation, both with and without orgasm. These findings tend to upset the notion of Guttman scaling of sexual experience (Brady & Levitt, 1965), since the preseumed sequence of sexual events is kissing, breast contact, manual, then oral stimulation of the genitals, and finally, intercourse.

An additional source of confusion is the fact that more men than women volunteer for sex research, and volunteers on the whole tend to report more sexual experiences. Perhaps what is occuring is that the women who do volunteer for sex research report much higher levels of sexual behavior than women who do not. In other words, perhaps the female sample is a "super-sexed" sample which may upwardly skew the overall reporting of sexual experiences by volunteers.

Other differences by sex were found. Women reported more experience kissing a partner of the same sex; have experienced more forms of sexual abuse; Men have had more experience with reading and viewing pornography with heterosexual and lesbian themes and report more sexual

fantasies with bisexual, homosexual and heterosexual themes. Finally, women were more likely to hold positive attitudes toward homosexuals.

Clearly several of these variables, namely sexual abuse, exposure to pornography and incidence of sexual fantasy, are related to the varying sex-role training and position in contemporary society of each sex. Women are more likely to be sexually abused, either as children or adults (Brownmiller, 1976) the overwhelming majority of this abuse being perpetrated by men. Though the advent of the feminist movement in the late 1960's encouraged women in a freer exploration of all facets of their sexuality, many women continue to internalize the good girl/bad girl dichotomy. Bad girls are sexual but don't end up with permanent partners. Good girls are much more selective about their sexuality in the hopes that they will be rewarded with a "good catch" and the dubious security found in marriage. Viewing or reading pornography, creating sexual fantasies, are an explicit statement of wanting to inflame one's sexual desire, not an activity "good girls" would be rewarded for. Of course, the issue of sex differences in attraction and response to pornography is much too involved to explore here.

A surprising result which appears to contradict previous research findings (Levitt, et al., 1962; Morokoff, 1986; Rosenthal & Rosnow, 1975) was that of significant differences between the pseudo-volunteers and the non-volunteers. Pseudo-volunteers were significantly different from the non-volunteers on eleven variables including degree of religiosity; mastubation and masturbation to orgasm; all of the heterosexual and lesbian pornography variables; and sexual fantasies of heterosexual intercourse and group sex, homosexual necking, and bisexual group sex. Pseudo-volunteers were significantly different from volunteers in terms of total number of sexual partners, front entry vaginal intercourse, and having a fantasy of homosexual group sex in which the self is imagined to be a memeber of the opposite sex. From these results it appears that classifying pseudo-volunteers with non-volunteers is innappropriate. Due to the very small number of significant differences between the pseudo-volunteers and the volunteers, it seems correct to combine these two groups into one, based on the stated intention to volunteer. It is important to remember that a subject may not show up for a study for reasons completely unrelated to the study itself. In that case it makes logical sense that they would be characteristically more similar to the intended volunteers who do report for the study. However, to confidently answer the question of correct classification of pseudo-volunteers, additional studies using large samples need to be conducted.

Conclusions

This study replicated the findings of previous research which showed that volunteers for sex research differ from non-volunteers on several variables assessing heterosexual experience, attitudes toward sex, and experince with commercial erotica. These differences generally take the form of increased experience and more liberal attitudes. A new dimension of sexuality found to distinguish volunteer status is that of sexual fantasies. Sensation seeking and experience seeking tendencies were found to be higher in volunteers. Male and female participants in survey-type sex research were found to differ on numerous variables measuring sexual experience, exposure to pornography, sexual abuse, sexual fantasies and attitudes toward homosexuals. Finally, it was demonstrated that pseudo-volunteers should perhaps be categorized with volunteers, rather than with non-volunteers as had been assumed previously. No significant differences were found between volunteers/non-volunteers for the three film types nor for the two types of sexual arousal measurement. Thus, the major hypotheses of this study were not supported.

No significant difference were found based on subjects' stated sexual preference or homosexual behaviors. In large part, this may have been due to the small number of students reporting such behavior. This may be a function of age and/or of the socially and politically conservative environment in which this research was conducted. It would be interesting to replicate this study in an overall more liberal atmosphere. It may also be necessary to do specific recruitment for homosexual subjects in order to assess the effect of gay behaviors.

At this time, I am somewhat hesitant to make definite conclusions regarding the pseudo-volunteer issue. Further research might assess the pseudo-volunteer's reasons for non-participation in an effort to determine if the research topic is the major contributor to such non-participation. If this is the case, and if another large sample replication results in few significant differences between the pseudo- and non-volunteers, then they may rightly be classed together. However if the number of significant differences between the two groups remains greater than that between the pseudo's and the volunteers, then they should either be classed with the volunteers or maintained as a separate category, despite their reasons for non-participation.

This study presents further evidence requiring the use of extreme caution when applying the results of sex research to the general population. We now have evidence of behavioral, attitudinal, and sex-oriented cognitive differences between volunteers and non-volunteers for sex research. This study made no attempt to assess what possible impact these differences may have, if any, on the physiological experience of sexuality. While it may be tempting and intutively comfortable, to assume that physiological experience of human sexuality is more or less universal, we have no data with which to back up this assumption. The empirical demonstration of the veracity of this assumption should be a major focus of future sex research. Unfortunately, accomplishing this task appears well-nigh impossible if we cannot discern how to eradicate the many problems of subject self-selection.

REFERENCES

Barker, W.J., & Perlman, D. (1975). Volunteer bias and personality traits in sexual standards research. Archives of Sexual Behaviour, 4, 161-171.

Brady, J.P., & Levitt, E.E. (1965). The scalability of sexual experience. Psychological Record, 15, 275-279.

Bauman, K.E. (1973). Volunteer bias in a study of sexual knowledge, attitudes, and behavior. Journal of Marriage and the Family, 35, 27-31.

Brownmiller, S. (1976). Against our will: Men, women and rape. N.Y.: Bantam Books.

Diamant, L. (1970). Attitude, personality, and behavior in volunteers and nonvolunteers for sexual research. Proceedings of the 78th Annual Convention of the APA, 5, 423-424.

Dunbar, J., Brown, M., & Amoroso, D.M. (1973). Some correlates of attitudes towards homosexuality. Journal of Social Psychology, 89, 271-279.

Dunbar, J., Brown, M., & Vuorinen, S. (1973). Attitudes towards homosexuality among Brazilian and Canadian college students. Journal of Social Psychology, 90, 178-183.

Farkas, G.M., Sine, L.F., & Evans, I.M. (1978). Personality, sexuality, and demographic differences between volunteers and nonvolunteers for a laboratory study of male sexual behavior. Archives of Sexual Behavior, 7, 513-520.

Hansen, G.L. (1982a). Androgyny, sex-role orientation, and homosexism. Journal of Psychology, 112(1), 39-45.

Hansen, G.L. (1982b). Measuring prejudice against homosexuals among college students: A new scale. Journal of Social Psychology, 117(2), 233-236.

Harrison, D.W., Gavin, M.R. & Isaac, W. (1985?). A portable instrument for measuring autonomic responses. Unpublished manuscript.

Hatfield, E., Sprecher, S. & Traupmann, J. (1978). Men's and women's reactions to sexually explicit films: A serendipitous finding. Archives of Sexual Behavior, 7, 583-591.

Hudson, W.W., Murphy, G.J., & Nurius, P.S. (1983). A short-form scale to measure liberal vs conservative orientations toward human sexual expression. Journal of Sex Research, 19(3), 258-272.

Johnson, W.T. & DeLamater, J.D. (1976). Response effects in sex surveys. Public Opinion Quarterly, 40, 165-181.

Kaats, G.R. & Davis, K. E. (1971). Effects of volunteer biases in studies of sexual behavior and attitude. Journal of Sex Research, 7, 26-34.

Kenrick, D.T., Stringfield, D.O., Wagenhals, W.L., Dahl, R.H., & Ransdell, H.J. (1980). Sex differences, androgyny, and approach responses to erotica: A new variation on the old volunteer problem. Journal of Personality and Social Psychology, 38, 517-524.

Kinsey, A.C., Pomeroy, W.B., & Martin, C.E. (1948). Sexual Behaviorin the Human Male. Philadelphia: W.B. Saunders.

Kohn, P.M., Hunt, R.W., Davis, C.A. & Cowles, M.P.(1982). Volunteering in principle, volunteering in fact, and experience seeking. Psychological Record, 32(2), 205-213.

Larsen, K.S., Cate, R. & Reed, M. (1983). Anti-Black attitudes, religious orthodoxy, permissiveness and sexual information: A study of the attitudes of heterosexuals toward homosexuals. Journal of Sex Research, 19(2), 105-118.

Levitt, E.E., Lubin, B. & Brady, J.P. (1962). The effect of the pseudovolunteer on studies of volunteers for psychological experiments. Journal of Applied Psychology, 46(1), 72-75.

Martin, R.M. & Marcuse, F.L. (1958). Characteristics of volunteers and nonvolunteers in psychological experimentation. Journal of Consulting Psychology, 22, 475-479.

Maslow, A.H. & Sakoda, J.M. (1952). Volunteer-error in the Kinsey study. Journal of Abnormal Social Psychology, 47, 475-479.

Masters, W. and Johnson, V. (1970). Human sexual inadequacy. Boston: Little, Brown and Co.

McDaniel, S.W., Madden, C.S. & Verille, P. (1987). Do topic differences affect survey non-response? Journal of the Market Research Society, 29(1), 55-66.

Morokoff, P. (1986). Volunteer bias in the psychophysiological study of female sexuality. Journal of Sex Research, 22(1), 35-51.

Mosher, D.L. & O'Grady, K.E. (1979). Homosexual threat, negative attitudes toward masturbation, sex guilt, and males' sexual and affective reactions to explicit sexual films. Journal of Consulting and Clinical Psychology, 47(5), 860-873.

Nevid, J.S. (1983). Exposure to homoerotic stimuli: Effects on attitudes and affects of heterosexual viewers. Journal of Social Psychology, 119, 249-255.

Rosen, R.C. & Keefe, F.J. (1978). The measurement of human penile tumescence. Psychophysiology, 15(4), 366-376.

Rosenthal, R. (1965). The volunteer subject. Human Relations, 18, 389-406.

Rosenthal, R., and Rosnow, R.L. (1975). The Volunteer Subject. In R. Rosenthal & R.L. Rosnow (Eds.), Artifact in Behavioral Research (pp. 59-118). New York: Academic Press.

Schachter, S. (1982). Recidivism and self-cure of smoking and obesity. American Psychologist, 37(4), 436-444.

Scheier, I.H. (1959). To be or not to be a guinea pig: preliminary data on anxiety and the volunteer for experiment. Psychological Report, 5, 239-240.

Sintchak, G. & Geer, J. (1975). A vaginal photoplethysmograph system. Psychophysiology, 12, 113-115.

Spence, J.T. and Helmreich, R.L. (1978). Masculinity & Femininity. Austin: University of Texas Press.

SPSS, Inc. (1986). SPSSX Users Guide. (2nd ed.). New York: McGraw-Hill.

Steinman, D.L., Wincze, J.P., Sakheim, Barlow, D.H., & Mavissakalian, M. (1981). A comparison of male and female patterns of sexual arousal. Archives of Sexual Behavior, 10(6), 529-547.

Trice, A.D., & Bailey, B.H. (1987). Informed consent: II. Withdrawal-without-prejudice clauses may increase no-shows. Journal of General Psychology, 113(3), 285-287.

Turnbull, D. & Brown, M. (1977). Attitudes towards homosexuality and male and female reactions to homosexual and heterosexual slides. Canadian Journal of Behavioral Science, 9(1), 68-80.

Wolchik, S.A., Spencer, S. L., and Lisis, I. S. (1983). Volunteer bias in research employing vaginal measures of sexual arousal: demographic, sexual and personality characteristics. Archives of Sexual Behavior, 12, 399-408.

Wolchik, S.A., Braver, S.L. and Jensen, K. (1985). Volunteer bias in erotica research: Effects of intrusiveness of measure and sexual background. Archives of Sexual Behavior, 14(2), 93-107.

Young, M., & Whertvine, J. (1982). Attitudes of heterosexual students toward homosexual behavior. Psychological Reports, 51(2), 673-674.

Zuckerman, M. (1986?). Abbreviated manual with scoring keys and forms for Form V of the Senation Seeking Scale. Unpublished manuscript, University of Delaware, Department of Psychology, Newark.

Zuckerman, M. (1971). Dimensions of sensation seeking. Journal of Consulting and Clinical Psychology, 36, 45-52.

Zuckerman, M. (1979). Sensation seeking: Beyond the optimal level of arousal. Hillsdale, N.J.: Lawrence Erlbaum.

Zuckerman, M. & Link, K. (1968). Construct validity for the sensation seeking scale. Journal of Consulting and Clinical Psychology, 32, 420-426.

Zuckerman, M. and Myers, P.L. (1983). Sensation seeking in homosexual and heterosexual males. Archives of Sexual Behavior, 12(4), 347-356.

Table 1

Two-way Significant ANOVA's (FILM TYPE BY VOLUNTEER STATUS)[a]

DEPENDENT VARIABLE	VOL M (HETERO)	NON-VOL M (GAY MALE)	(LES)	F
Sex				
(Volstat)	1.60	1.39		2.773***
Degree of Religiosity				
(Volstat)	2.41	2.13		11.831***
Total # of sexual partners				
(Volstat)	2.88	2.41		11.831***
Manual contact with clad female breast				
(Interaction)				3.678*
(Volunteering at hetero.)		3.65	2.98	6.06**[b]
(Volunteering at gay male)		3.40	2.86	3.27*
(Film at volunteer)	(3.65)	(3.40)	(2.74)	9.32**
Vaginal intercourse, front entry				
(Volstat)	3.23	2.83		6.456
Vaginal intercourse, rear entry				
(Volstat)	2.45	2.01		8.082**
Masturbation				
(Volstat)	3.59	2.78		27.552***
Masturbation to orgasm				
(Volstat)	3.23	2.49		18.443***
Orgasm via manual manipulation of your genitals				
(Volstat)	2.91	2.47		8.136**
Orgasm via oral contact with your genitals				
(Volstat)	2.58	2.26		4.733*
Orgasm via vaginal intercourse				
(Volstat)	2.96	2.45		9.358**
Group sex				
(Volstat)	1.21	1.05		6.872**
Read heterosexual pornography				
(Volstat)	3.59	3.10		16.580***
View heterosexual pornography				
(Volstat)	2.51	1.96		20.908***
Read gay male pornography				
(Interaction)				3.728*
(Volunteering at gay)		1.48	1.14	4.18*

Table 1. cont.

DEPENDENT VARIABLE	VOL M (HETERO)	NON-VOL M (GAY MALE)	(LES)	F
(Volunteering at lesbian)		1.18	1.45	3.12*
(Film at volunteer)	(1.46)	(1.48)	(1.18)	3.67*
(Film at non-volunteer)	(1.37)	(1.14)	(1.45)	7.37**
Read lesbian pornography (Volstat)	2.51	1.96		12.405***
View lesbian pornography (Volstat)	2.40	1.88		13.804***
(Interaction)				3.955*
(Volunteering at hetero.)		2.69	1.66	21.77**
(Film at volunteer)	(2.69)	(2.12)	(2.29)	5.28**
(Film at non-volunteer)	(1.66)	(1.92)	(2.05)	3.96*
Fantasies of heterosexual necking (Volstat)	1.09	1.21		3.814*
Fantasies of heterosexual intercourse (Volstat)	1.07	1.24		11.142***
Fantasies of homosexual necking (Volstat)	1.82	1.94		9.855**
Fantasies of heterosexual group sex (Volstat)	1.43	1.66		16.111***
Fantasies of homosexual group sex (Volstat)	1.88	1.97		8.686**
Fantasies of bisexual group sex (Volstat)	1.68	1.88		17.315***
Fantasies of homosexual sex in which the self is imagined to be a member of the opposite sex (Volstat)	1.65	1.83		14.153***
I have sexual fantasies but I have never fantasized any of the above themes (Volstat)	1.96	1.83		8.323**

Table 1, cont.

DEPENDENT VARIABLE	VOL M (HETERO)	NON-VOL M (GAY MALE)	(LES)	F
Liberal vs conservative attitudes toward sexuality (Volstat)	29.20	33.57		7.69**

Note. All multi-variate tests were significant at the .05 level or less.

