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THREE INDICES OF SEX AWARENESS AND
RESPONSIVENESS IN COLLEGE FRESHMEN AND
SOPHOMORE WOMEN

Thesis for the Degree of M. A.
MICHIGAN STATE UNIVERSITY

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1967

THESIS



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ABSTRACT

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by Elizabeth J. Force

The sexual revolution (generally characterized as a liberalization in sexual attitudes and behavior) has been much publicized in both the scientific and popular literature. The present study is an attempt to measure the awareness of and responsiveness to sex in college freshmen and sophomore women who have presumably been exposed to this liberalization movement.

Responsiveness to sexual stimuli was investigated using three techniques. (1) The Draw A Person Test and (2) a Sentence Completion Test designed to elicit sexual material were administered to one hundred and four freshmen and eighty-one sophomore women. From this group, forty freshmen and forty sophomore women--designated as high or low sex responders--were tested in (3) a binocular rivalry stereoscopic situation for perception of sex words.

The stimuli for the stereoscope experiment consisted of forty-five pairs of stereograms: thirteen pairs of test slides containing sexual stimuli, plus controls for sexual content and for the test word for each test slide; four paired lie slides; and four neutral word pairs.

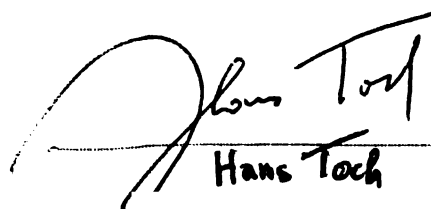


Elizabeth J. Force

It was hypothesized that high and low sex responders could be identified on the projective tests and might be found to perform differently on the stereoscope task. It was expected that the low sex responder group might show the kind of behavior labelled "perceptual defense." It was also hypothesized that sophomore women would show more awareness of and responsiveness to sexual stimuli than freshmen women.

The main results of the study showed that sophomore women were more responsive to sexual stimuli than freshmen women on all measures. The Draw A Person Test and the Sentence Completion Test used in this study were not at all related in measuring sexual responsiveness in our subjects. No prediction of stereoscope performance could be made from the projective data. No behavior significantly indicative of "perceptual defense" was noted; in fact, responsiveness to sexual stimuli in the stereoscope task was uniformly high for all groups.

The results were discussed both for their methodological and substantive implications. The three instruments were thus found to tap different sex-related concerns--and the same point holds for the items within the same instrument. The stereoscopic experiment was also found to suffer from inadequate controls in slide selection. Substantively, our data showed that the increasingly high attractiveness of sex for our subjects goes hand in hand with sex-related conflicts.


Hans Toch

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AND SOPHOMORE WOMEN

By

Elizabeth J. Force

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Psychology

1967

245720
8/25/07

ACKNOWLEDGMENTS

My sincere thanks is especially given to Dr. Hans Toch, chairman of my committee, for the use of his equipment, and his help and guidance in designing the study and preparation of this manuscript; Dr. John Hurley, for his support and encouragement in Dr. Toch's absence; and to Dr. Bertram Karon for his ideas on the manuscript. A special thanks to Christie Randolph for helping in scoring the materials.

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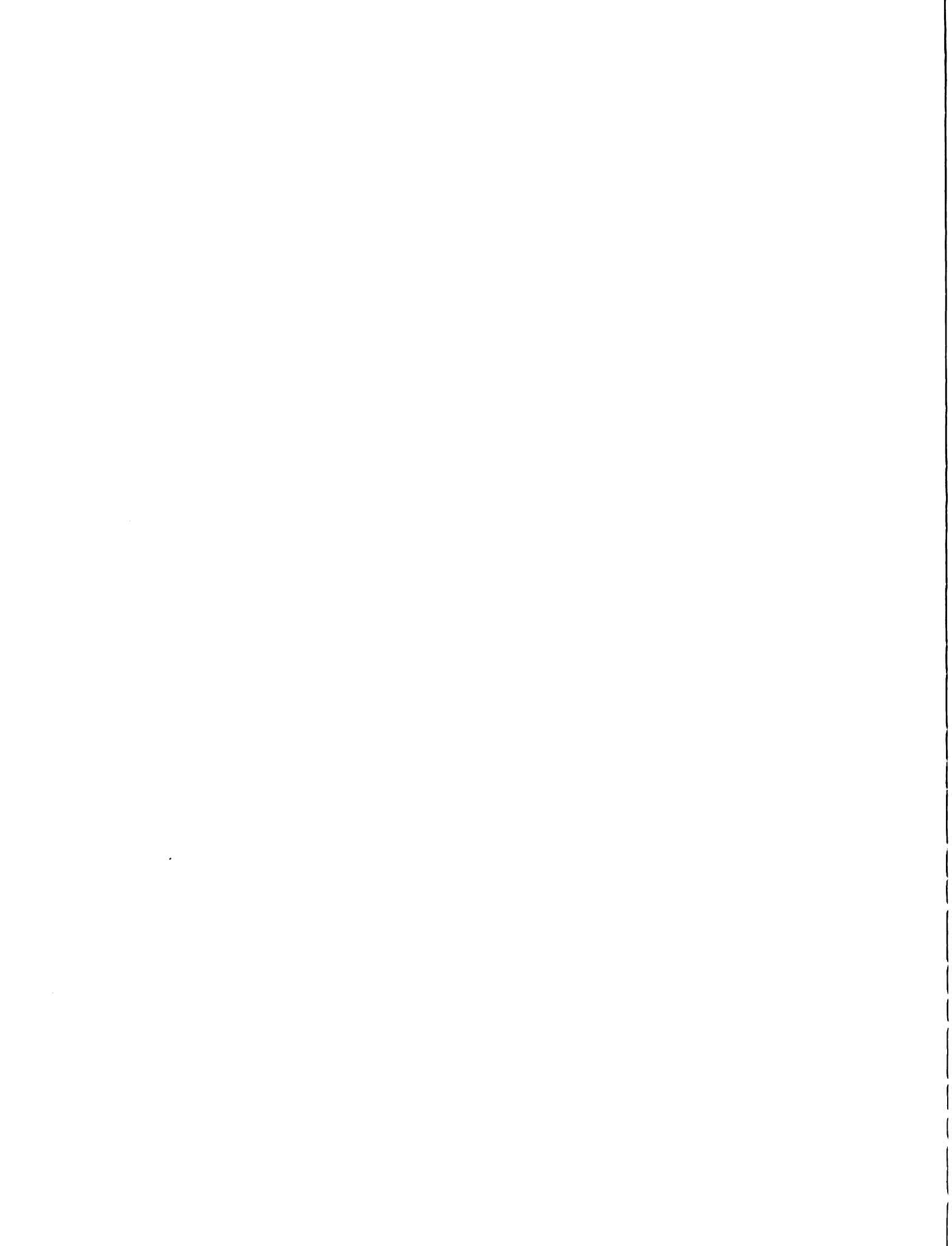
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INTRODUCTION

Sexual Revolution

This study was concerned with measuring awareness of, or readiness to reveal sexual material among college women, who are presumed to have been subject to the sexual "revolution" or liberalization in America. The presumed sexual revolution is the much publicized movement toward greater freedom and permissiveness in the area of sex, especially for women. For some (Sorokin, 1956), this revolution spells doom--a degeneration into sexual anarchy, with increasing rates of divorce, desertion, and disintegration of marriage and the family. Those holding this belief tend to see the new freedom as a sex addiction that has infiltrated every aspect of culture--art, music, literature, politics, etc. On the other side are those (Ellis, 1958; Reiss, 1966), who advocate more freedom in sex. This view holds that any manifestation of sex between adults which is pleasurable and acceptable to them in privacy, should be permitted and even encouraged.

Numerous changes in behavior and attitudes are involved in what is called the sexual revolution. As mentioned, the changes have been understood primarily in terms of women. Since World War I, there has been an increasing amount of



sexual permissiveness for women, taking the form of sanctioning of serial, not concurrent, promiscuity; a breakdown in adherence to the double standard; and a movement toward a standard of sexual freedom contingent on affection (Pope, 1965). This increasing permissiveness tends to converge the male and female attitudes toward sex by liberalizing the female (Christensen, 1962).