*p <.05. **p <.01. ***p <.001.

[a] Due to space considerations, only those analyses reaching significance at the .05 level or less are reported here.

[b] Tests of level of significance for the simple main effects were done only at the .05 and .01 levels.

Table 2

Two-way Significant ANOVA's (MEASUREMENT BY VOLUNTEER STATUS)[a]

DEPENDENT VARIABLE	VOL M (PHYS M)	NON-VOL M (SUBJ M)	F
Sex (Volstat)	1.60	1.39	11.618***
Degree of Religiosity (Volstat)	2.41	2.13	13.277***
Total Number of Sexual Partners (Volstat)	2.88	2.41	10.887***
Vaginal Intercourse, Front entry (Volstat)	3.23	2.83	5.415*
Vaginal Intercourse, Rear entry (Volstat)	2.45	2.01	6.799**
Masturbation (Volstat)	3.59	2.75	27.895***
Masturbation to orgasm (Volstat)	3.23	2.49	20.359***
Orgasm via manual manipulation of my genitals (Volstat)	2.91	2.47	7.873**
Orgasm via oral contact with my genitals (Volstat)	2.58	2.26	5.148*
Orgasm via vaginal intercourse (Volstat)	2.96	2.45	9.087**
Group Sex (Volstat)	1.21	1.05	8.381**
Read Heterosexual Pornography (Volstat)	3.59	3.10	18.426***
View Heterosexual Pornography (Volstat)	3.23	2.68	22.235***
Read Lesbian Pornography (Volstat)	2.51	1.96	15.348***
View Lesbian Pornography (Volstat)	2.40	1.88	16.734***
Fantasies of heterosexual necking (Volstat)	1.09	1.21	6.181*
Fantasies of heterosexual intercourse (Volstat)	1.07	1.24	11.515***
Fantasies of heterosexual group sex (Volstat)	1.43	1.66	15.002***
Fantasies of homosexual group sex (Volstat)	1.88	1.97	11.125***
Fantasies of bisexual group sex (Volstat)	1.68	1.88	17.200***
Fantasies of homosexual sex in which the self is imagined to be a member of the opposite sex (Volstat)	1.65	1.83	14.881***

Table 2. cont.

DEPENDENT VARIABLE	VOL M (PHYS M)	NON-VOL M (SUBJ M)	F
I have sexual fantasies but I have never fantasized any of the above themes (Volstat)	1.96	1.83	9.911**
Liberal vs conservative attitudes toward sexuality (Volstat)	29.20	33.57	6.894**

Note. All multivariate tests were significant at the .05 level or less.

*p <.05. **p <.01. ***p <.001.

[a] Due to space considerations, only those analyses reaching significance at the .05 level or less are reported heree.

[b] Tests of level of significance for the simple main effects were done only at the .05 and .01 levels.

Table 3

Two-way Significant ANOVA's for Sensation Seeking Variables

DEPENDENT VARIABLE	VOL M (HETERO)	NON-VOL M (GAY MALE) (LES)	F
FILM TYPE BY VOLUNTEER STATUS			
Total SS score (Volstat)	24.19	21.9	9.236**
Experience seeking (Volstat)	5.99	5.10	10.565***
Boredom Susceptibility (Volstat)	3.82	3.24	4.755*
MEASUREMENT TYPE BY VOLUNTEER STATUS			
Total SS score (Volstat)	24.19	21.90	9.854**
Experience Seeking (Volstat)	5.99	5.10	10.609***
Boredom Susceptibility (Volstat)	3.82	3.24	4.217*

*p <.05. **p <.01. ***p <.001.

Table 4

Significant Differences by Volunteer Status: One-way ANOVA'S with Contrasts.

Variables	Vol Mean	Non-vol Mean	Pseudo Mea	Vol. Status Contrasts (Key)	F
Sex	1.627	1.3904		A	5.98**
Degree of religiosity	2.407	2.139		A & C	5.77**
		2.139	2.395		
Total Number of Sexual Partners	3.121	2.412		A & B	8.30***
	3.121		2.540		
HETEROSEXUAL EXPERIENCE					
Manual Manipulation of Partner's Genitals	3.728	3.304		A	3.75*
Manual Manipulation of One's Genitals by Ones' Partner	3.780	3.422		A	3.64*
Oral Contact with one's genitals by one's partner	3.406	2.936		A	3.70*
Vaginal Intercourse, front entry	3.458	2.840		A & B	4.98**
	3.458		2.894		
Vaginal Intercourse, rear entry	2.610	2.011		A	4.79**
Masturbation	3.678	2.780		A & C	15.01***
		2.780	3.474		
Masturbation to orgasm	3.322	2.486		A & C	9.99***
		2.486	3.105		
Orgasm via manual manipulation of one's own genitals	2.983	2.471		A	4.08*
Orgasm via vaginal intercourse	3.102	2.454		A	5.47**
Group Sex	1.220	1.053		A	3.86*
Read pornography with a heterosexual theme	3.542	3.102		A & C	8.69***
		3.102	3.684		
View Pornography with a Heterosexual Theme	3.152	2.684		A & C	9.62***
		2.684	3.342		
Read Pornography with a Lesbian Theme	2.542	1.962		A & C	6.80**
		1.962	2.447		
View Pornography with a Lesbian Theme	2.441	1.877		A & C	7.54***
		1.877	2.368		
Someone Unsuccessfully tried to Rape Me	1.814	1.620		A	3.83*

Table 4, cont.

Variables	Vol Mean	Non-vol Mean	Pseudo Mean	Vol. Status Contrasts	F
SEXUAL FANTASY CONTENT					
Heterosexual Necking	1.152	1.209		A	5.09**
Heterosexual Intercourse	1.084	1.241		A & C	5.41**
		1.241	1.079		
Homosexual Necking	1.848	1.941		A & C	6.73**
		1.941	1.763		
Heterosexual Group Sex	1.424	1.663		A & C	7.27***
		1.663	1.447		
Homosexual Group Sex	1.864	1.968		A	4.80**
Bisexual Group Sex	1.661	1.877		A & C	8.61***
		1.877	1.711		
Sex Change Fantasy with Homosexual Sex	1.559	1.834		A & B	10.24***
	1.559		1.790		

Note. All multivariate tests significant at the .001 level or less, Student-Newman-Keuls Test significant at the .05 level.

*p <.05. **p <.01 ***p <.001.

Volunteer Status Contrast KEY
A = Volunteers are significantly different than Non-Volunteers
B = Volunteers are significantly different than Pseudo-Volunteers
C = Non-Volunteers are significantly different than Pseudo-Volunteers

Table 5.

Significant Differences, by Sex, Among the S&P Sample.

VARIABLES	FEMALE M	MALE M	T
HETEROSEXUAL EXPERIENCE			
Kissing	3.98	3.87	2.48*
Kissing with tongue contact	3.95	3.72	3.20**
Clad breast stimulation	2.63	3.56	-6.33***
Nude breast stimulation	2.61	3.44	-5.55***
Oral contact with female breast	2.49	3.27	-5.00***
Manual manipulation of partner's genitals	3.53	3.22	2.40**
Manual manipulation of your genitals by your partner	3.66	3.28	3.24***
Oral contact with your partner's genitals	3.10	2.61	3.26***
Oral contact with your genitals by your partner	3.19	2.84	2.48*
Kissing same sex partner	1.30	1.07	2.88**
Masturbation	2.64	3.54	-6.41***
Masturbation to orgasm	2.12	3.47	-9.15***
Orgasm via vaginal intercourse	2.44	2.86	-2.59**
Read heterosexual porn.	2.86	3.75	-8.46***
View heterosexual porn.	2.39	3.43	-9.78***
Read lesbian pornography	1.58	2.82	-10.07***
View lesbian pornography	1.57	2.64	-9.02***
Contact with exhibitionist	1.61	1.74	-2.41*
Someone touched me without my consent	1.30	1.60	-5.26***
Someone forced me to touch them	1.66	1.88	-4.50***
Unsuccessful rape attempt	1.49	1.87	-7.43***
I was raped	1.86	1.96	-3.05**
Fantasy of heterosexual intercourse	1.24	1.11	2.89**
Fantasy of heterosexual group sex	1.73	1.40	5.93***
Fantasy of bisexual group sex	1.88	1.73	3.13**
Fantasy of homosexual group sex in which the self is imagined to be a member of the opposite sex	1.99	1.51	11.75***
Attitudes toward homosexuals	36.92	44.72	-4.71***

*p <.05 **p <.01 ***p <.001

Table 6.

Descriptive Statistics for the S&P (experimental) Sample

VARIABLES	MEAN	STD. DEV.
Age	1.067	.289
Degree of Religiosity	2.228	.628
Family Income	4.825	1.393
Size of Hometown	3.676	1.806
Length of Longest Sexual Relationship	3.723	1.652
Total Number of Sexual Partners	2.572	1.187
Liberal VS Conservative Attitudes toward Sex	3.203	.593
Sexual Preference	2.000	.324
Position on Sex-Role Continuum	1.076	.594
Attitudes Toward Homosexuals	2.262	.935
Sensation Seeking Total Score	22.668	5.830
Thrill and Adventure Seeking	7.842	2.055
Disinhibition	6.025	2.601
Experience Seeking	5.394	2.064
Boredom Susceptibility	3.411	2.115
HETEROSEXUAL EXPERIENCE		
Kissing	3.930	.378
Kissing with Tongue Contact	3.849	.612
Clad Breast Stimulation	3.060	1.308
Nude Breast Stimulation	2.993	1.329
Oral Stimulation of Female Breast by Male	2.852	1.373
Manual Stimulation of Partner's Genitals	3.393	1.075
Manual Stimulation of One's Genitals by one's Partner	3.484	.984
Oral Contact with Partner's Genitals	2.877	1.293
Oral Contact with One's Genitals by One's Partner	3.032	1.214
Vaginal Intercourse, Front Entry	2.979	1.340
Vaginal Intercourse, Rear Entry	2.173	1.325
HOMOSEXUAL EXPERIENCE		
Kissing	1.197	.706
Kissing with Tongue Contact	1.053	.337
Manual Stimulation of Partner's Genitals	1.084	.428
Manual Stimulation of One's Genitals by one's Partner	1.091	.443
Oral Contact With Partner's Genitals	1.046	.338
Oral Contact with One's Genitals by One's Partner	1.056	.380
MISCELLANEOUS SEXUAL EXPERIENCE		
Masturbation	3.063	1.263
Masturbation to Orgasm	2.747	1.404
Orgasm via Manual Stimulation of One's Genitals	2.628	1.295
Orgasm via Oral Contact with One's Genitals	2.375	1.315

Table 6. cont.

VARIABLES	MEAN	STD. DEV.
Orgasm via Vaginal Intercourse	2.632	1.356
Group Sex	1.105	.447
Anal Intercourse	1.249	.626
EXPERIENCE WITH COMMERCIAL EROTICA		
Read Heterosexual pornography	3.271	.988
View Heterosexual Pornography	2.870	1.038
Read Gay Male Pornography	1.337	.736
View Gay Male Pornography	1.172	.546
Read Lesbian Pornography	2.147	1.204
View Lesbian Pornography	2.063	1.130
EXPERIENCE WITH SEXUAL AND PHYSICAL ABUSE		
Contact with an exhibitionist	1.673	.478
Someone Touched Me without My Consent	1.435	.497
I was forced to Touch Someone without my consent	1.758	.429
Someone unsuccessfully tried to rape me	1.663	.473
I was raped	1.905	.293
I have been physically (not sexually) abused	1.965	.276
I have experienced erectile difficulties	1.481	.737
My erectile difficulties are a serious problem for me	2.496	.587
SEXUAL FANTASY CONTENT		
Heterosexual necking	1.168	.375
Heterosexual intercourse	1.186	.390
Homosexual necking	1.895	.307
Heterosexual group sex	1.582	.494
Homosexual group sex	1.937	.244
Bisexual group sex	1.811	.393
Sex change fantasy with homosexual sex	1.772	.420
Have sexual fantasies, none of the above	1.874	.333
Do not have sex fantasies	1.986	.118

Table 7.

Demographic Statistics for the MAQ (control) Sample.

VARIABLES	MEAN	STD.DEV.
Sex	1.339	.475
Age	1.095	.363
Degree of Religiosity	2.213	.704
Family Income	4.968	1.298
Size of Hometown	3.896	1.652
Length of Longest Sexual Relationship	3.371	1.848
Total Number of Sexual Partners	2.226	1.161
Liberal VS Conservative Attitudes To Sex	3.100	.555
Sexual Preference	2.018	.285
Position on Sex-Role Continuum	1.00	.702
Attitudes Toward Homosexuals	2.167	.860
Sensation Seeking Total Score	21.914	7.374
Thrill and Adventure Seeking	7.621	2.631
Disinhibition	5.735	2.701
Experience Seeking	5.256	2.559
Boredom Susceptibility	3.345	2.303

Table 8.

Univariate ANOVA'S comparing the control and experimental conditions

VARIABLES	MAQ Mean	S & P Mean	F
Sex	1.343	1.462	7.24**
Age	1.097	1.069	.93
Degree of Religiosity	2.208	2.227	.10
Family Income	4.972	4.819	.22
Size of Hometown	3.894	1.660	2.40
Length of Longest Sexual Relationship	3.343	3.747	6.56*
Total Number of Sexual Partners	2.213	2.578	11.80***
Liberal vs Conservative Attitudes Toward Sex	3.093	3.202	4.39*
Sexual Preference	2.019	2.004	.31
Position on Sex-Role Continuum	1.000	1.076	1.68
Attitudes toward Homosexuals	2.167	2.267	1.50
Sensation Seeking Total Score	2.579	2.697	4.05*
Thrill and Adventure Seeking	7.602	7.845	2.16
Experience Seeking	5.269	5.383	.30
Disinhibition	5.718	5.986	1.93
Boredom Susceptibility	3.366	3.422	.13

Note. All Multivariate tests were significant at the .05 level or less.

*p <.05 **p <.01 ***p<.001

Table 9

Outcome of initial hypotheses.

Hypotheses	Proved?	Supporting Data
OVERALL, VOLUNTEERS WILL HAVE:		
1. Increased heterosexual experience	YES	Differences on 20+ variables. See Tables 1,2,3 & 5 (MANOVA, ANOVA)
2. More liberal sex attitudes	YES	Only for general sexual attitudes. See Tables 1,2 (MANOVA, ANOVA)
3. Higher rates of sex trauma and erectile difficulties	NO	Unsuccessful rape attempt, contrary to prediction. See Table 5. (1-way ANOVA w/contrasts)
4. Higher Sensation Seeking	YES	(Also Experience seeking and Boredom Susceptibility). See Table 3. (1-way ANOVA)
5. Sex-Role position will interact with experimental condition and vol. status	NO	
6. Gender will interact with exper. cond. and vol. status	NO	
VOLUNTEERS FOR THE GAY MALE & LESBIAN FILM CONDS. WILL HAVE:		
7. Less negative attitudes toward homosexuals	NO	
8. More experience with porn., including gay/lesbian porn.	YES & NO	Gay male cond. Vols - read more gay male porn., vols. for lesbian read less. No diff. on other porn vars. See Table 1. (MANOVA, ANOVA)
9. More gay.lesbian fantasies	NO	
10. More gay behaviors	NO	
11. Higher scores on DIS & ES	NO	

Table 9, cont.

Outcome of initial hypotheses.

Hypotheses	Proved?	Supporting Data
CONTROL (MAQ) VS EXPERIMENTAL (S&P) SAMPLE:		
12. No demographic differences	YES	Only diff. was sex, more male vols for sex research. See Table 8. (ANOVA)
13. S&P-more sex experience; more liberal sex attitudes	YES	3 of 5 sex vars.; only different in general sex attitudes. See Table 8. (ANOVA)
14. No personality differences	NO	Vols. for S&P had higher SSS. See Table 8. (ANOVA)

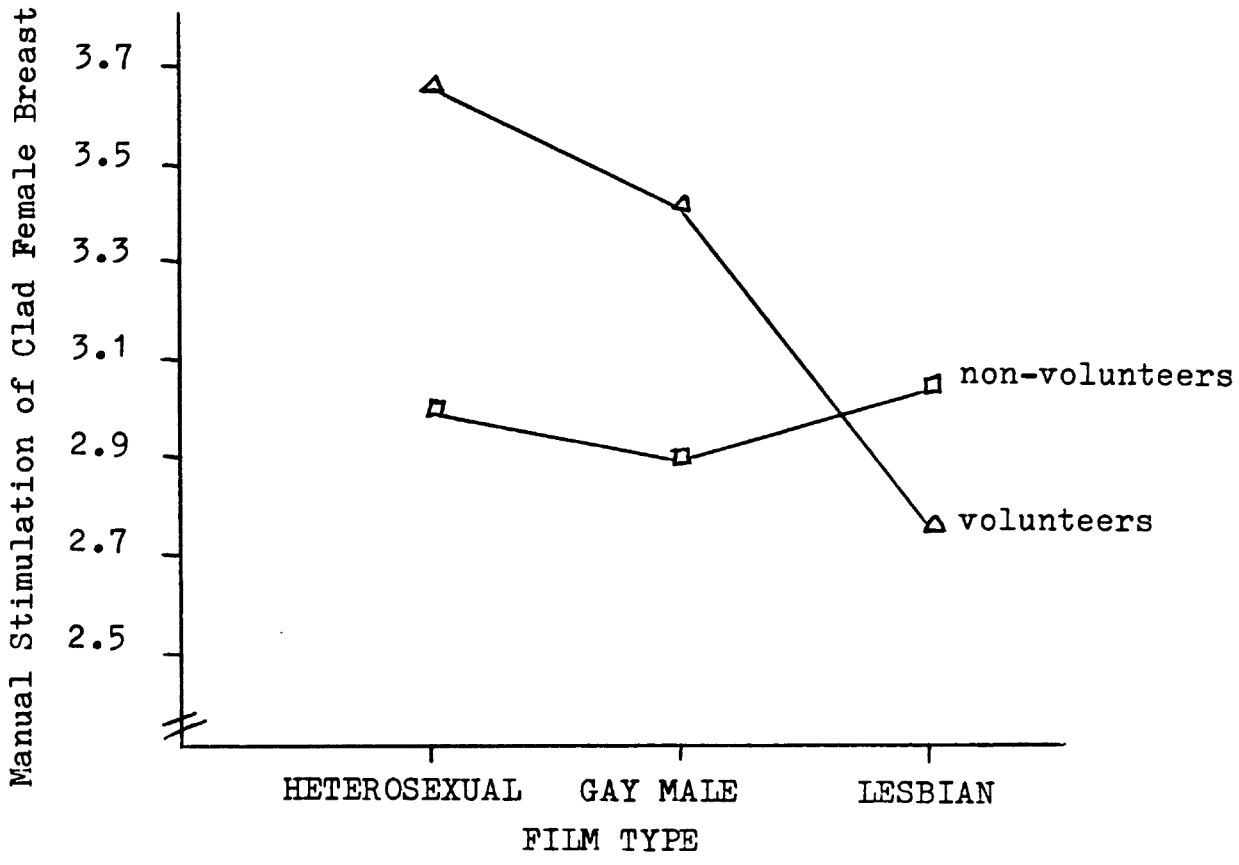


Figure 1

Frequency of manual stimulation of clad female breast as affected by the interaction of Volunteer Status and Film Stimuli Content

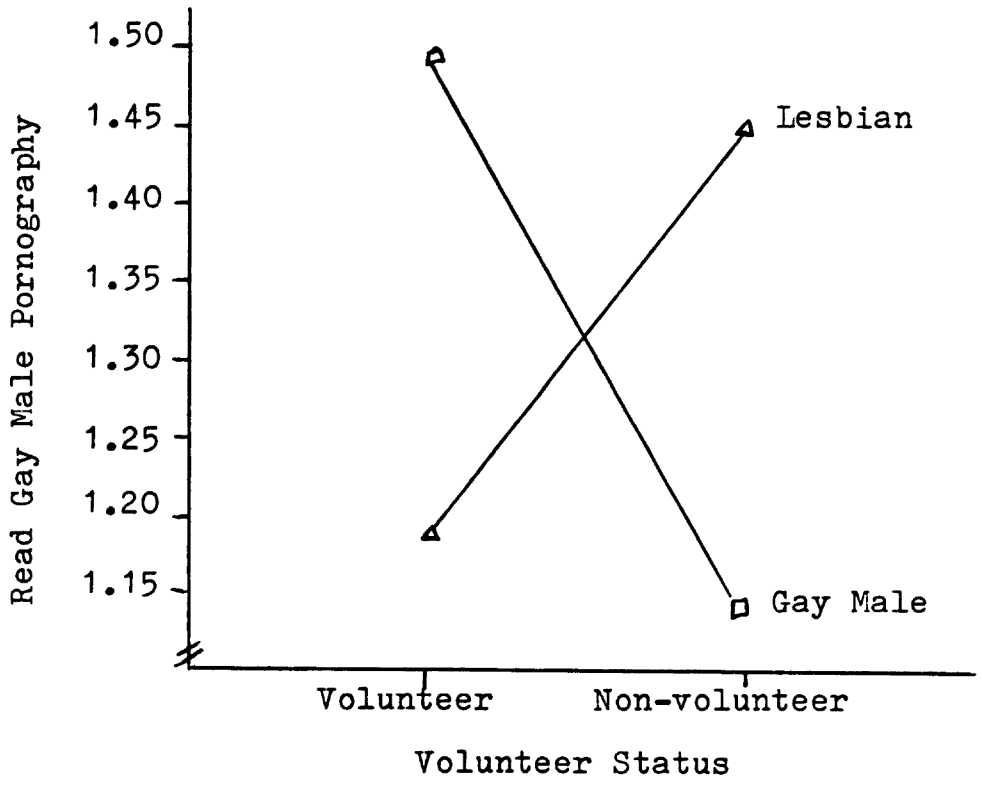


Figure 2

Frequency of reading gay male pornography
as influenced by
volunteer status for the lesbian and gay male films.

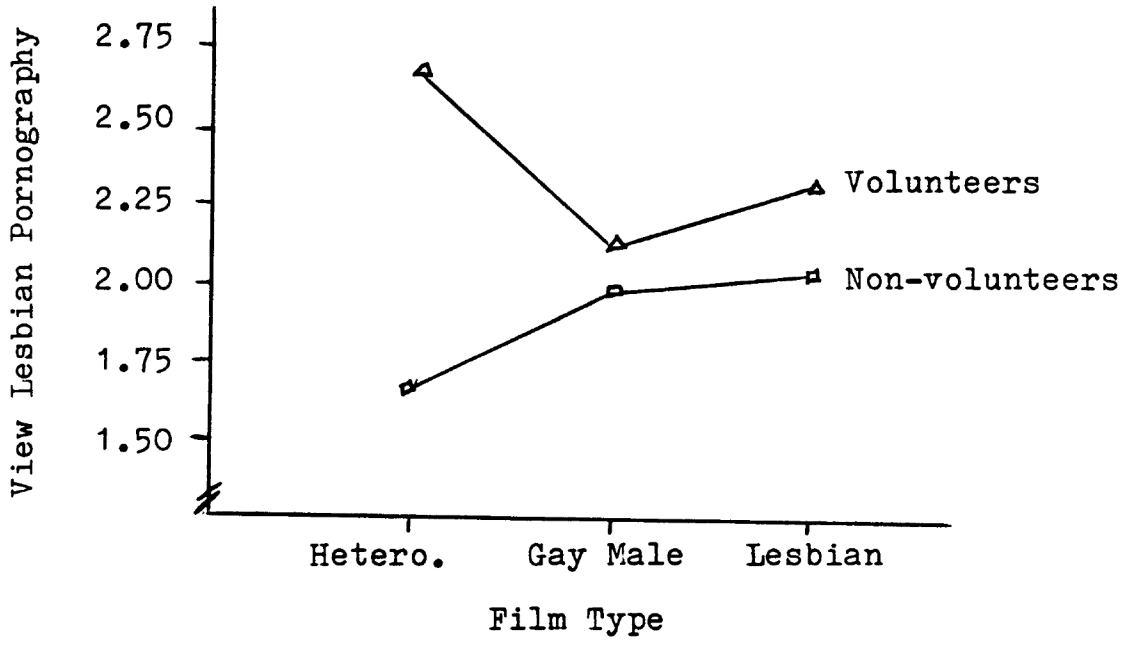


Figure 3

The interaction of Volunteer Status and Film Type as it influences exposure to lesbian visual stimuli

Appendix A

DIRECTIONS FOR COMPLETING THE SEXUALITY AND PERSONALITY QUESTIONNAIRE

This questionnnaire deals with a sensitive topic: sexuality. For that reason we ask you to respect each other's privacy by not looking at anyone else's questionnaire and by not discussing the questionnaire. All responses will be kept completely confidential. At the end of the questionnaire you are asked if you would like to participate in further research. You are asked to indicate either YES or NO on your OPSCAN sheet, which cannot be traced to you. You are also asked indicate your willingness to participate on a separate tear-off sheet. If you are willing to be a part of the study, you are asked to also put your name and phone number on this separate sheet. Everyone is asked to tear off this sheet (whether or not you want to participate) and place it in the box by the experimenter.

You complete this questionnaire in essentially the same way you completed your SAT's. Each question has a number next to it which corresponds to a line number on the OPSCAN sheet. Using a #2 pencil, you are to fill in completely the circle containing the number corresponding to your answer. BE SURE TO ANSWER EVERY QUESTION, DO NOT LEAVE ANY SPACES BLANK. In a few instances, a question may not be relevant to your experience. If there are no instructions given with the questions on how to deal with this situation, raise your hand and one of the experimenters will tell you what to do. Many of the questions utilize a scale for your answers. Be sure to read these scales closely as they may differ in wording. DO NOT ASSUME THAT A SCALE IS THE SAME JUST BECAUSE IT LOOKS LIKE ONE THAT YOU HAVE USED PREVIOUSLY. When you have finished the questionnaire, all 160 lines on the OPSCAN should have a circle filled in. If any are missing, go back and see what you have left out and fill it in. REMEMBER, DO NOT LEAVE ANY SPACES BLANK!!!

To Begin:

1. Leave the NAME and COURSE sections BLANK.

2. Fill in the date.

3. In the ID NUMBER SECTION, place a "0" in the FIRST FIVE COLUMNS and the LAST FOUR DIGITS OF YOUR SOCIAL SECURITY NUMBER (Tech ID Number) in the LAST FOUR COLUMNS. For example: 000002755. Then fill in the circles corresponding to each number in each column.

4. Each questionnaire has a three-digit ID number written on it in the upper right-hand corner of the first page. Fill this in in the SEAT NO section, again filling in both columns and appropriate circles.

5. Be sure to completely fill in the circles. Make your marks dark. Do not put more than one mark on each line.

6. If you have any questions, raise your hand and an experimenter will try to answer them.

Refer any additional questions to:
M.K. Lane, Psychology Dept., Derring 4092

SEXUALITY AND PERSONALITY

1) SEX: FEMALE 1 MALE 2

2) AGE: 20 years or less: 1
21 to 23 years: 2
24 or older 3

3) PLEASE RATE YOUR CURRENT LEVEL OF RELIGIOUS DEVOUTNESS:

Very Devout 1
Moderately Devout 2
Not Devout 3

4) PARENT'S ANNUAL INCOME LAST YEAR (GIVE YOUR BEST ESTIMATE), OR YOUR OWN IF YOU ARE SELF-SUPPORTING:

Under $10,000: 1
$10,000 - 20,000: 2
$21,000 - 30,000: 3
$31,000 - 40,000: 4
$41,000 - 50,000: 5
Over $50,00: 6

5) SIZE OF TOWN IN WHICH YOU SPENT THE MOST YEARS WHILE GROWING UP:

Rural area: 1
Under 25,00 people: 2
25,000 - 50,00 people: 3
50,000 - 100,00 people: 4
100,000 - 200,00 people: 5
Over 200,00 people: 6

6) LENGTH OF LONGEST SEXUAL RELATIONSHIP:

Not Applicable: 1
Less than one month: 2
One to six months: 3
Six months to one year: 4
One year to two years: 5
More than two years: 6

7) SEXUAL PREFERENCE:

Bisexual: 1
Heterosexual: 2
Homosexual: 3
Do Not Label Myself: 4

8) TOTAL NUMBER OF SEXUAL PARTNERS;

None 1
One 2
Two to Five 3
Five to Ten 4
Ten to Twenty 5
More than Twenty 6

SEXUAL EXPERIENCE:

For the following questions regarding your sexual activities, please fill in the number on the OPSCAN sheet corresponding to your level of experience for <u>each</u> sexual activity, **DO NOT LEAVE ANY BLANK.** Refer to the following "experience scale".

1 = I have never experienced this
2 = I have experienced this one time
3 = I have experienced this more than once but less than 5 times
4 = I have experienced this more than 5 times

SEXUAL ACTIVITIES WITH MEMBERS OF THE <u>OPPOSITE</u> SEX

9) Kissing

10) Kissing with tongue contact

11) Manual manipulation of clad female breast

12) Manual manipulation of nude female breast

13) Oral contact with female breast

14) Manual manipulation of partner's genitals

15) Manual manipulation of your genitals by your partner

16) Oral contact with your partner's genitals

17) Oral contact with your genitals by your partner

18) Vaginal intercourse, partner's facing each other

19) Vaginal intercourse, (woman on bottom on stomach, man on top, penile entry of vagina from the rear.)

SEXUAL ACTIVITIES WITH MEMBERS OF THE <u>SAME</u> SEX
(Use the same scale, below.)

1 = I have never experienced this
2 = I have experienced this one time
3 = I have experienced this more than once but less than 5 times
4 = I have experienced this more than 5 times

20) Kissing

21) Kissing with tongue contact

22) Manual manipulation of partner's genitals

23) Manual manipulation of your genitals by your partner

(Use the same scale, below.)

1 = I have never experienced this
2 = I have experienced this one time
3 = I have experienced this more than once but less than 5 times
4 = I have experienced this more than 5 times.

24) Oral contact with partner's genitals

25) Oral contact with your genitals by your partner

MISCELLANEOUS SEXUAL ACTIVITIES
(Use the same scale, below)

1 = I have never experienced this
2 = I have experienced this one time
3 = I have experienced this more than once but less than 5 times
4 = I have experienced this more than 5 times

26) Masturbation

27) Masturbation to orgasm

28) I experienced orgasm through manual manipulation of my genitals by my partner

29) I experienced orgasm through oral contact with my genitals by my partner

30) I experienced orgasm through vaginal intercourse

31) Group Sex (sexual activity with more than one other person at the same time)

32) Anal Intercourse (with either opposite sex or same sex partner.)

33) Reading erotic or pornographic literature which has a heterosexual theme.

34) Viewing erotic or pornographic films or videos (at least X rated), which have a heterosexual theme.

35) Reading erotic or pornographic literature which has a gay male theme.

36) Reading erotic or pornographic literature which has a lesbian theme.

37) Viewing erotic or pornographic films or videos which have a gay male theme (at least X rated.)

38) Viewing erotic or pornographic films or videos which have a lesbian theme (at least X rated.)

OTHER SEXUAL HISTORY

The following 6 questions refer to experiences that you may have had at some point in your life. They all concern activities which might have occured without your consent or invitation. All questions should be answered by both men and women. If a question is not applicable to you, please answer NO (fill in 2 on your OPSCAN sheet.)

39) An exhibitionist exposed his/her genitals to me.
YES 1 NO 2

40) Someone touched (with sexual intent) my breasts, buttocks, genitals or other body parts, with either their hands or their mouth, without my consent.
YES 1 NO 2

41) Someone coerced or forced me to touch (with sexual intent) his/her breasts, buttocks, genitals or other body parts, with either my hands or my mouth.
YES 1 NO 2

42) Someone unsuccessfully attempted to coerce or force me to have sexual intercourse (either vaginal or anal) with her/him.
YES 1 NO 2

43) Someone coerced or forced me to have sexual intercourse (either vaginal or anal) with him/her.
YES 1 NO 2

44) Someone abused me physically (other than 40-43), for example, beating, burning, or whipping me, etc.
YES 1 NO 2

FOR MEN ONLY: (WOMEN, FILL IN 5 FOR THESE 2 QUESTIONS.)