Looking at the changes in terms of the college scene, we find that chastity is no longer necessary to the self esteem of young college women; in fact, it is more likely that not being chaste is a component of acceptance and self esteem. However, there is a structure in the sexual code of college women that seems to center on the quality of the total relationship, rather than external sanctions. Thus, most college women feel a need to trust the partner's responsibility for them, and feel that a personal relationship must exist before they engage in coitus. Otherwise, they see themselves as promiscuous, and tend to feel guilty, and sometimes depressed (Walters, 1965). In terms of college women, the new morality includes the importance of fidelity and consideration of others; sex preceded by friendship and love; and no exploitation (Farnsworth, 1965). Ehrmann (1959) studied male and female college students over the period of 1946-1953. He found that women engage in less deviant sexual activities, and have less sexual experience than men. Also, they tend to control the male in pre-marital sexual activities. Most important, however, is Ehrmann's finding relating to the

central issue; that is, that college women rarely engage in sex for sex's sake, but for love's sake. They seem to need to rationalize sex as having love at its basis. Thus, the females' sexual behavior is primarily related to perceiving herself in love, and having some kind of a steady, secure relationship, and only secondarily related to such factors as attitudes toward sex, adjustment to sex, church attendance, etc.

Reiss (1966) characterizes the current stage of the sexual revolution as the period of the resexualization of the female body, and attributes it to the increasing feasibility of conception control. This has been preceded, according to Reiss, by three other stages or revolutions. First came the stage when sexual relations became social as well as biological; this was followed by separation of heterosexual relations from procreation; and finally, placement of sexual behavior under the normative controls evolved with culture. Rubin (1965) states that we are in a transitional period of morality with many conflicting value systems. He describes six such systems. There is the traditional repressive asceticism with its proscription of sex outside of marriage, and its grudging acceptance of sex in marriage only when linked with procreation; the enlightened asceticism which examines possible deviation from the strict codes stated above, but makes no changes. Then, there is humanistic liberalism, which begins to internalize controls to replace the external social and religious ones, and claims

as the criterion of sexual morality, the consequence of the act upon the interrelationships of people; and a humanistic radicalism, which advocates relatively complete sexual freedom with some prerequisites, however. More recently is "fun morality," which allows complete freedom, but limits it to well-informed, and fairly well adjusted people; and finally, sexual anarchy, which permits any sexual behavior as long as it is not injurious to the partner.

Where then, are we now? Apparently attitudes, especially toward premarital sexual relations, have changed tremendously in the last twenty to twenty-five years; but although the belief, especially of those who are offended by the revolution, is that sexual behavior too has changed greatly, studies find that behavior changes have not been as marked. Kinsey (1953) did find an increase among women born after 1900 of the acceptance of more involved petting before marriage, and of premarital coitus; but in the majority of cases, behavior was restricted to fiances. Apparently the greatest changes occurred among those born in the first decade of the 1900's, and subsequently these changes have been accepted, maintained, and somewhat extended by later generations. Thus, what is seen is more acceptance of formerly prescribed behavior, and hence, less guilt. According to Reiss (1966), attitudes have now caught up with behavior, and we may expect an increase, and change in the forms of sexual behavior.

In summary then, "sexual revolution" does seem to be a reasonable postulate for recent changes among college women. Some of the reasons for the trend toward sexual permissiveness might be the decline in efficacy of religious standards; exposure of men to different sexual standards in Europe during World War I; increase in availability of good contraceptives; general emancipation of the female; increased anonymity in urban centers; the drive against organized prostitution; greater freedom of the young; changed dating systems; altered familial functions; coed colleges; and general play morality (Newcomb, 1937; Kinsey, 1953, Pope, 1965). Greater permissiveness seems to have been achieved by throwing off negative attitudes and sanctions, and internalizing codes that are concerned with the general welfare of the persons involved and their relationship. First, attitudes changed, but once the new attitudes became accepted, behavior changes in the direction of greater sexual freedom could occur, especially among women. This general behavior change seems to be broadening into a "revolution" in sexual techniques regardless of the sex or marital status of the partner. This stage appears to be in the process of attitude examination at present, with behavioral advocates in the minority (Ellis, 1958). The purpose of this study is to investigate the effects of the sexual revolution at this juncture on college women today.

Methods of Investigation

In this study, college girls' awareness of, and responsiveness to, sexual stimuli was investigated via three techniques: the Draw A Person Test, a Sentence Completion Test, and a stereoscope task.

Draw A Person Test

Interest among clinicians in drawings started before there were any formal tests to interpret the drawings of patients. The initial interest centered around classifying drawings according to psychiatric groupings, and thus using them as aids in diagnosis. However, it was found that this could only be done for extremely disturbed individuals who made very bizarre drawings (Machover, 1949). Drawings were first systematically used as intelligence and developmental tests in the Stanford Binet and Goodenough Draw A Man Test. Machover (1949) noted that clinical material not necessarily related to intellectual level also emerged from examination of figure drawings, and developed the Draw A Person Test. According to Machover, drawing a person involves projection of one's body image, and thus provides for expression of one's own body needs and conflicts. In her words: "we build our image of self out of our impulses, our behavior, and the reality about us, and the representation of the body image in drawing tends to invite the graphic expression of any conflict which might be experienced in any of these spheres" (Machover, 1949), p. 59).

There has been some question as to how much the drawing actually does represent the individual doing the drawing. Levy (Abt and Bellak, 1950) states that the person drawn is usually some combination of a projection of one's self concept, of one's attitudes toward someone else in the environment, of ideal-self image, of external circumstances, of the individual's attitude toward the examiner and the testing situation, as well as a reflection of his attitude toward life in general. Also, drawings may be a conscious expression of any of the above, or may include disguised symbols of unconscious phenomena. In a study investigating the nature of the self the individual draws, Kamano (1960) used the semantic differential technique, and found that individuals tended to draw what they experienced as their actual self, rather than their ideal, or their least liked self.

The literature dealing with sexual characteristics of drawings is sparse. Swenson (1955) has constructed a scale of sexual differentiation for figure drawings. In one study, patients' drawings were rated on Swenson's scale for masculinity and femininity, and the patients were also rated by their therapists on a sexual adjustment scale. There was no significant relationship between patients' rated sexual adjustment and the sexual characteristics of their human figure drawings. The experimenter did find, however, that women who drew female figures of average femininity tended to be better adjusted sexually than women who drew extremely feminine or extremely masculine figures. The authors

concluded that the DAP is only a gross indicator of adjustment (Siprelle et al, 1956).

In a study more related to the present one, Fisher (1952) investigated the question of whether the sex role characteristics of figure drawings are meaningful for predicting sexual behavior and attitudes. Female patients were used, and drawings were evaluated as to degree of femininity (femininity defined as degree to which the figures conformed to a feminine concept). Past sexual adjustment was also rated. Femininity ratings of drawings and sexual behavior did not correspond. Also, there was no correspondence between an individual's conformity to the feminine role, and degree of femininity expressed in the drawings. The authors had a fairly inflexible and gross concept of femininity, and they explain the lack of correspondence between drawings and behavior in terms of this. They also advance the idea that conformity to the female role is not synonymous with deriving satisfaction from femininity. Some of their more specific findings tended to support the hypothesis of a general sex role configuration projected into human figure drawings which has meaning in terms of sexual behavior and role. They found that those with average femininity expressed in their drawings indicated deriving the most satisfaction in coitus. Also, those with high femininity ratings tended to have a wider range of heterosexual contact, although often with little real satisfaction derived from it. Those low on femininity ratings

from their drawings tended to show the most sexual preoccupation and acting out during their illness. This was interpreted to mean that these patients found release of pent-up, repressed impulses when their defensive inhibitions were lowered in the course of personality disorganization.

An interesting issue is raised by Sherman (1958), who inquires whether artistic ability, or projection is involved in figure drawings. He found that Swenson's scale measured artistic ability rather than basic personality variables. (In the present study, a control for artistic ability was used.)

Sentence Completion Test

Sentence Completion Tests have been used to measure intellectual variables by Ebbinghaus before they were used in personality assessment by Payne and Tandler (Sachs and Levy in Abt and Bellak, 1950). The technique is useful in clinical personality assessment and research because of its flexibility. There is no one sentence completion test; rather, there can be as many sentence completion tests as there are foci of interest. These can be constructed by making up appropriate stems. As a device in personality assessment, the SCT has evoked some disagreement as to whether it is a projective technique or not. Those who accept the idea of levels of psychological functioning (the idea that there are different levels of personality, and that different tests may tap different levels), feel that

sentence completion data come from a level closer to awareness, and is more subject to conscious defense than Rorschach or TAT data (Goldberg in Murstein, 1965). However, it is felt that sentence stems do allow projection, although perhaps less than some less structured stimuli, such as ink blots (Sachs and Levy in Abt and Bellak, 1950).

The assumptions underlying sentence completion techniques are that when an individual is pressured to complete sentence fragments quickly with the first thing that comes to mind he will reveal significant material that is uncensored; and that in talking about others, he reveals himself. Actually, the freedom from censoring is questionable, and there is no evidence for the relative merits of either first or third person pronouns (Sachs and Levy in Abt and Bellak, 1950).

Some researchers feel that a sentence completion technique is most useful when constructed to force subjects to express attitudes in specific areas, and to reveal specific areas of interest. This customizing of sentences supposedly makes interpretation more meaningful, and makes it more difficult for the subject to avoid involvement in the task (Forer, 1950). However, there have been no studies that have systematically investigated the effects of variation in stem structure and form.

The sentence completion form for our study used third person pronoun references, and it structured the stems in varying degrees to elicit responses in the area of sex.



In a previous study, a sentence completion test structured to elicit hostile or sexual responses has found a correlation between the sentence completion test and auditory recognition scores for related content. It was found that subjects who repressed or inhibited sexual and/or aggressive responses on the sentence completion test also had low auditory recognition accuracy for sexual and aggressive material (Lazarus, 1951).

This type of finding introduces the idea of perceptual defense. The term perceptual defense refers to the presumed tendency to ward off recognition of threatening stimuli as long as possible within a given stimulus situation. The phenomena has been postulated by many authors, but there is no agreement as to the underlying process. Postman claimed that there is no mechanism for perceptual defense once familiarity, set, and selective verbal report are controlled. He found that set and selective verbal reporting explain the phenomena, and asserted that the postulation of an underlying mechanism for perceptual defense would be uneconomical (Postman et al., 1953). Postman also maintained that perceptual defense can be explained by the dominance of strong alternative hypotheses, and thus is more of a process of perceptual selectivity than defense involving repression (Postman, 1953). Others tend to relate perceptual defense to psychoanalytic theory. Psychoanalytic theory states that impulses which are unacceptable to the ego are denied conscious expression by it, but are continually striving for

release. Thus, according to Blum, the individual at an unconscious level should be sensitive and responsive to cues relevant to the potentially threatening impulses. This is called subception. (Lazarus, 1951, found support for subception in the fact that discriminations could be made even when the stimulus could not be accurately reported.) Perceptual defense is defined as the process whereby the ego seeks ways to avoid perceiving or recognizing threatening impulses when they approach consciousness. Blum felt that he had confirmed the existence of perceptual defense in experimenting with Blacky pictures, but stated that the idea of conflict or unacceptable impulses alone does not lead to repression if the individual does not have a predisposition to handle that conflict by repression (Blum, 1955). Another experiment with the Blacky found that "repressors" avoided tachistoscopically presented pictures that were relevant to their conflict areas (Nelson, 1955). Eriksen reports that subjects who showed disturbance in the areas of aggression, succorance, and homosexuality on a Word Association Test, had high perceptual recognition thresholds for pictures corresponding to the same need scenes (Eriksen, 1951). Rosenstock (1951) found that sentences involving sexual and aggressive impulses were more difficult to recognize than neutral sentences, and concluded that repression is at least secondarily perceptual. Of interest to the present study is his finding that women are more likely to repress aggressive material, while men are more likely to repress sexual



material. Another relevant study was done by Rosenzweig (1942) using a photoscope. He found that schizophrenics who had been divided into high and low spontaneous sex activity groups could be differentiated in the amount of time they spent looking at sexual pictures. The high group spent more time, while the low group, although obviously interested, were more inhibited.

Whatever the underlying process, there seems to be adequate documentation of the phenomenon named perceptual defense (high recognition thresholds for negatively valued and emotionally toned stimuli). This fact makes it possible to inquire whether the phenomenon would be observable if subjects were presented with sexual words and phrases in a stereoscope. The question to be asked is whether those who show conflict and repression in the sexual area on other measures would also "defend" against recognizing sexual material presented in the stereoscope.

The Stereoscope

The stereoscope history has been reviewed in recent studies including those of Moore (1964) and Conley (1965). The important findings for our study are the observations that past experience and present needs can affect perception of pictures in the stereoscope. Engel (1956) used the binocular rivalry situation in the stereoscope to present paired upright and upside-down faces to subjects, and found that the upright faces were exclusively seen. In another



experiment, Engel (1961) presented paired photographs of head and genital areas stereoscopically, and found that the head areas were perceived virtually to the exclusion of genital areas. Bagby (1957) paired Mexican and American scenes in the stereoscope and found that Mexicans tended to perceive the Mexican scenes, while Americans tended to perceive the American scenes. Pettigrew et al. (1958) studied racial prejudice in South Africans by using photographs of ethnic groups presented stereoscopically. Using paired violent and non-violent stereograms, Toch and Schultz (1961) found that as a result of training, advanced students in Police Administration perceived more violence than two control groups. Again using violence stereograms, Shelly and Toch (1962) found that offenders who obtained high violence perception scores evidenced more overt troublesome behavior than offenders with lower scores. Berg and Toch (1962) investigated drives other than aggressive ones, and found that perception scores were an indication of the extent to which subjects freely expressed their impulses. Impulsive prison inmates were found to perceive more slides with blatant drive expression depicted than did neurotic prison inmates. Putoff (1962) found that assaultive inmates perceived more violence than a non-assaultive group. Moore (1964) studied children, and found that violence perception increases with age, and is greater for boys than for girls.

The present study uses words in the stereoscope to investigate the role of sexual needs and attitudes. Several previous studies have employed words as stimulus material. Davis (1959) presented different words to each eye, and used association times as a measure of emotional content. He found that words of low frequency usage and long association times were suppressed. A series of studies by Rommetveit and Toch (1963, 1964) investigated how context affects word perception in a stereoscope rivalry situation. The authors presented topographically similar but semantically different words (i.e., hell, sell) to the two eyes, preceded by a common context word (devil, heaven). Context was found to determine perception. The exploration of context effects was expanded by the authors to include the study of syntactic and semantic links between context and test stimuli (1964). In this experiment, each rivalry pair was preceded by a meaningful phrase context, an anomalous phrase context, and an associative word context. Instructions to perceive words, or to read part of a text were used for different groups. All contexts were found to be effective in making the test word dominate, but the 'read text' instructions were found to facilitate the effects of the meaningful phrase context, while the 'perceive words' instructions facilitated the effects of the associative word context. The results of these studies suggested the use of meaningful and non-meaningful phrases and word pairs employed in our stereoscope experiment.

METHOD

Design of the Study

This study sought to separate subjects into two groups by their performance on the Draw A Person Test (DAP), and the Sentence Completion Test (SCT). (1) A group tending to repress or inhibit sexual impulses, or to show a low degree of awareness of sexual stimuli; and (2) a group tending to respond freely to sexual stimuli, who would be generally aware of their sexual impulses. It was felt that if two such groups could be identified, they would perform differently on a stereoscope task in which they were presented with sexual material. Those in the low sexual awareness group could be expected to exhibit the phenomenon of perceptual defense. A difference was also expected between freshmen and sophomores, with the latter expected to show more awareness of sex-related material than the former.

As a result of the influence of the sexual revolution, our subjects would be expected to be generally more aware of sexual stimuli and more comfortable with expression of sexual impulses than would comparable subjects of earlier generations. However, it was felt that it would be possible to identify a group that resisted the liberalization influence and defended against sexual awareness and expression, in contrast to a group that would be comfortable with sex

liberalization and hence more aware of sexual impulses, and thus more able to express them freely. It was felt that sophomores, having had a year longer to adjust to college and to be exposed to the more liberal attitudes towards sex which are part of a college environment, would be more responsive to sexual stimuli than freshmen. This finding might or might not imply a correlation with degree of sexual expression in behavior.

Subjects

Subjects for this study were drawn from introductory psychology courses at Michigan State University. They were all single, white females. One hundred and four freshmen and eighty-one sophomores were tested on the DAP and SCT, and after the high and low sex awareness groups were formed, forty freshmen and forty sophomores participated in the stereoscope experiment.