45) I have experienced difficulty in achieving an erection with a partner:

Never	1
At least once:	2
Two to five times:	3
More than five times:	4

46) I consider my difficulties in achieving an erection to be a serious problem: YES 1 NO 2 Doesn't apply 3

SEXUAL FANTASIES

While sexual fantasies are as varied as the individuals who have them, it is possible to identify many common themes. The fantasies listed below are an example of a few of those themes. They are not intended to be a definitive list, nor are they meant to define "normality" or "abnormality". Please indicate whether you have ever had a sexual fantasy of each particular type by filling in either a 1, (YES. I've had a fantasy of this type.) or a 2, (NO. I have never had a fantasy of this type.) on your OPSCAN sheet at the appropriate line number. The term "Characters" refers to the participants in your fantasies, which may or may not include you.

47) "Necking" and "Petting" (no sexual intercourse) by 2 opposite sex persons.
YES 1 NO 2

48) Sexual Intercourse by 2 opposite sex persons.
YES 1 NO 2

49) "Necking" and "Petting" by 2 same sex persons, both the same sex as you.
YES 1 NO 2

50) "Heterosexual Group Sex" in which only one of the characters is a member of your sex. All of the others are of the opposite sex. For example, a woman and 3 men or a man and 2 women.
YES 1 NO 2

51) "Homosexual Group Sex" in which all of the characters are members of your sex. For example, 3 women or 4 men.
YES 1 NO 2

52) "Bisexual Group Sex" in which the group is composed of <u>at least</u> two members of the same sex, and one of the opposite sex. For example, 2 women and 3 men or 2 men and 1 woman.
YES 1 NO 2

53) All of the characters are of the sex opposite your own sex and they are engaging in homosexual activities. For example, if you are a woman, you have a fantasy about 2 gay men. If you are a man, you have a fantasy about 2 lesbians.
YES 1 NO 2

Please answer the following True/False questions by filling in either a 1 (TRUE) or a 2 (FALSE) on your OPSCAN sheet on the appropriate line.

54) While I do have sexual fantasies, I have <u>never</u> fantasized any of the above listed themes.
TRUE 1 FALSE 2

55) I have never had a sexual fantasy.
TRUE 1 FALSE 2

Please refer to the following scale for the next 25 questions. Fill in the number on the OPSCAN sheet which best reflects your attitude regarding each statement.

1 **Strongly Disagree**
2 **Disagree**
3 **Neither agree nor disagree**
4 **Agree**
5 **Strongly Agree**

56) I think there is too much sexual freedom given to adults these days.

57) I think that the increased sexual freedom seen in the past several years has done much to undermine the American family.

58) I think that young people have been given too much information about sex.

59) Sex education should be restricted to the home.

60) Older people do not need to have sex.

61) Sex education should be given only when people are ready for marriage.

62) Premarital sex may be a sign of a decaying social order.

63) Extramarital sex is never excusable.

64) I think there is too much sexual freedom given to teenagers these days.

65) I think there is not enough sexual restraint among young people.

66) I think people indulge in sex too much.

67) I think the only proper way to have sex is through intercourse.

68) I think sex should be reserved for marriage.

69) Sex should be only for the young.

70) Too much social approval has been given to homosexuals.

71) Sex should be devoted to the business of procreation.

72) People should not masturbate.

73) Heavy sexual petting should be discouraged.

74) People should not discuss their sexual affaiirs or business with others.

75) Severely handicapped (physically and mentally) people should not have sex.

7

(Refer to the same scale, below)

1 Strongly Disagree
2 Disagree
3 Neither agree nor disagree
4 Agree
5 Strongly Agree

76) There should be no laws prohibiting sexual acts between consenting adults.

77) What two consenting adults do together sexually is their own business.

78) There is too much sex on television.

79) Movies today are too sexually explicit.

80) Pornography should be totally banned from our bookstores.

The items below are words that could be used to describe someone's personality. Each item consists of a pair of characteristics, with the numbers 1-5 in between. Each pair describes opposite characteristics - that is, you cannot be both at the same time. The numbers form a scale between the two extremes. You are to fill in on the OPSCAN sheet (on the line corresponding to the question number) the number which describes where you fall on the scale. Thus, 1 and 5 are extremes, 3 is medium or average. Be sure to answer the questions below to describe yourself as you are now. Don't spend too much time on any one item; first impressions are usually best.

81) Not at all aggressive	1 2 3 4 5	Very aggressive
82) Not at all independent	1 2 3 4 5	Very independent
83) Not at all emotional	1 2 3 4 5	Very emotional
84) Very submissive	1 2 3 4 5	Very dominant
85) Not at all excitable in a major crisis	1 2 3 4 5	Very excitable in a major crisis
86) Very passive	1 2 3 4 5	Very active
87) Not at all able to devote self completely to others	1 2 3 4 5	Able to devote self completely to others
88) Very rough	1 2 3 4 5	Very gentle
89) Not at all helpful to others	1 2 3 4 5	Very helpful to others
90) Not at all competitive	1 2 3 4 5	Very competitive
91) Very home oriented	1 2 3 4 5	Very wordly

92) Not at all kind	1 2 3 4 5	Very kind
93) Indifferent to other's approval	1 2 3 4 5	Highly needful of other's approval
94) Feelings not easily hurt	1 2 3 4 5	Feelings easily hurt
95) Not at all aware of feelings of others	1 2 3 4 5	Very aware of feelings of others
96) Can make decisions easily	1 2 3 4 5	Have difficulty making decisions
97) Gives up very easily	1 2 3 4 5	Never gives up easily
98) Never cries	1 2 3 4 5	Cries very easily
99) Not at all self-confident	1 2 3 4 5	Very self-confident
100) Feels very inferior	1 2 3 4 5	Feels very superior
101) Not at all understanding of others	1 2 3 4 5	Very understanding of others
102) Very cold in relations with others	1 2 3 4 5	Very warm in relations with others
103) Very little need for security	1 2 3 4 5	Very strong need for security
104) Goes to pieces under pressure	1 2 3 4 5	Stands up well under pressure

Refer to the following scale for the next 15 questions. As before, fill in the appropriate circle on your OPSCAN (on the line corresponding to the question number) which best reflects your current attitude toward each statement. (Note that this scale goes in the opposite direction - agree to disagree - of the previous scale of this type.)

1 Strongly agree
2 Agree
3 Undecided
4 Disagree
5 Strongly Disagree

105) Sexual Preference should not be a factor in employment opportunity.

106) Homosexuals are just like anyone else, they simply chose an alternative lifestyle.

9

(Refer to the same scale, below)

1 Strongly agree
2 Agree
3 Undecided
4 Disagree
5 Strongly Disagree

107) Homosexuals should be isolated from heterosexuals.

108) Homosexuals should not be discriminated against because of their sexual preferences.

109) Homosexual acts should be illegal.

110) Homosexuals are a danger to our young people.

111) I would not like to work with a homosexual.

112) Homosexuals should not hold high government offices.

113) Job discrimination against homosexuals is wrong.

114) Homosexuals should not hold leadership positions.

115) Homosexuals do not corrupt the youth of America.

116) I would not want a homosexual to live in the house (apartment) next to mine.

117) If I found out one of my friends was a homosexual, our friendship would be severely damaged.

118) I would never have anything to do with a person if I knew he/she was a homosexual.

119) Apartment complexes should not accept homosexuals as renters.

Each of the items below contains two choices, 1 and 2. Please indicate on your OPSCAN sheet (on the line corresponding to the question number) which of the choices most describes <u>your likes</u> or the way <u>you feel</u>. In some cases you may find terms in which both choices describe your likes or the way you feel. Please choose the one which better describes your likes or feelings. In some cases you may find items in which you do not like either choice. In these cases mark the choice <u>you dislike least</u>.

It is important you respond to <u>all items</u> with only <u>one choice</u>, 1 or 2. We are interested only in your <u>likes or feelings</u>, not in how others feel about these things or how one is supposed to feel. There are no right or wrong answers. Be frank and give your honest appraisal of yourself.

120) 1. I like "wild" uninhibited parties.
2. I prefer quiet parties with good conversation.

121) 1. There are some movies I enjoy seeing a second or even a third time.
2. I can't stand watching a movie I've seen before.

122) 1. I often wish I could be a mountain climber.
2. I can't understand people who risk their necks climbing mountains.

123) 1. I dislike all body odors.
2. I like some of the earthy body smells.

124) 1. I get bored seeing the same old faces.
2. I like the comfortable familiarity of everyday friends.

125) 1. I like to explore a strange city or section of town by myself, even if it means getting lost.
2. I prefer a guide when I am in a place I don't know well.

126) 1. I dislike people who do or say things just to shock or upset others.
2. When you can predict almost everything a person will do or say he or she must be a bore.

127) 1. I usually don't enjoy a play or movie where I can predict what will happen in advance.
2. I don't mind watching a play or a movie where I can predict what will happen in advance.

128) 1. I have tried mariajuana or would like to.
2. I would never smoke marijuana.

129) 1. I would not like to try any drug which might produce strange and dangerous effects on me.
2. I would like to try some of the drugs that produce hallucinations.

130) 1. A sensible person avoids activities that are dangerous.
2. I sometimes like to do things that are a little frightening.

131) 1. I dislike "swingers."
2. I enjoy the company of real "swingers."

132) 1. I find that stimulants make me uncomfortable.
2. I often like to get high (drinking liquor or smoking marijuana).

133) 1. I like to try new foods that I have never tasted before.
2. I order the dishes with which I am familiar, so as to avoid disappointment and unpleasantness.

134) 1. I enjoy looking at home movies or travel slides.
2. Looking at someone's home movies or travel slides bores me tremendously.

135) 1. I would like to take up the sport of water-skiing.
2. I would not like to take up water-skiing.

136) 1. I would like to try surf-board riding.
2. I would not like to try surf-board riding.

137) 1. I would like to take off on a trip with no pre-planned or definite routes, or timetable.
2. When I go on a trip I like to plan my route and timetable fairly carefully.

138) 1. I prefer the "down-to-earth" kinds of people as friends.
2. I would like to make friends in some of the "far-out" groups like artists or "hippies".

139) 1. I would not like to learn to fly an airplane.
2. I would like to learn to fly an airplane.

140) 1. I prefer the surface of the water to the depths.
2. I would like to go scuba diving.

141) 1. I would like to meet some persons who are homosexual (men or women).
2. I stay away from anyone I suspect of being "queer."

142) 1. I would like to try parachute jumping.
2. I would never want to try jumping out of a plane with or without a parachute.

143) 1. I prefer friends who are excitingly unpredictable.
2. I prefer friends who are reliable and predictable.

144) 1. I am not interested in experience for its own sake.
2. I like to have new and exciting experiences and sensations even if they are a little frightening, unconventional or illegal.

145) 1. The essence of good art is in its clarity, symmetry of form and harmony of colors.
2. I often find beauty in the "clashing" colors and irregular forms of modern painting.

146) 1. I enjoy spending time in the familiar surroundings of home.
2. I get very restless if I have to stay around home for any length of time.

147) 1. I like to dive off the high board.
2. I don't like the feeling I get standing on the high board (or I don't go near it at all.)

148) 1. I like to date members of the opposite sex who are physically exciting.
2. I like to date members of the opposite sex who share my values.

149) 1. Heavy drinking usually ruins a party because some people get loud and boisterous.
2. Keeping the drinks full is the key to a good party.

150) 1. The worst social sin is to be rude.
2. The worst social sin is to be a bore.

151) 1. A person should have considerable sexual experience before marriage.
2. It's better if two married persons begin their sexual experience with each other.

152) 1. Even if I had the money I would not care to associate with flighty persons like those in the "jet set."
2. I could conceive of myself seeking pleasure around the world with the "jet set."

153) 1. I like people who are sharp and witty even if they do sometimes insult others.
2. I dislike people who have their fun at the expense of hurting the feelings of others.

154) 1. There is altogether too much portrayal of sex in movies.
2. I enjoy watching many of the "sexy" scenes in movies.

155) 1. I feel best after taking a coule of drinks.
2. Something is wrong with people who need liquor to feel good.

156) 1. People should dress according to some standards of taste, neatness, and style.
2. People should dress in individual ways even if the effects are sometimes strange.

157) 1. Sailing long distances in small sailing craft is foolhardy.
2. I would like to sail a long distance in a small but seaworthy sailing craft.

158) 1. I have no patience with dull or boring persons.
2. I find something interesting in almost every person I talk with.

159) 1. Skiing fast down a high mountain slope is a good way to end up on crutches.
2. I think I would enjoy the sensation of skiing very fast down a high mountain slope.

The following page describes a further experiment in which you are invited to participate for additional extra credit. Participation in this future study is totally voluntary. Credit for the current study <u>is not</u> contingent upon your participating in this next study.

Please indicate whether you intend to participate in this further study by answering the question below on your OPSCAN and by filling out the separate sign-up sheet attached to the description of the study. Be sure to indicate your decision to participate (either YES or NO) <u>in both places</u>. Read the description of the study before answering the question below.

160) Are you willing to participate in the research project described on the next page?
YES <u>1</u> NO <u>2</u>

CHECK THE APPROPRIATE BOX AND FOLLOW THE INSTRUCTIONS BELOW

YES____, I wish to participate in the "EROTIC FILMS AND SEXUAL AROUSAL: PERSONALITY VARIABLES, ATTITUDES, BEHAVIORS, AND EXPERIENCES." study.

If yes:

A) **Please fill in a "1" on line 160 of your OPSCAN sheet.**

B) Write your name and local phone number in the spaces below.

NAME _____

PHONE # _____

An experimenter will call you within the next two weeks to schedule an appointment.

NO_____, I do not wish to participate in the "EROTIC FILMS AND SEXUAL AROUSAL: PERSONALITY VARIABLES, ATTITUDES, BEHAVIORS AND EXPERIENCES." study.

If no:

A) **Please fill in a "2" on line 160 of your OPSCAN sheet.**

B) DO NOT LEAVE YOUR NAME OR NUMBER.

EVERYONE:

TEAR OFF THIS SHEET AND DROP IT IN THE BOX MARKED "EROTIC FILMS AND SEXUAL AROUSAL".

THANK YOU FOR YOUR TIME!

DIRECTIONS FOR COMPLETING THE MULTIPLE ATTITUDES QUESTIONNAIRE

This questionnaire deals with many topics: religion, income, relationships, personality characteristics, and sexual attitudes. For that reason we ask you to respect each other's privacy by not looking at anyone else's questionnaire and by not discussing the questionnaire. All responses will be kept completely confidential. If you decide that you are not comfortable answering these questions, you may leave this questionnaire blank, without any penalty or loss of credit.

You complete this questionnaire in essentially the same way you completed your SAT's. Each question has a number next to it which corresponds to a line number on the OPSCAN sheet. Using a #2 pencil, you are to fill in completely the circle containing the number corresponding to your answer. BE SURE TO ANSWER EVERY QUESTION, DO NOT LEAVE ANY SPACES BLANK. In a few instances, a question may not be relevant to your experience. If there are no instructions given with the questions on how to deal with this situation, raise your hand and one of the experimenters will tell you what to do. Many of the questions utilize a scale for your answers. Be sure to read these scales closely as they may differ in wording. DO NOT ASSUME THAT A SCALE IS THE SAME JUST BECAUSE IT LOOKS LIKE ONE THAT YOU HAVE USED PREVIOUSLY. When you have finished the questionnaire, 112 lines on the OPSCAN should have a circle filled in. If any are missing, go back and see what you have left out and fill it in. REMEMBER, DO NOT LEAVE ANY SPACES BLANK!!!