Administration of the Projectives

Subjects were administered the DAP and SCT in groups of fifteen to twenty-five, with thirty minutes allowed for completion of the two tasks. They were first requested to draw a car on a blank sheet of 8 1/2 x 11 inch paper in order to allay anxiety, and to obtain a measure of artistic ability. Before they did the drawings, the subjects were told that this was not a test of artistic ability, but that the examiner was interested in how college students performed on a variety of tasks. Any questions seeking directions on

how or what to draw were answered by, "that's up to you." Subjects were allowed three minutes to complete their drawing of a car. On another blank sheet of 8 1/2 x 11 inch paper, the subjects were requested to draw a person. The only direction given by the examiner was the specification that the person drawn be a full person, and not a stick figure. Any further questioning was again answered with, "that's up to you." After five minutes, the subjects were requested to turn over their sheets, and draw a full person of the sex opposite to the one they had just drawn. After five minutes, the sheets were collected, and the SCT passed out. Subjects were requested to complete the sentences as quickly as possible with the first thought that came to mind, and were assured that there were no right or wrong answers. Subjects were also assured that the material was confidential, and that their names were required only for the purpose of matching the two tests, and contacting them for participation in the second part of the experiment. Fifteen minutes were allowed for completion of the SCT.

Sentence Completion Material

The sentences used consisted of sentences drawn from the Forer Incomplete Sentence Blank, and sentences constructed by the author to elicit sexual material. All the sentences could be completed with a sexual response, and in some instances such a response could be avoided only with varying degrees of difficulty. The SCT used is as follows:

The sentences below are not complete. Please finish them. Answer as quickly as you can, writing down what first comes to mind. Remember, your answers will be confidential.

1. Most girls
2. Sometimes she wished she were
3. She likes
4. He became angry when she
5. When they danced together, she felt
6. Never trust a man who
7. When he put his arms around her, she
8. Sex is
9. She used to daydream about
10. Most husbands and wives fight over
11. Mother told her never to
12. A girl has a right to hit a fellow who
13. When she became pregnant, she
14. She often wished he would
15. Girls should never
16. He left her because
17. She said no when he
18. Most men
19. She felt she had done wrong when she
20. He put his hands
21. She felt he only dated her because
22. When he kissed her, she
23. When they were parked, he
24. She felt very excited when he
25. She was afraid when he
26. She wanted to get away when he

Evaluation of performance on the DAP and SCT was necessary before groups could be selected for the stereoscope experiment. Thus, evaluation of the DAP and SCT will be discussed next.

Analysis of DAP and SCT Data

The materials were analyzed separately for freshmen and sophomores. In the case of the DAP, the drawings were separated into groups in terms of the representation (high group), or non-representation (low group) of sexual characteristics. The first criterion for inclusion in the high

group was that the drawings be of adults. From there, separation into high and low groups was based mainly on the presence or absence of secondary sex characteristics in the drawings. The female drawings were scored in terms of the representation of breasts, hips, waist, as well as curvature and general femininity. The male was also evaluated in terms of degree of masculine body and face. No formal scoring system was used, but there was perfect agreement between the independent groupings made by the examiner and another graduate student in clinical psychology.

A formal scoring system was devised for the SCT. Except for sentence numbers 8 and 13, which were omitted from analysis because of sexual content in the stem, all sentences were given 0, 1, or 2 points. The criteria for scoring were as follows:

- 2 - The sentence was completed with direct, obvious, sexual content.
- 1 - The sentence completion alludes to sexual content.
- 0 - The sentence completion has no reference to sexual content.

For example:

TABLE 1.--Sentence completion scoring.

	2	1	0
15. Girls should never	have intercourse before marriage	lead a boy on	lie
17. She said no when he	asked her to go to bed with him	he tried	asked her for a cigarette.

The sentences were independently scored by the examiner and another graduate student, and in the cases (10) where agreement was not found, a score was assigned after discussion. Later, an item analysis was performed.

The Stereoscope Experiment

Subjects

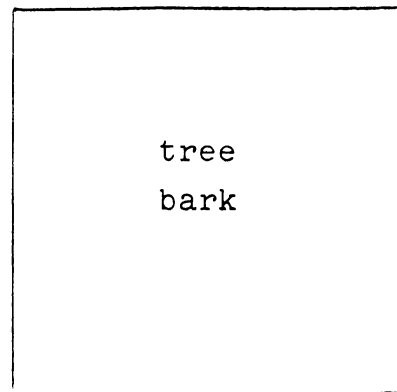
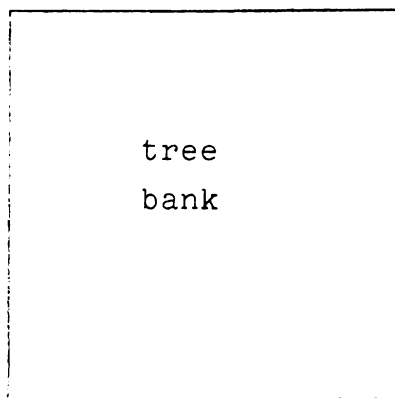
The participants in the stereoscope experiment consisted of forty sophomores and forty freshmen. Each group of forty was composed of the ten with the lowest and the ten with the highest SCT scores; the ten whose drawings showed the most sexual characteristics, and the ten whose drawings showed the least sexual characteristics. Since the distribution of drawings was found to be heavily weighted toward minimal representation of sexual characteristics, the low group consisted of subjects who had drawn both persons clearly identifiable as children, or had entirely omitted sexual characteristics. Separate groups were formed based on the two tests after it was found that there was virtually no correlation ($r < .1$) between performance on the DAP and SCT.

Apparatus

For the stereoscope experiment, the apparatus consisted of a modified stereoscope designed by Engel (1956). Light intensity was held constant at .2 candles/ft. in both fields. An interval timer attached to the stereoscope maintained exposure time of stimulus figures at .5 seconds throughout the experiment.

Stereoscope Material

The stimuli consisted of forty-five pairs of stereograms. The stereograms were 2" x 2" pieces of cardboard covered with non-glossy white paper on which the stimuli words were typed. All word pairs were centered so that when the stereograms were placed in the stereoscope, the letters overlapped perfectly. No more than two letters were different in any words paired in the rivalry situation. The stereograms took such form as:



except that sexual connotation as well as meaning was used.

The test stimuli consisted of thirteen paired stereograms in which a meaningful, sexually-related phrase or word pair was matched with a non sex-related, less meaningful or nonsense phrase or word pair, i.e.,

make make	or touch	touch
love lost	penis	pines

For each of these test slides (sex slides), there were two controls. One control consisted of the sex-related test word in a non sex-related, meaningful phrase or word pair, matched with a less meaningful or nonsense phrase or word



pair, i.e., in in or man man . The second control
 love lost penis pines

consisted of the sex-related test word in a non meaningful or
 nonsense phrase or word pair matched with a meaningful pair
 containing the control word, i.e., hairpin hairpin or tree
 love lost penis
 tree .
 pines

Along with the test slides and their controls, four
 paired lie slides were used to check on the subjects' re-
 porting. Also, four matched word pairs that were unrelated
 in content to the test stimuli were used. The slides used
 were as follows.

(a) Test and control slides:

excite erection	excite election	(#30)	in heat	in beat	(#8)
building erection	building election	(#40)	summer heat	summer beat	(#49)
vote erection	vote election	(#1)	policeman's heat	policeman's beat	(#36)
unwed mother	unwed matter	(#18)	sleep with	sleep wait	(#3)
loving mother	loving matter	(#12)	talk with	talk wait	(#7)
substance mother	substance matter	(#27)	short with	short wait	(#34)
Become pregnant	become fragrant	(#32)	overdue period	overdue perish	(#23)
mother pregnant	mother fragrant	(#17)	comma period	comma perish	(#24)
smell pregnant	smell fragrant	(#39)	insects period	insects perish	(#48)
sex penis	sex pines	(#10)	touch penis	touch pines	(#13)

man penis	man pines	(#14)	_____	same		
needles penis	needles pines	(#11)		tree penis	tree pines	(#33)
date pet	date net	(#46)		pregnant coed	pregnant cold	(#15)
dog pet	dog net	(#47)		studious coed	studious cold	(#25)
total pet	total net	(#2)		ice coed	ice cold	(#16)
kiss breast	kiss breaks	(#21)		fondle breast	fondle grease	(#9)
bra breast	bra grease	(#42)	_____	same		
drop breast	drop breaks	(#37)		bacon breast	bacon grease	(#43)
make love	make lost	(#35)				
in love	in lost	(#5)				
hairpin love	hairpin lost	(#26)				

(b) Lie slides:

green grass	green grass	(#6)		car breast	car breast	(#28)
house penis	house penis	(#31)		desk erection	desk erection	(#44)

(c) Non series:

tree bark	tree bank	(#29)		string loop	string coop	(#4)
money bank	money bark	(#22)		chicken coop	chicken loop	(#20)

Administration

Only seventy of the eighty subjects chosen for the stereoscope experiment were used for analysis due to uncooperativeness or complete eye dominance. All subjects saw all forty-five slides in individual sessions. The slides were presented in random order, once each. Within each pair, presentation to each eye was randomized so that each eye would be randomly exposed to the more meaningful pair.

Before showing the slides to the subjects, the experimenter adjusted the slide holder for optimal fusion. Subjects who wore glasses used them. The instructions for the experiment were as follows:

"Look into the eye piece with both eyes open. You will see a pair of words flash on for a very short time. I want you to read aloud what you see. There are no wrong answers. Please close your eyes while I put the slides in and remove them."

If subjects complained that the words being perceived did not make sense, they were encouraged to report what they saw anyway. Responses were scored verbatim on individually pre-coded response blanks.

RESULTS

The two projectives were not found to be measuring the same thing (correlation <1.00), and there were only slight tendencies for the projective material to predict stereoscope performance.

Draw A Person Data

The most remarkable finding concerning the drawings was that the majority had to be classified as showing a low degree of sexuality. On the whole, the drawings were quite immature, not just in terms of omitting sexual characteristics, but also in terms of body proportion and detail. This trend was the same in both groups, but was significantly greater in the freshmen group.

TABLE 2.--Classification of drawings.

	High Group	Low Group
Freshmen	17	87
Sophomores	24	57

(χ^2 significant at .05 level)

In no cases was it impossible to distinguish between the sexes drawn. Of the eighty-seven freshmen whose drawings were classified in the low group, fifteen had drawings which were clearly identifiable as children (5 male only, 3 female only, 7 both). Of the fifty-seven sophomore low-scored drawings, nine were clearly identifiable as children (2 male only, 1 female only, 6 both). The proportion is greater for freshmen, but not significantly so. Thirty-seven freshmen drew a male first, while eighteen sophomores drew a male first. Again, the proportion is greater for freshmen than for sophomores, but not significantly so. Those who drew males first tended to be in the lower groups both on DAP and SCT (non-significant).

Sentence Completion Test Data

Scores on the SCT had a possible range of 0-48 points. The SCT also had a low distribution, with freshmen scores ranging from 0-32, and sophomore scores ranging from 2-30, with most scores clustered around 11-15. The two distributions did not show a significant difference, but again there was a tendency for more of the freshmen to score low and for more of the sophomores to score high.

TABLE 3.--Distribution of SCT scores.

	Below 10	Above 20
Freshmen	46.15%	11.54%
Sophomores	34.57%	13.58%

An item analysis was done on the SCT. The stems chosen for the SCT appear to differentiate on the whole quite well between high and low sex responders for the test. The instrument appears to discriminate somewhat better among freshmen. It is interesting to note that although it becomes obvious that sexual responses are being elicited, the items at the end of the test are among the best discriminators.

TABLE 4.--Item analysis on the SCT.

Item No.	Level of Significance	
	Freshmen	Sophomores
1	.025	.10
2	N.S.	N.S.
3	.001	.005
4	N.S.	N.S.
5	.025	.025
6	.001	.005
7	.001	.05
9	.05	N.S.
10	.10	N.S.
11	.01	.001
12	.01	.025
14	N.S.	N.S.
15	.001	N.S.
16	N.S.	.05
17	.001	.025
18	N.S.	.01
19	.001	.001
20	.001	.10
21	.005	.001
22	.025	.10
23	.025	.05
24	.001	.001
25	.001	.001
26	.001	.001

Relations Between the Projective
and Stereoscope Data

As mentioned, there was virtually no correlation between performance on the DAP and SCT, and thus separate high and low sex groups were chosen from each test. It was not possible to predict stereoscope performance on the basis of either DAP or SCT scores. On the whole, perception of sex-related words in the stereoscope was much more frequent than expected, with few subjects showing the type of response classifiable as "perceptual" defense. A chi square analysis was done between high and low groups on DAP and SCT and each slide separately for freshmen and sophomores. Fifty-two chi squares were computed. They are not listed because on the majority the χ^2 was less than one. In sophomores, there were no significant relationships between SCT performance and perception of the sex-related test slides. What small trend there was was a negative one, with those scoring low on SCT tending to see more of the sex combinations on the sex-related test slides. The DAP also showed no significant relationship with perception on the test slides, although a slight positive trend was noted, with those in the high sex drawing group perceiving more sex in the test slides. For freshmen, there were significant relationships; but, considering the number of computations, this is not too surprising a finding. There was a significant negative relationship between SCT scores and performance on one slide. Those with low SCT scores

tended to perceive "touch penis" more than those with high SCT scores (χ^2 significant at the .05 level). There was a significant positive relationship between DAP performance and performance on another slide. Those with high sex drawings tended to perceive "make love" more often than those with low sex drawings (χ^2 significant at the .01 level). Otherwise there seemed to be a slight tendency for the DAP performance to relate negatively to performance on the test slides. In other words, there seem to be no clear-cut relationships between either projective test and the stereoscope performance. What does become clear, however, is that the two tests are measuring different things, and that the supposedly comparable groups chosen from performance on each are not similar, and do not perform similarly on the stereoscope. In the case of the freshmen who saw the sex combination on ten or more of the thirteen sex-related test slides, there was a non-significant, but negative relation to both DAP and SCT performance. These freshmen who perceived the highest number of sex combinations on the test slides fell into the low sex groups on both DAP and SCT. On the other hand, the freshmen who scored lowest on perception of sex on the test slides (five or less out of thirteen), also tended to score in the low DAP and SCT groups (a more marked trend for SCT than for DAP). For sophomores, these same trends are noted, but are less obvious.

Stereoscope Data

Looking now at the stereoscope data alone, we find that the distribution of freshmen and sophomores in terms of number of sex combinations seen in the thirteen test slides do not differ significantly, but the distribution is slightly higher for sophomores (see Appendix A).

As noted, the amount of sex perceived by both groups of subjects is high. Out of the thirteen test slides, the mean number of sex combinations perceived by freshmen is 7.37, and it is 8.17 for sophomores. The difference between freshmen and sophomores is not significant, but it is in the predicted direction. Sex words were also often chosen in non-meaningful combinations, indicating a high attractiveness of sexual material for the groups.

An item analysis was done on the sex slides with the following results:

TABLE 5.--Item analysis on the test slides.

Slide No.	Level of Significance for χ^2	
	Freshmen	Sophomores
30	N.S. (approach .10)	N.S.
21	N.S.	N.S.
18	N.S.	N.S.
35	.10	N.S.
8	N.S. (approach .10)	.10
15	N.S.	N.S.
23	N.S.	.10
13	.10	N.S.
32	.10	.05
10	.01	.025
9	N.S. (approach .10)	N.S.(approach .10)
46	N.S.	N.S.
3	N.S.	.05

Thus on the whole, the slides did not differentiate adequately between high and low sex perceiver groups, and there seemed to be some problem with the slides that called for further analysis.

After examination of responses, slides 35, 46, 18, and 32 were removed from analysis because of the strong pull of the words "love," "pet," "mother," and "pregnant" irrespective of the context. Then, on the remaining test slides, a chi square analysis was run to see if there was a tendency to avoid the sex combinations. Table 6 compares the relationship between the test word and its control.

For freshmen, all slides except those two containing "penis" as the test word showed a trend towards avoiding the sex word in the sex-related combination more than in the non sex-related combinations. For sophomores, this trend did not emerge; in fact, in several cases the opposite trend is noted--a tendency to avoid the test word more often in the non sex-related combination.

Thus, only slides 15 and 23 ("pregnant coed," and "overdue period") showed a significant trend toward avoiding perceiving the sex-related combination. In the remaining slides, either the sex combination is not avoided, or it is not avoided any more often than the non sex-related combination containing the test word. The slight preference for the non sex-related combinations noted in freshmen disappeared with the sophomores. In fact, every sex activity word gives a reversal and increase from freshmen to

TABLE 6.--Comparison of perception of the sex combinations and controls.