To Begin:

1. Leave the NAME, ID NUMBER, and COURSE sections BLANK.

2. Be sure to completely fill in the circles. Make your marks dark. Do not put more than one mark on each line.

3. If you have any questions, raise your hand and an experimenter will try to answer them.

Refer any additional questions to:
M.K. Lane, Psychology Dept., Derring 4082

MULTIPLE ATTITUDES QUESTIONNAIRE

1) SEX: FEMALE 1 MALE 2

2) AGE:
20 years or less: 1
21 to 23 years: 2
24 or older 3

3) PLEASE RATE YOUR CURRENT LEVEL OF RELIGIOUS DEVOUTNESS:

Very Devout 1
Moderately Devout 2
Not Devout 3

4) PARENT'S ANNUAL INCOME LAST YEAR (GIVE YOUR BEST ESTIMATE), OR YOUR OWN IF YOU ARE SELF-SUPPORTING:

Under $10,000: 1
$10,000 - 20,000: 2
$21,000 - 30,000: 3
$31,000 - 40,000: 4
$41,000 - 50,000: 5
Over $50,00: 6

5) SIZE OF TOWN IN WHICH YOU SPENT THE MOST YEARS WHILE GROWING UP:

Rural area: 1
Under 25,00 people: 2
25,000 - 50,00 people: 3
50,000 - 100,00 people: 4
100,000 - 200,00 people: 5
Over 200,00 people:

6) LENGTH OF LONGEST SEXUAL RELATIONSHIP:

Not Applicable: 1
Less than one month: 2
One to six months: 3
Six months to one year: 4
One year to two years: 5
More than two years: 6

7) SEXUAL PREFERENCE:

Bisexual: 1
Heterosexual: 2
Homosexual: 3
Do Not Label Myself: 4

8) TOTAL NUMBER OF SEXUAL PARTNERS;

None 1
One 2
Two to Five 3
Five to Ten 4
Ten to Twenty 5
More than Twenty 6

Please refer to the following scale for the next 25 questions. Fill in the number on the OPSCAN sheet which best reflects your attitude regarding each statement.

1 Strongly Disagree
2 Disagree
3 Neither agree nor disagree
4 Agree
5 Strongly Agree

9) I think there is too much sexual freedom given to adults these days.

10) I think that the increased sexual freedom seen in the past several years has done much to undermine the American family.

11) I think that young people have been given too much information about sex.

12) Sex education should be restricted to the home.

13) Older people do not need to have sex.

14) Sex education should be given only when people are ready for marriage.

15) Premarital sex may be a sign of a decaying social order.

16) Extramarital sex is never excusable.

17) I think there is too much sexual freedom given to teenagers these days.

18) I think there is not enough sexual restraint among young people.

19) I think people indulge in sex too much.

20) I think the only proper way to have sex is through intercourse.

21) I think sex should be reserved for marriage.

22) Sex should be only for the young.

23) Too much social approval has been given to homosexuals.

24) Sex should be devoted to the business of procreation.

25) People should not masturbate.

26) Heavy sexual petting should be discouraged.

27) People should not discuss their sexual affaiirs or business with others.

(refer to scale below)

1 Strongly Disagree
2 Disagree
3 Neither agree nor disagree
4 Agree
5 Strongly Agree

28) Severely handicapped (physically and mentally) people should not have sex.

29) There should be no laws prohibiting sexual acts between consenting adults.

30) What two consenting adults do together sexually is their own business.

31) There is too much sex on television.

32) Movies today are too sexually explicit.

33) Pornography should be totally banned from our bookstores.

The items below are words that could be used to describe someone's personality. Each item consists of a pair of characteristics, with the numbers 1-5 in between. Each pair describes opposite characteristics - that is, you cannot be both at the same time. The numbers form a scale between the two extremes. You are to fill in on the OPSCAN sheet (on the line corresponding to the question number) the number which describes where you fall on the scale. Thus, 1 and 5 are extremes, 3 is medium or average. Be sure to answer the questions below to describe yourself as you are now. Don't spend too much time on any one item; first impressions are usually best.

34) Not at all aggressive	1 2 3 4 5	Very aggressive
35) Not at all independent	1 2 3 4 5	Very independent
36) Not at all emotional	1 2 3 4 5	Very emotional
37) Very submissive	1 2 3 4 5	Very dominant
38) Not at all excitable in a major crisis	1 2 3 4 5	Very excitable in a major crisis
39) Very passive	1 2 3 4 5	Very active
40) Not at all able to devote self completely to others	1 2 3 4 5	Able to devote self completely to others
41) Very rough	1 2 3 4 5	Very gentle
42) Not at all helpful to others	1 2 3 4 5	Very helpful to others
43) Not at all competitive	1 2 3 4 5	Very competitive

44) Very home oriented	1 2 3 4 5	Very wordly
45) Not at all kind	1 2 3 4 5	Very kind
46) Indifferent to other's approval	1 2 3 4 5	Highly needful of other's approval
47) Feelings not easily hurt	1 2 3 4 5	Feelings easily hurt
48) Not at all aware of feelings of others	1 2 3 4 5	Very aware of feelings of others
49) Can make decisions easily	1 2 3 4 5	Have difficulty making decisions
50) Gives up very easily	1 2 3 4 5	Never gives up easily
51) Never cries	1 2 3 4 5	Cries very easily
52) Not at all self-confident	1 2 3 4 5	Very self-confident
53) Feels very inferior	1 2 3 4 5	Feels very superior
54) Not at all understanding of others	1 2 3 4 5	Very understanding of others
55) Very cold in relations with others	1 2 3 4 5	Very warm in relations with others
56) Very little need for security	1 2 3 4 5	Very strong need for security
57) Goes to pieces under pressure	1 2 3 4 5	Stands up well under pressure

Refer to the following scale for the next 15 questions. As before, fill in the appropriate circle on your OPSCAN (on the line corresponding to the question number) which best reflects your current attitude toward each statement. (Note that this scale goes in the opposite direction - agree to disagree - of the previous scale of this type.)

1 **Strongly agree**
2 **Agree**
3 **Undecided**
4 **Disagree**
5 **Strongly Disagree**

58) Sexual Preference should not be a factor in employment opportunity.

59) Homosexuals are just like anyone else, they simply chose an alternative lifestyle.

60) Homosexuals should be isolated from heterosexuals.

5

(Refer to the same scale, below)

1 Strongly agree
2 Agree
3 Undecided
4 Disagree
5 Strongly Disagree

61) Homosexuals should not be discriminated against because of their sexual preferences.

62) Homosexual acts should be illegal.

63) Homosexuals are a danger to our young people.

64) I would not like to work with a homosexual.

65) Homosexuals should not hold high government offices.

66) Job discrimination against homosexuals is wrong.

67) Homosexuals should not hold leadership positions.

68) Homosexuals do not corrupt the youth of America.

69) I would not want a homosexual to live in the house (apartment) next to mine.

70) If I found out one of my friends was a homosexual, our friendship would be severely damaged.

71) I would never have anything to do with a person if I knew he/she was a homosexual.

72) Apartment complexes should not accept homosexuals as renters.

Each of the items below contains two choices, 1 and 2. Please indicate on your OPSCAN sheet (on the line corresponding to the question number) which of the choices most describes <u>your likes</u> or the way <u>you feel</u>. In some cases you may find terms in which both choices describe your likes or the way you feel. Please choose the one which better describes your likes or feelings. In some cases you may find items in which you do not like either choice. In these cases mark the choice <u>you dislike least</u>.

It is important you respond to <u>all items</u> with only <u>one choice</u>, 1 or 2. We are interested only in your <u>likes or feelings</u>, not in how others feel about these things or how one is supposed to feel. There are no right or wrong answers. Be frank and give your honest appraisal of yourself.

73) 1. I like "wild" uninhibited parties.
2. I prefer quiet parties with good conversation.

74) 1. There are some movies I enjoy seeing a second or even a third time.
2. I can't stand watching a movie I've seen before.

75) 1. I often wish I could be a mountain climber.
2. I can't understand people who risk their necks climbing mountains.

76) 1. I dislike all body odors.
2. I like some of the earthy body smells.

77) 1. I get bored seeing the same old faces.
2. I like the comfortable familiarity of everyday friends.

78) 1. I like to explore a strange city or section of town by myself, even if it means getting lost.
2. I prefer a guide when I am in a place I don't know well.

79) 1. I dislike people who do or say things just to shock or upset others.
2. When you can predict almost everything a person will do or say he or she must be a bore.

80) 1. I usually don't enjoy a play or movie where I can predict what will happen in advance.
2. I don't mind watching a play or a movie where I can predict what will happen in advance.

81) 1. I have tried mariajuana or would like to.
2. I would never smoke mariajuana.

82) 1. I would not like to try any drug which might produce strange and dangerous effects on me.
2. I would like to try some of the drugs that produce hallucinations.

83) 1. A sensible person avoids activities that are dangerous.
2. I sometimes like to do things that are a little frightening.

84) 1. I dislike "swingers."
2. I enjoy the company of real "swingers."

85) 1. I find that stimulants make me uncomfortable.
2. I often like to get high (drinking liquor or smoking mariajuana).

86) 1. I like to try new foods that I have never tasted before.
2. I order the dishes with which I am familiar, so as to avoid disappointment and unpleasantness.

87) 1. I enjoy looking at home movies or travel slides.
2. Looking at someone's home movies or travel slides bores me tremendously.

88) 1. I would like to take up the sport of water-skiing.
2. I would not like to take up water-skiing.

89) 1. I would like to try surf-board riding.
2. I would not like to try surf-board riding.

90) 1. I would like to take off on a trip with no pre-planned or definite routes, or timetable.
2. When I go on a trip I like to plan my route and timetable fairly carefully.

91) 1. I prefer the "down-to-earth" kinds of people as friends.
2. I would like to make friends in some of the "far-out" groups like artists or "hippies".

92) 1. I would not like to learn to fly an airplane.
2. I would like to learn to fly an airplane.

93) 1. I prefer the surface of the water to the depths.
2. I would like to go scuba diving.

94) 1. I would like to meet some persons who are homosexual (men or women).
2. I stay away from anyone I suspect of being "queer."

95) 1. I would like to try parachute jumping.
2. I would never want to try jumping out of a plane with or without a parachute.

96) 1. I prefer friends who are excitingly unpredictable.
2. I prefer friends who are reliable and predictable.

97) 1. I am not interested in experience for its own sake.
2. I like to have new and exciting experiences and sensations even if they are a little frightening, unconventional or illegal.

98) 1. The essence of good art is in its clarity, symmetry of form and harmony of colors.
2. I often find beauty in the "clashing" colors and irregular forms of modern painting.

99) 1. I enjoy spending time in the familiar surroundings of home.
2. I get very restless if I have to stay around home for any length of time.

100) 1. I like to dive off the high board.
2. I don't like the feeling I get standing on the high board (or I don't go near it at all.)

101) 1. I like to date members of the opposite sex who are physically exciting.
2. I like to date members of the opposite sex who share my values.

102) 1. Heavy drinking usually ruins a party because some people get loud and boisterous.
2. Keeping the drinks full is the key to a good party.

103) 1. The worst social sin is to be rude.
2. The worst social sin is to be a bore.

104) 1. A person should have considerable sexual experience before marriage.
2. It's better if two married persons begin their sexual experience with each other.

105) 1. Even if I had the money I would not care to associate with flighty persons like those in the "jet set."
2. I could conceive of myself seeking pleasure around the world with the "jet set."

106) 1. I like people who are sharp and witty even if they do sometimes insult others.
2. I dislike people who have their fun at the expense of hurting the feelings of others.

107) 1. There is altogether too much portrayal of sex in movies.
2. I enjoy watching many of the "sexy" scenes in movies.

108) 1. I feel best after taking a coule of drinks.
2. Something is wrong with people who need liquor to feel good.

109) 1. People should dress according to some standards of taste, neatness, and style.
2. People should dress in individual ways even if the effects are sometimes strange.

110) 1. Sailing long distances in small sailing craft is foolhardy.
2. I would like to sail a long distance in a small but seaworthy sailing craft.

111) 1. I have no patience with dull or boring persons.
2. I find something interesting in almost every person I talk with.

112) 1. Skiing fast down a high mountain slope is a good way to end up on crutches.
2. I think I would enjoy the sensation of skiing very fast down a high mountain slope.

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY

Appendix B

CONSENT FORM

By signing this form I give my consent to participate in the psychology experiment titled "SEXUALITY: PERSONALITY VARIABLES, ATTITUDES, BEHAVIORS AND EXPERIENCES." I understand that the questionnaire contains potentially embarassing questions of a sexually explicit nature and that I may withdraw my participation at any time after reporting for the experimental session, without penalty or loss of benefit, if I find the material in any way objectionable. The experimental session will last approximately one hour to one and one-half hours. Furthermore, I understand that all responses will be kept completely confidential. I also am aware that I have the right to withdraw my data immediately after the collection of such data, again without penalty or loss of benefit. Individual responses will not be traceable either while stored in computer data banks nor in the case that this study results in a publication. I agree to answer every question on the questionnaire honestly, frankly, and to the best of my ability, realizing that most of the questions have an option that I may use if they are not applicable to my experience. I hereby give my permission to use my results as group data for the purpose of fufilling the Master's thesis requirement for the Psychology Dept. at Virginia Tech. I also give my permission to use my results as group data in the event that any publications are forthcoming from this research.

After I sign and date this form I will remove it from the questionnaire packet by tearing off this sheet. I will place it in the box specifically provided for storage of the consent forms. I understand that if I have any questions regarding this experiment I am to contact either M.K.LANE OR RICHARD WINETT, Ph.D. IN THE PSYCHOLOGY DEPT. AT VIRGINIA TECH. (The name and phone numbers for these two individuals and the chairperson of the Institutional Review Board are provided on a separate, tear-off sheet attached to the questionnaire.) I have provided my name and campus address on a separate 3 X 5 card (which cannot be connected with the data on my questionnaire in any way), in order that a letter may be sent to me in June of 1987 (prior to the end of the 1986-1987 school year) fully debriefing me on the intentions and aims of this study. I will place this card in the box provided as I leave the testing room.

I HAVE READ, AND AGREE TO ABIDE BY, THE CONDITIONS STATED ABOVE.

SIGNED:_____

DATE:

CONSENT FORM

By signing this form I give my consent to participate in the psychology experiment titled "MULTIPLE ATTITUDES QUESTIONNAIRE." I understand that the questionnaire contains questions of an intimate nature (regarding family finances, religion, relationships, sexuality, and my personal attitudes on some of these topics) and that I may withdraw my participation at any time after reporting for the experimental session, without penalty or loss of benefit, if I find the material in any way objectionable. The experimental session will last approximately one hour to one and one-half hours. Furthermore, I understand that all responses will be kept completely confidential. I also am aware that I have the right to withdraw my data immediately after the collection of such data, again without penalty or loss of benefit. Individual responses will not be traceable either while stored in computer data banks nor in the case that this study results in a publication. I agree to answer every question on the questionnaire honestly, frankly, and to the best of my ability, realizing that most of the questions have an option that I may use if they are not applicable to my experience. I hereby give my permission to use my results as group data for the purpose of fufilling the Master's thesis requirement for the Psychology Dept. at Virginia Tech. I also give my permission to use my results as group data in the event that any publications are forthcoming from this research.

After I sign and date this form I will remove it from the questionnaire packet by tearing off this sheet. I understand that if I have any questions regarding this experiment I am to contact either M.K.LANE OR RICHARD WINETT, Ph.D. IN THE PSYCHOLOGY DEPT. AT VIRGINIA TECH. (The name and phone numbers for these two individuals and the chairperson of the Institutional Review Board are provided on a separate, tear-off sheet attached to the questionnaire.) I have provided my name and campus address on a separate 3 X 5 card (which cannot be connected with the data on my questionnaire in any way), in order that a letter may be sent to me in June of 1987 (prior to the end of the 1986-1987 school year) fully debriefing me on the intentions and aims of this study.

This experiment, # 127-86, has been approved by the University Institutional Review Board.

I HAVE READ, AND AGREE TO ABIDE BY, THE CONDITIONS STATED ABOVE.

SIGNED:_____

DATE:

CONSENT FORM

By signing this form I give my consent to participate in the psychology experiment titled "EROTIC FILMS AND SEXUAL AROUSAL: PERSONALITY VARIABLES, ATTITUDES, BEHAVIORS AND EXPERIENCES." The objective of this study is to assess the personality, attitudinal, behavioral, and experiential correlates associated with sexual arousal produced by viewing sexually explicit films. I understand that I may view potentially embarassing sexually-explicit material during the course of this study and thus, have the right to withdraw my participation at any time after reporting for the experimental session, without penalty or loss of benefit, if I find the material in any way objectionable. Furthermore, I may withdraw any data which I may provide to the experimenter immediately after collection of said data. I understand that all responses will be kept completely confidential. Individual responses will not be traceable either while stored in computer data banks nor in the case that this study results in a publication. I understand that there will be a small group briefing session prior to my individual experimental session which is to be conducted in a private rooom. I realize that this study will take approximately one to one and one-half hours to complete. I hereby give my permission to use my results as group data for the purpose of fufilling the Master's thesis requirement for the Psychology Dept. at Virginia Tech. I also give permission for my results to be used as group data in the event that this research results in publications.