Common Test Word	Freshmen		Common Test Word	Sophomores	
	Word Perceived	Word Perceived		Word Perceived	Word Perceived
	coed	other		coed	other
pregnant	9	26	pregnant	10	25
studious	19	16	studious	17	18
	(significance level .025)			(significance level .10)	
	period	other		period	other
overdue	12	23	overdue	21	14
comma	20	15	comma	22	13
	(significance level .10)			(N.S.)	
	breast	other		breast	other
kiss	20	15	kiss	24	11
bra	26	9	bra	18	17
	(N.S.)			(N.S.)	
	penis	other		penis	other
sex	18	17	sex	23	12
man	17	18	man	22	13
	(N.S.)			(N.S.)	
	breast	other		breast	other
fondle	23	12	fondle	21	14
bra	26	9	bra	18	17
	(N.S.)			(N.S.)	
	penis	other		penis	other
touch	20	15	touch	28	7
man	17	18	man	22	13
	(N.S.)			(N.S.)	
	erection	other		erection	other
excite	12	23	excite	14	21
building	16	19	building	12	23
	(N.S.)			(N.S.)	
	heat	other		heat	other
in	13	22	in	14	21
summer	21	14	summer	16	19
	(significance level .10)			(N.S.)	
	with	other		with	other
sleep	26	9	sleep	23	12
talk	28	7	talk	25	10
	(N.S.)			(N.S.)	

sophomores--more sophomores perceive sex-related material and avoid it less in the sex-related combination. In fact, our main finding is that more sex combinations are seen by sophomores than freshmen (χ^2 significant at the .05 level).

The slides were also examined to see if subjects tended to see the meaningful phrases and word pairs. Each slide pair was examined, and the proportion of subjects perceiving the meaningful pairing was compared with the proportion of those who perceived the control word, or some combination of control and meaningful word. Z tests for proportions were calculated (see Appendix B). Many of the words are found to be dominant due to a structural or frequency pull. In every case except "pregnant coed," and "overdue period" (freshmen only), meaning appears to work even in opposition to sex-related content. In general, the meaningful phrases and word pairs are perceived, but it must also be noted that this is often true because word frequency and word structure have not been controlled well enough. The difficulties in finding words to pair with sex words did not allow careful enough controls in this area.

DISCUSSION

The hypotheses formulated in this exploratory study on the whole were not supported, although some interesting trends are noted. The data do support the hypothesis of greater sexual awareness and responsiveness among female sophomores as compared to freshmen. But the projective tests were not found to correlate, and neither did they predict performance on the stereoscope.

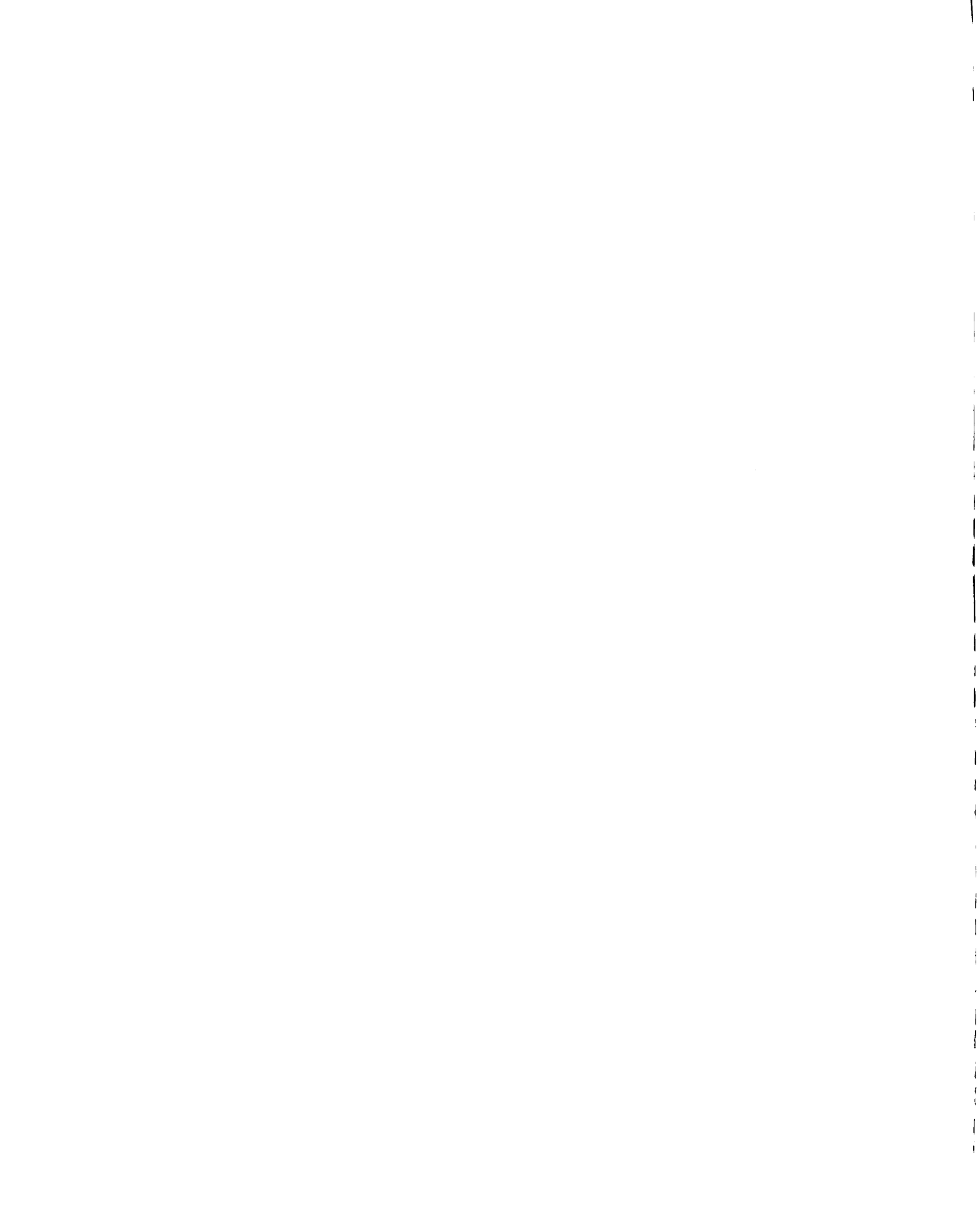
The fact that the DAP and the SCT did not correlate may be compatible with the levels hypothesis which would hold that each test is tapping different levels of sexual awareness and responsiveness. On the DAP, subjects were not at all aware of how their drawings would be evaluated. However, it is quite unlikely that the subjects were not aware of the expectation of sexual answers on the SCT. On the SCT, subjects would be able to consciously avoid sexual responsiveness; in fact, one would have to do a lot of avoiding to get a very low score on the test.

The drawings of our subjects on the whole are immature and may indicate some conflict over sexuality and identity. Thus the low drawing groups may be expressing some problems and anxiety with their sexuality and identity. If an intuitive comparison can be made, those in the low group on the SCT may be expressing a great deal more awareness

of sex than those low on the DAP, who in essence are showing only that they can differentiate minimally between males and females. This same discrepancy probably does not hold as strongly between high groups on the DAP and SCT. If one examines our item analysis, it becomes evident that the majority of items which discriminate are items which could be described as "conflict" or "negative" sex items (i.e., numbers 19, 25, 26), in contrast to items which could be defined as vague, or as dealing with more positive heterosexual and/or social situations (i.e., numbers 2, 10, 14). As SCT scores increase, the subjects' responses may show more than an awareness of sexuality; they may reveal conflicts the subject has about sexual matters. The difference between high and low SCT respondents would be mainly one of degree of openness to expressing sexual attitudes where a possible conflict might be expected. Thus, the low group avoids sexual conflict areas, but is not necessarily representing sexuality. The high SCT group, by contrast, is communicating openly about sexual attitudes, as well as about conflict and behavior. This clearly would not correspond to the high group on DAP, who merely express sexuality in their drawings. As mentioned by Fisher (1952), extreme representation or non-representation of sexuality in drawings may both indicate some sexual conflict, but (due to the different levels tapped by DAP and SCT) it may not be the same conflict as expressed on the SCT. The SCT data is probably more related to attitudes about sex behavior and interpersonal

situations, while sexual expression on the DAP is probably more concerned with sexual identification. Thus, the lack of relationship found between SCT and SAP is not surprising in retrospect.