After I sign and date this form I will remove it from the questionnaire packet by tearing off this sheet. I will place it in the box specifically provided for storage of the consent forms. I understand that if I have any questions regarding this experiment I am to contact either M.K.LANE OR RICHARD WINETT, Ph.D. IN THE PSYCHOLOGY DEPT. AT VIRGINIA TECH. (The name and phone number for these two individuals and for the chairperson of the Institutional Review Board are provided on a separate tear-off sheet.)

I HAVE READ THE DESCRIPTION OF THE EXPERIMENT, AND AGREE TO ABIDE BY, THE CONDITIONS STATED ABOVE. I UNDERSTAND THE PROCEDURE INVOLVED IN THIS EXPERIMENT AND I AGREE TO PARTICIPATE.

SIGNED:_____

DATE:

Appendix C

TITLE: EROTIC FILMS AND SEXUAL AROUSAL: PERSONALITY VARIABLES, ATTITUDES, BEHAVIORS AND EXPERIENCES.

EXPERIMENTER: M.K. LANE, PSYCHOLOGY DEPT., 4082 DERRING, x.5291

FACULTY SPONSOR: RICHARD WINETT, PH.D., PSYCHOLOGY DEPT.

OBJECTIVES: To assess the personality, attitudinal. behavioral, and experiential correlates of sexual arousal produced by viewing sexually explicit films.

DURATION: Approximately one hour consisting of a 15 minute small group briefing session followed by 30 to 45 minute individual experimental sessions.

LOCATION: Derring Hall (rooms to be announced.)
The experiment will be conducted in individual, private, sound-proofed and climate controlled labs equipped with comfortable reclining chairs and video monitors. The experimenter will be located in a room adjacent to the lab to operate the experimental equipment. Contact between the two rooms will be maintained via a two-way intercom.

GENERAL PROCEDURE:

You will watch a short, 15 minute videotape of explicit heterosexual activity (i.e., involving kissing; nudity; body caressing; oral-genital contact; and sexual intercourse) during which your level of sexual arousal will be measured.

MEASURE OF SEXUAL AROUSAL: MEN

A mercury-in-rubber penile strain gauge will be used to measure any changes in circumference of your penis while you are watching the film. The gauge consists of a rubber ring filled with mercury which you place on your penis. As your penis expands, the rubber ring lengthens. The device is extremely lightweight and unobtrusive when in place. The device is sterilized after each use. You will be instructed in placement of the strain gauge by a male experimenter. He will leave the room and you will undress from the waist down and place the strain gauge yourself.

MEASURE OF SEXUAL AROUSAL: WOMEN

A vaginal photoplethysmograph will be used to assess your sexual arousal periodically during the film. The plethysmograph is a small, tampon-sized and shaped device made from a sterile acrylic material. It contains a light sensor which detects changes in light in the vagina produced by changes in blood volume and blood flow in the vaginal walls. Like a tampon, it cannot be readily felt once it is inserted. You will not feel the device taking its readings. The plethysmograph is discarded after each use. You will be instructed in correct insertion of the device by a female experimenter. She will leave the room and you will undress from the waist down and insert the plethysmograph yourself.

PLEASE GO ON TO THE NEXT PAGE

PROCEDURE:

Once the device is in place, you will sit quietly for five minutes while continuous baseline readings are being taken. At the end of this time the experimenter will begin the film. Readins of your arousal level will be taken once each minute for ten seconds. You will not be aware of this activity. At the conclusion of the video you will again sit quietly for five minutes while we take continous readings. Finally, the experimenter will tell you to remove the device and to dress.

CONFIDENTIALITY:

Your participation in this study is completely confidential. If you agree to participate, after you have been contacted by phone to schedule the experimental session, all records of your name and phone number will be destroyed. You cannot be linked to either your responses on the questionnaire or to the data gathered during the arousal study. Since the arousal study is conducted in individual, private labs, no one can see or hear you.

DEBRIEFING:

A letter fully explaining the goals and purpose of this study will be available to all participants in early June 1987.

PLEASE GO ON TO THE NEXT PAGE

201 C

TITLE: EROTIC FILMS AND SEXUAL AROUSAL: PERSONALITY VARIABLE, ATTITUDES, BEHAVIORS AND EXPERIENCES.

EXPERIMENTER: M.K. LANE, PSYCHOLOGY DEPT., 4082 DERRING, x 5291

FACULTY SPONSOR: RICHARD WINETT, PH.D., PSYCHOLOGY DEPT.

OBJECTIVES: To assess the personality, attitudinal, behavioral, and experiential correlates of sexual arousal produced by viewing sexually explicit films.

DURATION: Approximately one hour consisting of a 15 minute small group briefing session followed by 30 to 45 minute individual experimental sessions.

LOCATION: Derring Hall (rooms to be announced.)
The experiment will be conducted in individual, private, sound-proofed and climate controlled labs equipped with comfortable reclining chairs and video monitors. The experimenter will be located in a room adjacent to the lab to operate the experimental equipment. Contact between the two rooms will be maintained via a two-way intercom.

GENERAL PROCEDURE:

You will watch a short, 15 minute videotape of explicit male homosexual activity (i.e., involving kissing; nudity; body caressing; oral-genital contact;) during which your level of sexual arousal will be measured.

MEASURE OF SEXUAL AROUSAL: MEN

A mercury-in-rubber penile strain gauge will be used to measure any changes in circumference of your penis while you are watching the film. The gauge consists of a rubber ring filled with mercury which you place on your penis. As your penis expands, the rubber ring lengthens. The device is extremely lightweight and unobtrusive when in place. The device is sterilized after each use. You will be instructed in placement of the strain gauge by a male experimenter. He will leave the room and you will undress from the waist down and place the strain gauge yourself.

MEASURE OF SEXUAL AROUSAL: WOMEN

A vaginal photoplethysmograph will be used to assess your level of sexual arousal periodically during the film. The plethysmograph is a small tampon-sized and shaped device made from a sterile acrylic material. It contains a light sensor which detects changes in light in the vagina produced by changes in blood volume and blood flow in the vaginal walls. Like a tampon, it cannot be readily felt once it is inserted. You will not feel the device taking its readings. The plethysmograph is discarded after each use. You will be instructed in correct insertion of the device by a female experimenter. She will leave the room and you will undress from the waist down and insert the device yourself.

PLEASE GO ON TO THE NEXT PAGE

PROCEDURE:

Once the device is in place, you will sit quietly for five minutes while continuous baseline readings are being taken. At the end of this time the experimenter will begin the film. Readins of your arousal level will be taken once each minute for ten seconds. You will not be aware of this activity. At the conclusion of the video you will again sit quietly for five minutes while we take continous readings. Finally, the experimenter will tell you to remove the device and to dress.

CONFIDENTIALITY:

Your participation in this study is completely confidential. If you agree to participate, after you have been contacted by phone to schedule the experimental session, all records of your name and phone number will be destroyed. You cannot be linked to either your responses on the questionnaire or to the data gathered during the arousal study. Since the arousal study is conducted in individual, private labs, no one can see or hear you.

DEBRIEFING:

A letter fully explaining the goals and purpose of this study will be available to all participants in early June 1987.

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TITLE: EROTIC FILMS AND SEXUAL AROUSAL: PERSONALITY VARIABLES, ATTITUDES, BEHAVIORS AND EXPERIENCES.

EXPERIMENTER: M.K. LANE, PSYCHOLOGY DEPT., 4082 DERRING, x.5291

FACULTY SPONSOR: RICHARD WINETT, PH.D., PSYCHOLOGY DEPT.

OBJECTIVES: To assess the personality, attitudinal, behavioral, and experiential correlates of sexual arousal produced by viewing sexually explicit films.

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LOCATION: Derring Hall (rooms to be announced.)
The experiment will be conducted in individual, private, sound-proofed and climate controlled labs equipped with comfortable reclining chairs and video monitors. The experimenter will be located in a room adjacent to the lab to operate the experimental equipment. Contact between the two rooms will be maintained via a two-way intercom.

GENERAL PROCEDURE:

You will watch a short, 15 minute videotape of explicit lesbian activity (i.e., involving kissing; nudity; body caressing; oral-genital contact;) during which your level of sexual arousal will be measured.

MEASURE OF SEXUAL AROUSAL: MEN

A mercury-in-rubber penile strain gauge will be used to measure any changes in circumference of your penis while you are watching the film. The gauge consists of a rubber ring filled with mercury which you place on your penis. As your penis expands, the rubber ring lengthens. The device is extremely lightweight and unobtrusive when in place. The device is sterilized after each use. You will be instructed in placement of the strain gauge by a male experimenter. He will leave the room and you will undress from the waist down and place the strain gauge yourself.

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LOCATION: Derring Hall (rooms to be announced.)
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GENERAL PROCEDURE:

You will watch a short, 15 minute videotape of explicit heterosexual activity (i.e., involving kissing; nudity; body caressing; oral-genital contact; and sexual intercourse) during which your level of sexual arousal will be measured.

MEASURE OF SEXUAL AROUSAL:

Five times during your viewing of the film you will be asked to self-rate your level of sexual arousal using a pen-and-paper measure. This is a 5-point scale ranging from VERY AROUSED to NOT AT ALL AROUSED.

PROCEDURE:

Initially you will sit quietly in the lab for five minutes. The experimenter will begin the film after this period. She/he will contact you via intercom to tell you when to rate your level of sexual arousal. When the film ends you will again sit quietly for five minutes. Then you will be asked for a final rating of your sexual arousal.

CONFIDENTIALITY:

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GENERAL PROCEDURE:

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MEASURE OF SEXUAL AROUSAL:

Five times during your viewing of the film you will be asked to self-rate your level of sexual arousal using a pen-and-paper measure. This is a 5-point scale ranging from VERY AROUSED to NOT AT ALL AROUSED.

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LOCATION: Derring Hall (rooms to be announced.)
The experiment will be conducted in individual, private, sound-proofed and climate controlled labs equipped with comfortable reclining chairs and video monitors. The experimenter will be located in a room adjacent to the lab to operate the experimental equipment. Contact between the two rooms will be maintained via a two-way intercom.

GENERAL PROCEDURE:

You will watch a short, 15 minute videotape of explicit lesbian activity (i.e., involving kissing; nudity; body caressing; oral-genital contact;) during which your level of sexual arousal will be measured.

MEASURE OF SEXUAL AROUSAL:

Five times during your viewing of the film, you will be asked to self-rate your level of sexual arousal using a pen-and-paper measure. This is a 5-point scale ranging from VERY AROUSED to NOT AT ALL AROUSED.

PROCEDURE:

Initially you will sit quietly in the lab for five minutes. The experimenter will begin the film after this period. She/he will contact you via intercom to tell you when to rate your level of sexual arousal. When the film ends you will again sit quietly for five minutes. Then you will be asked for a final rating of yuour sexual arousal.

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Appendix D

1 ☐ active
2 ☐ adventurous
3 ☐ affectionate
4 ☐ afraid
5 ☐ agitated
6 ☐ agreeable
7 ☐ aggressive
8 ☐ alive
9 ☐ alone
10 ☐ amiable
11 ☐ amused
12 ☐ angry
13 ☐ annoyed
14 ☐ awful
15 ☐ bashful
16 ☐ bitter
17 ☐ blue
18 ☐ bored
19 ☐ calm
20 ☐ cautious
21 ☐ cheerful
22 ☐ clean
23 ☐ complaining
24 ☐ contented
25 ☐ contrary
26 ☐ cool
27 ☐ cooperative
28 ☐ critical
29 ☐ cross
30 ☐ cruel
31 ☐ daring
32 ☐ desperate
33 ☐ destroyed
34 ☐ devoted
35 ☐ disagreeable
36 ☐ discontented
37 ☐ discouraged
38 ☐ disgusted
39 ☐ displeased
40 ☐ energetic
41 ☐ enraged
42 ☐ enthusiastic
43 ☐ fearful
44 ☐ fine
45 ☐ fit
46 ☐ forlorn
47 ☐ frank
48 ☐ free
49 ☐ friendly
50 ☐ frightened
51 ☐ furious
52 ☐ gay
53 ☐ gentle
54 ☐ glad
55 ☐ gloomy
56 ☐ good
57 ☐ good-natured
58 ☐ grim
59 ☐ happy
60 ☐ healthy
61 ☐ hopeless
62 ☐ hostile
63 ☐ impatient
64 ☐ incensed
65 ☐ indignant
66 ☐ inspired
67 ☐ interested
68 ☐ irritated
69 ☐ jealous
70 ☐ joyful
71 ☐ kindly
72 ☐ lonely
73 ☐ lost
74 ☐ loving
75 ☐ low
76 ☐ lucky
77 ☐ mad
78 ☐ mean
79 ☐ meek
80 ☐ merry
81 ☐ mild
82 ☐ miserable
83 ☐ nervous
84 ☐ obliging
85 ☐ offended
86 ☐ outraged
87 ☐ panicky
88 ☐ patient
89 ☐ peaceful
90 ☐ pleased
91 ☐ pleasant
92 ☐ polite
93 ☐ powerful
94 ☐ quiet
95 ☐ reckless
96 ☐ rejected
97 ☐ rough
98 ☐ sad
99 ☐ safe
100 ☐ satisfied
101 ☐ secure
102 ☐ shaky
103 ☐ shy
104 ☐ soothed
105 ☐ steady
106 ☐ stubborn
107 ☐ stormy
108 ☐ strong
109 ☐ suffering
110 ☐ sullen
111 ☐ sunk
112 ☐ sympathetic
113 ☐ tame
114 ☐ tender
115 ☐ tense
116 ☐ terrible
117 ☐ terrified
118 ☐ thoughtful
119 ☐ timid
120 ☐ tormented
121 ☐ understanding
122 ☐ unhappy
123 ☐ unsociable
124 ☐ upset
125 ☐ vexed
126 ☐ warm
127 ☐ whole
128 ☐ wild
129 ☐ willful
130 ☐ wilted
131 ☐ worrying
132 ☐ young

Appendix E

To: All Participants in Psychology Experiment # 101-87
From: M.K. Lane, Principal Investigator, Psych. Dept., VPI & SU

Dear Participant,

First let me thank you again for participating in either the "Sexuality: Personality Variables, Attitudes, Behaviors, and Experiences" or "Multiple Attitudes" studies which I conducted during fall quarter of this year. The purpose of this letter is to further explain the premise of my study.

Those of you who participated in the "Multiple Attitudes" study served as a general control group for my study. I wanted to determine if students who volunteer for sex research differ from those who volunteer for more innocuous research in terms of demographic variables. Preliminary data indicates that there is no difference on the demographics. The rest of the data has yet to be analysed.

As you may recall, after completing the questionnaire for the "Sexuality: Personality..." study, you were asked if you wished to volunteer for a further study, "Erotic Films and Sexual Arousal: Personality Variables, Attitudes, Behaviors, and Experiences." This study involved your viewing a sexually explicit film while having your level of seual arousal measured.

In actuality, I never intended to conduct this final study. Those of you who volunteered and reported for the scheduled sessions were told that you were part of the control group. You then viewed a short, non-sexual film. This deception on my part was necessary for a few reasons which will be explained later in this letter. My basic interest in this study was to examine the attitudes, sexual behaviors, personality variables, and sexual experiences which are correlated with participation/non-participation in this type of research.

You probably learned about the problems associated with "Volunteer Bias" in behavioral research. As you know, most psychological research is conducted with college students as subjects which limits the generalizability of our findings to the rest of the population. A further complicating factor is that research psychologists usually rely on <u>volunteers</u> for their studies, people who select themselves for the research based on their interest in the topic, financial or credit renumeration, time constraints, etc. Thus, we rarely have a random sample of the population as a whole. This again leads to problems of generalizing our results.

I am interested in this problem of volunteer bias as it affects psychological research as a whole, but more particularly as it influences human sexuality research. Thus, in this study I was interested in the characteristics, attitudes and behaviors of those who would volunteer for the "Erotic Films..." study as compared to those who would not. Previous research has shown that volunteers for this type of research tend to be somewhat more sexually experienced, hold more liberal attitudes regarding sexuality, and have had greater exposure to commercialized erotica. Though my data has not yet been analyzed, I expect to replicate these findings. Additionally, I was interested in the effect that varying the stimuli content (whether potential volunteers were told that they would be viewing films with a heterosexual, male homosexual, or lesbian theme) would have on volunteer characteristics, etc. Again, more liberal attitudes and greater and more diverse sexual experience might be expected from those who volunteered for the two homosexual conditions. These hypotheses have not yet been confirmed.

Regarding the need for deception. Previous research has also shown that a portion of those people who state the desire to participate in sexual arousal research will not, in fact (for a variety of reasons), report for the actual study. These "pseudo-volunteers" have been shown to be characteristically more similar to those who initially decline to participate than to those who do participate in the study. Thus, I needed to be able to distinguish the pseudo-volunteers from the actual volunteers. Running a sexual arousal study is time-consuming and expensive, an undertaking which I was not prepared to carry out. Therefore I set up the fake "Erotic Films..." study so that volunteers would have to report for something. I had you include the last four digits of your social security number (which are not traceable) on all of the Opscans which you filled out so that the data from the "Sexuality: Personality..." study could be matched with the data from the "Erotic Films..." study. This allowed me to analyze the original data into three groups, volunteers, pseudo-volunteers, and non-volunteers.

It is my sincere hope that the deception involved in this study did not cause you any harm. If you have any concerns about this issue or any other aspect of this study, please feel free to contact me at the Psychology Department or at extension 5291. I hope to have my data analyzed by Winter '87. If you are interested in learning about the results of this study, please contact me at the Psychology Dept. at that time. I ask your cooperation in protecting the aims of my study by not discussing what you have learned about this study in this letter with anyone who has not previously participated in the study. It is <u>essential</u> that the fiction that an erotic films study will be conducted be believed by future

participants. I thank you in advance for your cooperation in this matter.

Again, thanks for your participation and for understanding why the use of deception was necessary at this time.

Sincerely,

M.K. Lane, Psychology Dept.

APPENDIX F

A comparison of undergraduate volunteers for non sex-related survey research with volunteers for sex survey research at Virginia Tech.

As shown in the literature review for this study (see Appendix G), volunteers for sex research differ from non-volunteers on a number of dimensions. Primarily these differences occur on sex-related variables. It is thus logical to conclude that volunteers for non-sex related research would differ from volunteers for sex research, at least on variables assessing aspects of sexuality.

To determine the veracity of this assumption, undergraduates at Virginia Polytechnic Institute and State University were given the opportunity to volunteer for one of two studies, but not both. One study, "Multiple Attitudes Questionnaire" (MAQ) was described as containing "questions of an intimate nature (regarding family finances, religion, relationships, sexuality and personal attitudes on these topics" (MAQ Consent form, Appendix B). The second study "Sexuality: Personality Variables, Attitudes, Behaviors, and Experiences" (S&P) involved "potentially embarassing questions of a sexually explicit nature." (S&P Consent form, appendix

B). Students were able to earn an equal amount of experiment participation credits for each study. Both studies were described as taking the same amount of time. The S&P questionnaire completely replicated the MAQ. Additionally, it contained approximately 50 questions regarding sexual experiences, behaviors and fantasies. Of the 221 volunteers for the MAQ study, 146 were women, 75 men. 154 women and 131 men comprised the S&P sample. Over 90% of the subjects in the two samples were 20 years old or less. For complete descriptive statistics for each group refer to Tables 6 and 7.

Insert Table 6 about here.

Insert Table 7 about here.

The 16 variables common to both studies were subjected to a MANOVA using experiment type as the independent variable. Table 8 shows that multivariate tests were significant at the .05 level or less. Results of univariate tests yielded significant results at a probability level of .05 or less for five of these variables.

Insert Table 8 about here.

Volunteers for the MAQ were more likely to be women. These individuals had shorter sexual relationships, fewer sexual partners, and held more conservative attitudes toward sexuality than did volunteers for the sex research. Finally, volunteers for the sex study scored higher on sensation seeking.

Except for the variable of subject's gender, the two groups did not differ on any of the demogrpahic variables. They did differ on three out of the five sex-related variables assessed in both groups. In all three cases, the volunteers for the MAQ exhibited less sexual experience and greater sexual conservativism than did the sex research volunteers. Thus, we may conclude that those students who choose to volunteer for sex research differ from their peers who choose sex research primarily in areas related to sexuality.

Appendix G

LITERATURE REVIEW

VOLUNTEER BIAS

A great deal of psychological research has been conducted on volunteer subjects. These subjects are often university undergraduates who participate in experiments to receive extra credit toward their grades. For other volunteers, the incentive to participate is financial. Rarely do we see either random or stratified random sampling of the population of interest. This reliance on volunteers has forced psychologists to examine the effects of using volunteer subjects on the generalizability of their results.

If someone is unwilling to volunteer for a study it is usually impossible to collect data from them to ascertain exactly how and where they differ from volunteers. Some psychologists have attempted to circumvent this problem by administering batteries of questionnaires to an entire class as part of their fulfillment of the class requirements. Later on during the course of the class, students are asked to volunteer for research. At this point comparisons can be made

between volunteers and non-volunteers on the basis of the previously collected data. (Johnson & Delamater, 1976; Kohn, et al., 1982; Martin & Marcuse, 1958; Scheier, 1959.) Although the ethics of collecting research data on students prior to their agreeing to volunteer for psychological research (no information regarding initial consent procedures is given in any of the above studies) is questionable at best, this is an effective technique for amassing information on non-volunteers.

Non-volunteers have been found to be more anxious than volunteers in at least one study. (Scheier, 1959.) However, Scheier cites a study by Himelstein in which the difference in anxiety levels between volunteers and non-volunteers is not significant. Scheier qualifies these findings by stating that Hinmelstein's study was "an experiment whose description made it sound easier than ours." (Scheier, 1959, p. 239.) Though Martin and Marcuse did not in general find differences in anxiety levels between volunteers and non-volunteers, they showed that volunteers for personality research exhibited higher levels of anxiety, as measured on the Taylor Manifest Anxiety Scale, than did non-volunteers. (Martin & Marcuse, 1958.) Clearly the relationship between anxiety levels and volunteering for psychological research is uncertain at best.

Martin and Marcuse (1958) also examined several other personality variables such as ethnocentrism, self-sufficiency, introversion-extroversion, dominance-submission, sociability and intelligence. The only variable which differentiated overall volunteers from non-volunteers was intelligence, with volunteers being significantly more intelligent. Female volunteers scored significantly higher on sociability than did female non-volunteers. This study asked subjects to volunteer for different types of research including personality, hypnosis and sex studies. No significant differences were found between volunteers and non-volunteers for the sex research.

One personality variable which has been found to distinguish between volunteers and non-volunteers is sensation seeking. People expressing an intention to participate in psychological research were higher than non-volunteers on total sensation seeking; thrill and adventure seeking; experience seeking; internal sensation seeking; and arousal seeking tendency as measured by Form IV of the Zuckerman Sensation Seeking Scale (SSS). (Kohn, et al., 1982.) Kohn, et al. cite a 1976 study by Griffith and Walker which found that the disinhibition subfactor of the SSS was able to predict male volunteers for "exciting" research. Both the disinhibition and experience seeking subscales enable

researchers to identify female volunteers for both "ordinary" and "exciting" research.

Some general demographic variables have been identified which predict volunteering/survey responding. People who are older (generally over 50 years of age) and the less educated are less likely to volunteer for research. (Johnson & Delamater, 1976; McDaniel, et al., 1986; Rosenthal & Rosnow, 1975.) Additionally, those who do less recreational reading are also less likely to participate. (Johnson & Delamater, 1976.) Interestingly, McDaniel et al. (1986) found that people in the middle income bracket of $20,000 to $40,000 were less likely to respond.

Thus, it appears that there are indeed some significant differences between research volunteers and non-volunteers. To date, these differences tend to be demographic in nature, rather than general personality variables. However it may be that particular types of research attract/repel subjects with varying combinations of personality characteristics and experiences. It is then the responsibility of the experimenter to ferret out the relevant variables which may distinguish participants and non-participants. (McDaniel, et al., 1986.)

Since volunteer subjects are self-selected, rather than randomly selected, there may be myriad reasons why they are interested in participating in any individual experiment. It is not unreasonable to assume that a person is attracted to a study based on her/his own combination of interests and experiences. We may further posit that any group of individuals volunteering for a particualr study would share some of these interests and experiences, to an extent that they would be different in these (and perhaps other) areas from those not interested in participating in that particular research.

It is particularly the area of differentiating types and levels of experience which plagues sex research based on volunteer subjects. The early pioneering work of Alfred Kinsey and his colleagues has been criticised for problems stemming from volunteer bias. (Kinsey, et al., 1948; 1953.) In the words of Maslow and Sakoda, "the bias introduced into a sex study by the use of volunteers is, in general, in the direction of inflating the percentage reporting unconventional or disapproved sexual behavior..." (Maslow & Sakoda, 1952, p. 261.) Difficulties arise when one attempts to generalize results obtained from a volunteer sample to the population at large. In essence then, our knowledge of "human sexuality", is, to be more accurate, knowledge of the "sexuality of those humans who are willing to participate in various forms of sex

research." Previous research has shown that these volunteers differ from non-volunteers in many ways.

Volunteers for sex research differ from non-volunteers on a number of affect-related dimensions. Volunteers have less sex guilt (Farkas, et al., 1978). are less sexually fearful (Farkas, et al., 1978; Wolchik, et al., 1983), are less sexually anxious (Wolchik, et al., 1985), and show less overall guilt (Farkas, et al., 1978.) Volunteers have not been shown to be any more neurotic than non-volunteers. (Maslow & Sakoda, 1952) They show higher levels of self-esteem (Maslow & Sakoda, 1952), exhibit more sexual curiosity (Wolchik, et al., 1985), and a greater lack of sexual inhibitions (Morokoff, 1986).

Several demographic and attitudinal variables also differentiate between participants/non-participants in sex studies. More men than women will volunteer for sex research. (Morokoff, 1986; Wolchik, et al., 1985). These men tend to possess a higher degree of sexual knowledge and are less devout than are non-volunteers. (Bauman, 1973). Additionally, these men tend to endorse more sex-role stereotyped behaviors both for themselves and for women. (Diamant, 1970; Morokoff, 1986; Wolchik, et al., 1985). Women who volunteer for sex research, on the other hand, have less of a tendency to endorse the stereotypical sex-roles.

(Morokoff, 1986). On the whole, participants in sex experiments tend to be younger than non-participants. (Kaats & Davis, 1971). This group also holds more liberal attitudes toward sex (Kaats & Davis, 1971) and is more permissive (Diamant, 1970; Kaats & Davis, 1971).

Volunteers have fewer objections to viewing sexually explicit films. (Wolchik, et al., 1983). This last point must be qualified, however, as women are less likely to volunteer for studies using "hard-core" pornography as stimuli. (Kenrick, et al., 1980). Overall, volunteers have had an increased exposure to commercialized erotica (Wolchik, et al., 1983; Wolchik, et al., 1985) though the Farkas, et al. study did not find this to be the case. Interestingly, it was found that both sexes are more likely to volunteer for sex studies using erotic films as stimulus materials if the experimenter is a member of the opposite sex. (Kenrick, et al., 1980). Not surprisingly, volunteers place a higher value on sex research than do non-volunteers. (Wolchik, et al., 1985).

It is in the area of sex-related activities and experiences where we find the most pronounced differences between volunteers and non-volunteers. Volunteers have participated in an increased range of heterosexual activities, particularly non-coital behaviors (Farkas, et al., 1978;

Kaats & Davis, 1971; Morokoff, 1986; Wolchik, et al., 1983) and more "unusual" sexual activities such as anal intercourse (Morokoff, 1986). They masturbate more frequently (Morokoff, 1986; Wolchik, et al., 1983), have more frequent intercourse (Diamant, 1970; Morokoff, 1986) and have more frequent orgasms (Morokoff, 1986). On a more negative note, male volunteers have an increased incidence of erectile difficulties (Farkas, et aal., 1978; Wolchik, et al., 1985) while female volunteers have experienced a greater degree of sexual trauma (Wolchik, et al., 1983; Wolchik, et al., 1985). Findings regarding incidence of dating are somewhat contradictory. The Kaats and Davis study (1971) found that overall, volunteers dated more frequently. The women in Bauman's 1973 sample dated less frequently than the non-volunteers but also showed a higher proportion of non-exclusive dating. One sex-related area in which volunteers and non-volunteers do not appear to differ is that of rate of virginity (Kaats & Davis, 1971).

Clearly, volunteers for sex-related research differ from non-volunteers in many areas. While we have a great deal of information regarding the volunteer's characteristics, the implications of those characteristics and differences are not always obvious. We know that volunteers differ in terms of numbers and types of experiences, but do they differ in terms of their subjective and/or physiological experiences of these activities? This we do not know, thus increasing the

difficulty of interpreting and generalizing our results. For now the most appropriate approach is to interpret all results conservatively and cautiously, keeping in mind that we know very little about the sexuality of the population as a whole.

THE EFFECT OF ANTI-HOMOSEXUAL ATTITUDES AND RESPONSES TO HOMOEROTIC STIMULI ON VOLUNTEERING FOR SEX RESEARCH

Numerous studies have examined various correlates of anti-homosexual (homosexist) attitudes. (Dunbar, Brown, & Amoroso, 1973; Dunbar, Brown, & Vuorinen, 1973; Hansen, 1982a; 1982b; Larsen, et al., 1983; Mosher & O'Grady, 1979; Turnbull & Brown, 1977; Young & Whertvine, 1982). People who hold anti-homosexual attitudes tend toward religious orthodoxy (Larsen, et al., 1983) and characterize themselves as more religiously devout than do those with more positive attitudes toward gays (Turnbull & Brown, 1977). Homosexism has been strongly associated with anti-black attitudes (Larsen, et al., 1983). Homosexist individuals hold more sexually conservative attitudes (Dunbar, Brown, & Vuorinen, 1973). These individuals are also more disapproving of a wide variety of heterosexual activities (Dunbar, Brown, & Vuorinen, 1973). Those with more positive attitudes toward gays express more positive attiudes toward, and have increased levels of

participation in, heterosexual oral sex practices and intercourse (Young & Whertvine, 1982).

On the whole, men are more homosexist than women (Hansen, 1982a; Nevid, 1983); Turnbull & Brown, 1977). Men and women with anti-homosexual attitudes are more likely to endorse traditional sex-roles (Hansen, 1982a). In conjunction with this endorsement, they hold more restrictive views of sex-appropriate activities (Dunbar, Brown, & Amoroso, 1973). They show an increased willingness to rate sexually oriented materials as negative and as pornography (Turnbull & Brown, 1977). On a more personal level, they express higher levels of sex-guilt (Dunbar, Brown, & Amoroso, 1973; Mosher & O'Grady, 1979).Those men whose anti-gay attitude is combined with a personal fear of homosexuality have more negative attitudes toward masturbation and have a lower frequency of masturbation and percentage of orgasms durning masturbation (Mosher & O'Grady, 1979.)

Thus, the homosexist individual is one who is more rigid in her/his sex-role stereotyping; has a more negative attitude toward sexuality and the diversity of sexual activities; has increased negative and guilty feelings toward her/his own sexuality; and is less positively disposed toward erotic materials. It therefore seems reasonable to assume that homosexist persons may be less likely to volunteer for all

forms of sex research, but particularly for that research which requires the viewing of erotic materials.

Reactions to explicitly homosexual erotic materials vary widely by sex, though, in general, both women and men report less sexual arousal (measured either subjectively or physiologically) when viewing homosexual materials as compared to heterosexual materials (Hatfield, et al., 1978; Mosher & O'Grady, 1979; Steinman, et al., 1981; Turnbull & Brown, 1977). (Note that for men this is true only for male homosexual stimuli. Steinman et al.'s study (1981) found that exposure to lesbian stimuli resulted in the greatest levels of physiological arousal for men). When measured physiologically, men show the lowest arousal levels to male homosexual films, though that arousal is higher than that evoked by neutral stimuli (Steinman, et al., 1981). Women show slightly more arousal to lesbian films than to gay male films and show more arousal to the gay male films than do their male counterparts (Steinman, et al., 1981). Woman also report more positive than negative reactions after viewing gay male (and lesbian) stimuli, while the gay male clips provoke more negative reactions in men (Hatfield, et al., 1978).