As mentioned, neither projective test seemed to correlate with stereoscope performance. Two factors may be involved here. One possibility is that we really have three discrete instruments measuring three different aspects of sexuality. Another possibility is that the slides could not be constructed to be powerful enough to pick up whatever differences were being accounted for in high and low projective groupings. As we have seen, problems certainly existed with the stereograms which might defeat the operation of selective perception. Although we find no real relationship in our data, there seemed to be a trend for low DAP and SCT groups to perceive more sex in the stereoscope, as though interest in sex were being measured, but might be overshadowed by some conflict. We may recall that both groups saw more sex combinations in the stereoscope than non-sex combinations. If perceptual selectivity as usually conceived of were operating, we would expect subjects to avoid the sex-related combinations. This trend was slightly established for freshmen women, but not for sophomore women. Possibly, the most threatening, or conflict inducing of our sex-related word pairs (once obviously poorly constructed slider were removed) were: "Pregnant coed, overdue period, excite erection, and sleep with," "Pregnant coed and overdue



period" do appear to work in terms of showing selective avoidance, while "election" predominates over "erection," and "with" is predominant. This leaves us with the conclusion that we might have gotten more convincing results if we could have obtained more conflict-related material (such as phrases threatening pregnancy), and if we had controlled for word frequency and/or structural dominance.

Some statements can be made about our measures. As a whole, our SCT is reliable in terms of discriminating between high and low scorers. It appears to be measuring both sexual responsiveness, and the reporting of possible sex-related conflicts or negative feelings about sexual behavior. The drawings are perhaps giving more of a gross indication of maturity level, and acceptance of sexuality, and identification. The drawings are likely to be more individual-oriented, and may be more concerned with attitudes toward the self; while the SCT may yield more interpersonal data. Thus conflict indications on the DAP may be more "intrapsychic"; while conflict indications on the SCT are likely to be more interpersonal and behavioral. The stereoscopic slides on the whole are not reliable in terms of differentiating between high and low sex perceivers. As discussed, they also have problems in terms of eliciting indications of perceptual selectivity. However, they do demonstrate fairly clearly (when the structural problems are partialled out), that context and meaning do determine what

is perceived. This finding is in agreement with the studies of Toch and Rommetveit (1963, 1964).

What, then, of the sexual revolution? As discussed earlier, the sexual revolution is described in terms of greater sexual freedom for the female, the importance of a loving relationship before sexual relations, and a generally quicker change in attitudes than behavior. We find that our subjects are responsive to sexual stimuli especially in the straight-forward stereoscope task. Further, sophomore women are seen to be more responsive to sexual stimuli in all tasks than are freshmen women. The picture that emerges of our subjects is that they are somewhat conflicted over sex, but sex is clearly attractive to them and fairly accepted within their frame of reference. They approach sexual behavior with some conflict and guilt; but they do approach it more than they avoid it. The stereoscope data, especially with its high occurrence of sex words in non-meaningful contexts underlines the approach factor or positive overt attitudes toward sex. However, the low distribution on SCT data seems to indicate some conflict over sex-related attitudes and behavior; while the low distribution on DAP possibly indicates some underlying conflicts over accepting this "new sexuality." This finding fits in with the literature reviewed in terms of sexual behavior and attitudes not developing at the same rate. Thus, these girls seem quite interested in sex, and may want more sex-related behavior than their present attitudes allow

comfortably--they may verbalize more than they can allow themselves to participate in comfortably.

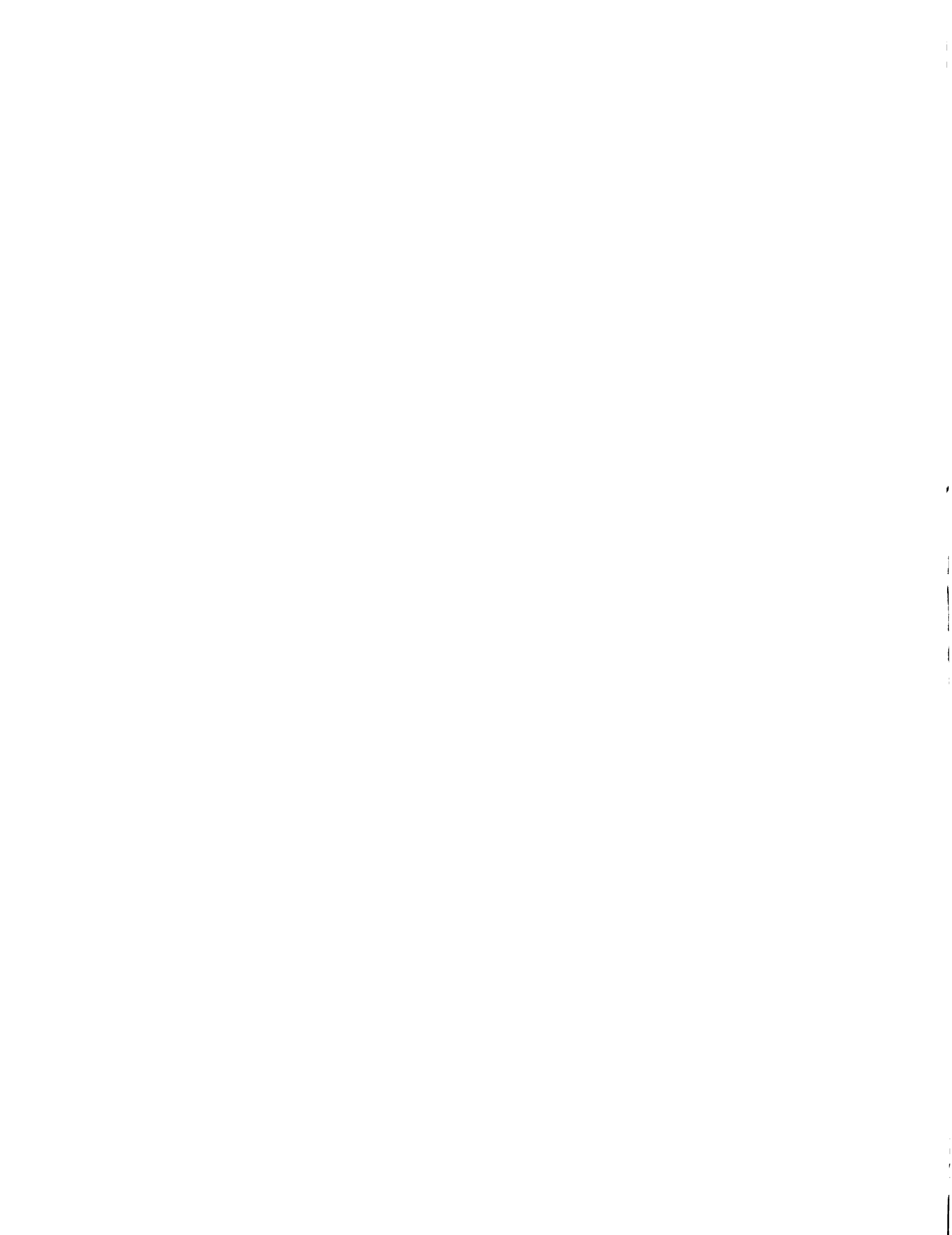
SUMMARY

This study was undertaken to explore the responsiveness of college women, who have been exposed to the effects of the sexual revolution, to sexual material. Women having longer exposure to these liberalization effects, especially in the relatively permissive college environment, should show more awareness and responsiveness. It was felt that sexual awareness and responsiveness could be measured by projective human figure drawings, and by a series of incomplete sentences specially constructed to elicit sexual material. It has been shown that perception is influenced by our experiences and need states. Thus, a perceptual task of reading word pairs and phrases in a binocular rivalry situation might show a difference in recognition of sexual material among subjects classified as high and low sex responders on the projective material.