Those individuals holding anti-homosexual attitudes rate depictions of homosexual oral sex, performed by members of their own sex, as most negative and most pornographic

(Hatfield, et al., 1978). Exposure to male homosexual materials produces increased feelings of anger, disgust and shame in homosexist men who perceive homosexuality as a personal threat (Mosher & O'Grady, 1979). These same subjects are likely to report post-viewing feelings of depression (Mosher & O'Grady,1979).

When we examine the pattern of responses to homosexual (male and female) erotica, the following conclusions may be drawn. Women will be slightly, though not significantly, less likely to volunteer for studies involving gay male materials than for lesbian oriented research. Heterosexual materials will elicit the most female volunteers. Men will probably show no differences in rate of volunteering for studies requiring the viewing of either heteroseual or lesbian films, though they will volunteer at reduced rates for studies utilizing male homosexual films. Finally, homosexist individuals will be the least likely to volunteer for studies involving gay stimulus materials.

EFFECT OF INTRUSIVENESS OF MEASUREMENT ON RATE OF VOLUNTEERING

Partially in response to charges of subjectivity in the survey research of sexual behavior, sexologists turned to the

psychophysiological study of sex, hoping that utilization of more objective measaures of sexual arousal would increase the generalizability of their results. Unfortunately, psychophysiological studies carry with them the same problem of selection bias. Additionally, it has been shown that volunteers for physiological studies of sexuality exhibit even more extreme levels of selection bias. Farkas and his colleagues found that volunteers for an experimental study of male sexuality involving genital measurement of arousal, which required partial nudity, differed from volunteers for a survey study of male sexuality in the following ways: volunteers were less guilty; less sexually fearful; more sexually experienced; older; and reported an increased incidence of erectile difficulties (Farkas, et al., 1978).

Wolchik, Braver and Jensen (1985) examined the effects of varying levels of intrusiveness of measurement and levels of dress/undress on characteristics of both male and female volunteers. They had significantly fewer volunteers of both sexes, for those conditions necessitating partial nudity. Female volunteers for the unclothed conditions had a greater number of sex partners and were more likely to engage in sex on the first date than were volunteers for the clothed conditions. The coresponding male volunteers showed increased exposure to pornographic literature and had an increased likelihood of first-date sex, as did the women.

As in the Farkas, et al. study (1978), Wolchik's group (1985) found several significant differences between volunteers and non-volunteers for a laboratory study of human sexuality. Volunteers were more sexually liberal, more sexually experienced, showed less sexual anxiety, had an increased exposure, and decreased objections, to commercial erotica. This group also replicated the Farkas, et al. findings of increased erectile difficulties for male volunteers while women volunteers reported increased sexual trauma (i.e., child sexual abuse, rape and attempted rape).

We can see from the results of these studies that though the physiological study of sexuality decreases the problems associated with questionnaire and survey-type research, it introduces additional, and more extreme, issues of subject bias. Studies of sexuality requiring partial nudity and genital measurement of sexual arousal attract subjects who differ in numerous areas from subjects for less intrusive types of sexual research. The assumption follows then that these volunteer subjects differ to an even greater degree from people who would not volunteer for any type of sexual research. Problems still facing sexologists are whether or not the "average" member of the population would be likely to volunteer for any type of sex research and, if not, how do we, or can we, interpret our findings based on such a select group of people to the population as a whole? It appears that the

answer to the first question is negative. We still do not have a satisfactory solution to the problem of generalizability.

THE ISSUE OF THE PSEUDO-VOLUNTEER

All psychological research which relies on volunteer subjects contains a problem of some volunteers not reporting for a study in which they have agreed to participate. The reasons for non-participation may be irrelevent to the topic of the research, such as an unexpected scheduling conflict or illness. Reasons for non-participation related to the research topic are of greater concern to the experimenter since they contribute to the already present problem of selection bias. After agreeing to participate in a study, a subject may decide that s/he objects to the topic or is put off by the methods to be used in the study. The question involved here is, assuming there are differences between volunteers and non-volunteers (as has been shown to be the case in sex research), are there any differences between those who intend to volunteer but do not (the pseudo-volunteers) and either the volunteers and/or the non-volunteers?

Previous research indicates that pseudo-volunteers do indeed differ from volunteers in a number of areas, more so than they differ from non-volunteers. Eugene Levitt and his colleagues (1962) found that pseudo-volunteers differed from volunteers on eight personality dimensions while they differed from non-volunteers on only two variables. This led them to conclude that pseudo-volunteers should be classed with non-volunteers in all analyses of data. This conclusion seemingly presents difficulties for those studies in which the pseudo-volunteers are classed with the volunteers, such as the Wolchik, et al., 1985 study of volunteer bias in sex research.

Wolchik's team presented the study to subjects as though it was being run in two phases. The first, a questionnaire study of sexuality, solicited volunteers for an additional study which would involve viewing sexually explicit films and potentially having one's sexual arousal physiologically measured. In fact, Wolchik never ran this second study, nor did she make any attempt to ascertain which potential volunteers would actually have reported for the study. thus, in the Wolchik, et al. study, the potential pseudo-volunteers were classed with the volunteers based on their stated intention to participate.

Patricia Morokoff was critical of this classification of the pseudo-volunteers by Wolchik's group. She states "...results presented by Wolchik, et al. may have underestimated the extent of volunteer bias." Presumably, classing the pseudo-volunteers with the volunteers would have the effect of "smoothing out" differences which would be more apparent had the pseudo-volunteers been grouped with the non-volunteers. In her own study of volunteer bias in sex research, Morokoff included the data from the pseudo-volunteers with the non-volunteer data on the basis of the Levitt, et al. study (1962). She did not run separate analyses, as did Levitt, switching the placement of the pseudo-volunteer data. Given that the Levitt, et al. study was based on a total of 76 subjects (of which 38 were volunteers, 16 were pseudo-volunteers and 22 non-volunteers), if Morokoff had run the additional analyses on her 92 subjects, confidence in the proper classification of the pseudo-volunteers would be increased.

The rate of volunteering for these studies differ greatly. Morokoff (1986) reports a volunteer rate of 67% (which did not include the pseudo-volunteers). Wolchik, et al. (1985) reported volunteer rates ranging from 13% (for women in the most intrusive condition) to a high of 67% (males in the clothed condition). Her mean volunteer rate for women was 31%, for men, 50%. Morokoff explains the obtained

difference in volunteer rates between the studies as due to Wolchik's providing her subjects with a written description of the procedures and equipment used. Morokoff's subjects received a tour of the lab used in the study and a full in-person explanation of all procedures, including those protecting confidentiality, privacy and equipment sterilization methods (Morokoff, 1986). In the Kohn, et al. study (1982), students were asked to indicate their willingness to participate in future (unspecified) research. 35% of the students responded affirmatively. Ultimately 84% of these students reported for a study when re-contacted. Levitt, et al.'s research (1962) resulted in a 50% volunteer rate and a 21% pseudo-volunteer rate, which yields a total of approximately 71% intended volunteers, comparable to Morokoff's rate and much higher than that of either Kohn, et al. or Wolchik, et al.

Results of these studies lead us to several conclusions. Volunteer rate will differ depending on type of study, amount and level of information regarding the stuudy given to subjects, incentives used for participation, and presence or absence of withdrawal penalties (Trice & Bailey, 1987). (This last point is especially relevant to research on sensitive topics in which it is customary to give students all opportunities to withdraw to avoid adverse effects due to

exposure to such topics.) It appears appropriate at this time to classify pseudo-volunteers with non-volunteers in any analysis of volunteer bias data. (It would perhaps be useful to carry out additional analyses to clarify this issue in any future research on volunteer bias.) It seems a bit premature to consider the question of the pseudo-volunteer resolved.

SENSATION SEEKING

Sensation Seeking has been defined by Zuckerman as "...the need for varied novel and complex sensation and experiences and the willingness to take physical and social risks for the sake of such experience." (Zuckerman, 1979, p.10.) Zuckerman developed the Sensation Seeking Scale (SSS) to differentiate individuals on the basis of their desire or need to experience highly stimulating events.

The scale consists of an overall total sensation seeking factor plus four subfactors which include Thrill and Adventure Seeking (TAS); Experience Seeking (ES); Disinhibition (DIS); and Boredom Susceptibility (BS). The TAS subfactor contains items assessing one's willingness to participate in physically dangerous or risky activities such as mountain climbing. Experience Seeking measures one's wish to "seek new

experiences through the mind and senses by living in a non-conforming lifestyle with unconventional friends, and through travel." (Zuckerman, 1986 [?], p.1.) The items in the DIS factor cover areas of one's life which include sexual activity, party going and alcohol consumption. Finally, BS items "indicate an aversion for repetitive experience of any kind, routine work, or even dull or predictable people...[or] a restless reaction when things go unchanged." (Zuckerman, 1986 [?], p .1.)

Previous research has shown significant gender differences in levels of sensation seeking as measured on the SSS. When examining people in their 20's, men were found to score significantly higher on the SSS total score as well as on all factors except that of ES. (Zuckerman, 1979.) In 1976, Waters and Pincus found that "high SS scorers are not related to a masculine stereotype but to a refusal to characterize themselves in either feminine or masculine terms." (Zuckerman, 1979, p.177.) However, other studies have shown sensation seeking to be "more related to a masculine than a feminine sex role and negatively related to androgyny." (Zuckerman, 1979, p.182.) The results of these studies appear to contradict each other, making it dificult to predict how Sensation Seeking will correlate with scores on the Spence-Helmreich Personal Attributes Questionnaire used in the current study.

Zuckerman examined the relationship between sensation seeking and experiemny participation. He found the highest positive correlations when considering participation in "unusual" studies such as those involving hypnosis and drug administration. (Zuckerman, 1979.) Watson examined 41 comparisions between volunteers for "unusual" types of experiments (and people engaging in "risky" occupations and/or hobbies) and control groups. In addition to replicating Zuckerman's above results, he found the experimental groups to be more homogeneous in their SSS scores than were the control group. (Watson, 1985.) This seems to indicate that those having a particular interest in one type of activities included among the SSS subfactors also have a more general tendency toward overall Sensation Seeking needs.

Numerous studies were conducted assessing the relationship between Sensation Seeking and various aspects of human sexuality. Results indicate positive correlations between SSS scores and heterosexual experience, in terms of both types of activities engaged in and number of sexual partners. (Zuckerman, 1979.) However, no such significant correlations were found between Sensation Seeking and (male) homosexual experience (Zuckerman, 1979; 1983) nor was SS corelated to masturbation. (Zuckerman, 1979.) Additionally,

positive correlations were found between SSS total and subfactor scores (except BS) and permissive attitudes toward sexuality. (Zuckerman, 1979.) Finally, the wish to see erotic films produced a low but significant correlation with the ES and DIS subfactors. (Zuckerman, 1979.) These results lead us to predict that volunteers for the erotic films and arousal study will show higher SSS scores than will the non-volunteers. These people (volunteers who are high on SSS) should also hold more liberal attitudes toward sexuality and have had a greater total number of sexual partners.

APPENDIX H

Regarding the statistical analyses used in this study.

I consulted extensively with Dr. Robert Frary of the Learning Resources Center regarding the appropriate analyses to be used for this study. During the design phase, he recommended that the data be analysed using a step-wise discriminant function analysis. This analysis enables one to predict group membership based on responses on the dependent variables. Upon inspection of the frequency data for volunteers/pseudo-volunteers/non-volunteers at each level of the film/measurement factorial, Dr. Frary determined that due to the low cell frequency in some of the levels, it would no longer be possible or appropriate to analyze the data using the discriminant function analysis. Furthermore, he concluded that analyses could not be run which would attempt to differentiate between subjects on the basis of stated sexual preference or homosexual behaviors due to the small number of persons reporting such behavior.

At this point he suggested that a series of ANOVA's be conducted, ranging from two-way ANOVA's using volunteer status and either film type or measurement type as factors, to a 4-way ANOVA using all three of the above variables as well as sex. In fact, Dr. Frary dumped my data into his file and ran

treatment conditions, we were not completely certain how best to handle this problem. It's not that the analyses done for the thesis are wrong, it's a judgement call as to how to statistically allocate portions of the variance "pie".

I am very grateful to both Drs. Cross and Frary. Dr. Frary especially went above and beyond the call of duty with the assistance he gave me. In addition to the time and effort he put in, he was also very patient and did his best to explain what he though was occuring in the data. I am sure this was frustrating for him due to the wide discrepancy in our understanding of statistics.

a series of analyses himself on SAS. Ultimately, I re-did some of these analyses, as well as ran some others using different combinations of variables. Because of a concern regarding inter-correlation among the dependent variables, I asked Dr. Frary why he suggested using ANOVA's rather than MANOVA's. His justification was that the analysis we were conducting at this point was descriptive, rather than inferential, in nature.

I also discussed this concern with Dr. Lawrence Cross of the Education Department, from whom I am taking Advanced Research Design and Methodology (EDUC 6310). It was his opinion that the MANOVA's should be run, given that a number of the variables did prove to be intercorrelated when both Dr. Frary and I ran Pearson correlations on several variables. He further stated that I could only legitimately report as significant, those variables for which the MANOVA had been significant. Fortunately, this requirement only eliminated two 4-way interactions which I was having a great deal of trouble interpreting!

Dr. Cross further suggested that for publication purposes, he, Dr. Frary, myself and perhaps the head of the statistics department consult on any additional/different analyses which might be run. Given the extremely unequal, disproportionate cell frequencies, which were due to the

APPENDIX I

Volunteer Status by Experimental Condition and Sex.

CONDITION	VOLUNTEERS	PSEUDO-VOLS	NON-VOLS	TOTAL
Hetero./Physio.				
Female	3 (10.7%)	1 (3.6%)	24 (85.7%)	28 (18.2%)
Male	8 (36.4%)	3 (13.6%)	11 (50.0%	22 (16.8%)
Hetero./Subj.				
Female	3 (15.0%)	3 (15.0%)	14 (70.0%)	20 (13.0%)
Male	11 (44.0%)	5 (20.0%)	9 (36.0%)	25 (19.1%)
Gay Male/Physio.				
Female	1 (3.0%)	5 (15.2%)	26 (78.8%)	33 (21.4%)
Male	2 (8.3%)	3 (12.5%)	19 (79.2%)	24 (18.3%)
Gay Male/Subj.				
Female	3 (14.3%)	2 (9.5%)	16 (76.2%)	21 (13.6%)
Male	6 (31.6%)	3 (15.8%)	10 (52.6%)	19 (14.5%)
Lesbian/Physio.				
Female	3 (12.5%)	3 (12.5%)	18 (75.0%)	24 (15.6%)
Male	5 (21.7%)	3 (13.0%)	15 (65.2%)	23 (17.6%)
Lesbian/Subj.				
Female	9 (33.3%)	2 (7.4%)	16 (59.3%)	27 (17.5%)
Male	5 (27.8%)	4 (22.2%)	9 (50.0%)	18 (13.7%)
Female	22 (14.3%)	17 (11.0%)	114 (74.0%)	154 (100%)
Male	37 (28.2%)	21 (16.0%)	73 (55.7%)	131 (100%)
Total	59 (20.6%)	38 (13.3%)	187 (65.4%)	285

APPENDIX J

The Institutional Review Board and the issues of deception and sexuality.

Initially, it was believed by the experimenter and the Virginia Tech Psychology Department's representative to the University's Institutional Review Board that this deception would pose no problems for the committee. However, this turned out to not be the case resulting in the study being delayed for three months while the committee deliberated. Some members of the committee felt that the deception involved was of great magnitude since we were not interested in the subject's erotic arousal but were interested in (in the words of one committee member) "what kind of wierdos volunteer for these kinds of studies". The concern was that when volunteeers discovered the true purpose of the study (through the de-briefing letter) they would be harmed by the knowledge that they were one of those "wierdos". Other members of the committee objected to the study on the grounds that they thought the subject matter (sexuality) was innapropriate for study or that the ultimate value of the study was insufficient to justify the use of decption. The study was finally approved after we agreed to insert the phrase "Personality Variables, Attitudes, Behaviors and Experiences" into the title of the "Erotic Films and Sexual Arousal" study. The

committee felt that this sufficiently notified students that we were interested in personality characteristics. Additionally, they were provided with a copy of the debriefing letter sent to all participants, which presents participation in the second part of the study in a positive manner. (See Appendix E).

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