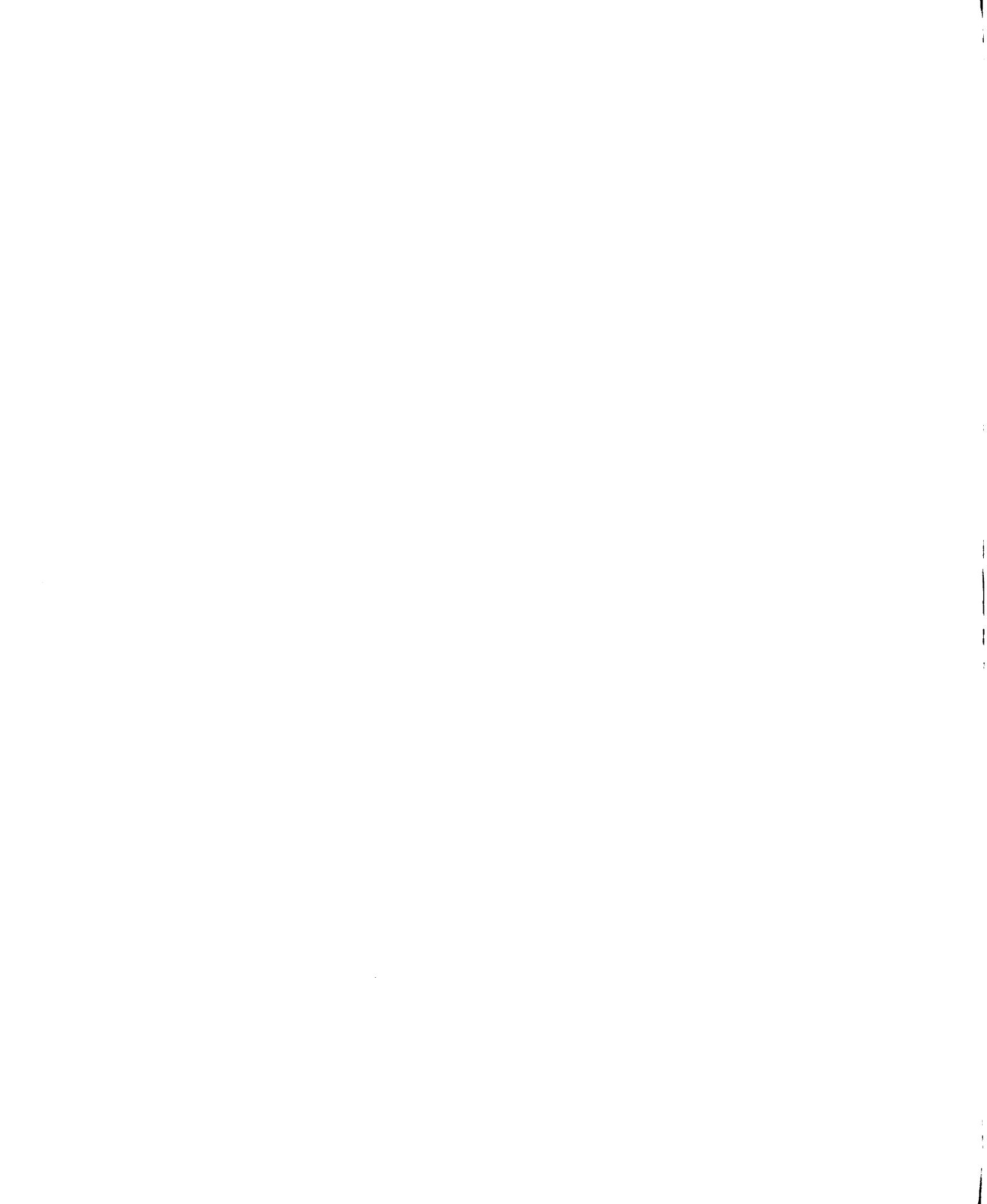
High and low sex responders were identified by scoring each sentence in the SCT on a 0, 1, or 2 point scale for sexual content, and evaluating the drawings on the DAP in terms of representation of sexual characteristics. Sex perception was investigated in a binocular rivalry situation using a modified stereoscope. Thirteen test stereograms consisting of sexual word pairs or phrases were used along with two controls for each test stereogram (a control for sex

content, and a control for the test word). Four lie slides were shown in random order to each subject. Subjects for the projective tests were 104 freshmen and 81 sophomore single women students at Michigan State University. Of these, 40 freshmen and 40 sophomores identified as high and low sex responders were used in the stereoscope task.

Results indicated that only the hypothesis of more sex responsiveness and awareness in sophomores than freshmen was supported. The projectives did not correlate in identifying high and low sex responders. The high and low sex responders did not differ in any meaningful way in perception of sex in the stereoscope, and it was not possible to predict stereoscope performance by utilizing either projective test. The SCT constructed for the study was found to be a reliable measure but the stereograms were not found to be reliable. The data are congruent with the literature on the sexual revolution which emphasizes the general liberalization influence in sexual attitudes and behavior today that is somewhat complicated by a quicker advance of attitudes than behavior.



BIBLIOGRAPHY



BIBLIOGRAPHY

- Bagby, J. "A Cross-cultural Study of Perceptual Predominance in Binocular Rivalry," J. Abnorm. Soc. Psych., 1959, 54, pp. 33-34.
- Berg, S. and Toch, H. H. "'Impulsive' and 'Neurotic' Inmates: A Study in Personality and Perception," J. Crim. Law. Crim. and Pol. Sci., 1962, 55, pp. 230-234.
- Blum, Gerald S. "Psychoanalytic Theory and Perceptual Vigilance and Defense," J. Abnorm. Soc. Psych., 1955, 51, pp. 24-29.
- Blum, Gerald S. "Perceptual Defense Revisited," J. Abnorm. Soc. Psych., 1955, 51, pp. 24-29.
- Christensen, Harold T., and Carpenter, George R. "Value Behavior Discrepancies Regarding Pre-Marital Coitus in Three Western Cultures," Am. Sociol. Rev., 1962, 27, pp. 66-74.
- Conley, Susan. "The Perception of Violence as a Function of Recent Experience and Sex," Unpublished thesis, 1965.
- Davis, J. "Personality, Perceptual Defense, and Stereoscopic Perception," J. Abnorm. Soc. Psych., 1959, 58
- Ehrmann, Winston. Premarital Dating Behavior. New York: Henry Holt and Company, Inc., 1959.
- Ehrmann, Winston. "Premarital Sexual Behavior and Sex Codes of Conduct with Acquaintances, Friends, and Lovers," Social Forces, 1959, 38, pp. 158-64.
- Ellis, Albert. Sex Without Guilt. Grove Press, 1958.
- Engel, E. "Binocular Methods in Psychological Research," in Explorations in Transactional Psychology, F. R. Kilpatrick, (ed.). New York: New York University Press, 1961.
- Engel, E. "The Role of Content in Binocular Resolution," Amer. J. Psych., 1956, 69, pp. 87-91.

- Eriksen, C. W. "Perceptual Defense as a Function of Unacceptable Needs," J. Abnorm. Soc. Psych., 1951, 46, pp. 557-64.
- Farnsworth, Dana L. "Sexual Morality and the Dilemma of the College," Am. J. Orthopsychiat., 1965, 35, 675-81.
- Fisher, Seymour, and Fisher, Rhoda. "Style of Sexual Adjustment in Disturbed Women and its Expression in Figure Drawings," J. Psych., 1952, 34, pp. 169-79.
- Forer, Bertram R. "A Structured Sentence Completion Test," J. Proj. Tech., 1950, 14, pp. 15-30.
- Goldberg, Philip A. "A Review of Sentence Completion Methods in Personality Assessment," in Handbook of Projective Techniques, Bernard I. Murstein (ed.). New York and London: Basic Books Inc., 1965.
- Guinan, James, and Hurley, John. "An Investigation of the Reliability of Human Figure Drawings," J. Proj. Tech., 1965, 29, pp. 300-4.
- Hanfman, Eugenia, and Getzels, J. W. "Studies of the Sentence Completion," J. Proj. Tech., 1953, 17, pp. 280-94.
- Kamano, Dennis. "An Investigation on the Meaning of Human Figure Drawings," J. Clin. Psych., 1960, 10, pp. 429-30.
- Kinsey, Alfred C., Pomeroy, Wardell B., Martin, Clyde E., and Gebhard, Paul H. Sexual Behavior in the Human Female. New York: Pocket Books, Inc., 1965.
- Lazarus, Richard S. and McCleary, Robert A. "Autonomic Discrimination Without Awareness: A Study in Subception," Psych. Rev., 1951, 58, pp. 113-122.
- Levy, Sidney. "Figure Drawings as a Projective Test," in Projective Psychology, Abt, L. E. and Bellak, L. (ed.). New York: Alfred A. Knopf., 1950.
- Machover, Karen. Personality Projection in the Drawing of the Human Figure. Springfield, Ill.: Charles C. Thomas, 1949.
- McLinnies, Elliott. "Emotionality and Perceptual Defense," Psych. Rev., 1949, 56, pp. 244-251.
- Moore, M. "The Perception of Violence as a Function of Age and Sex," Unpublished thesis, 1964.

- Nelson, Sherman E. "Psychosexual Conflicts and Defenses in Visual Perception," J. Abnorm. Soc. Psych., 1955, 51, pp. 427-433.
- Newcomb, Theodore. "Recent Changes in Attitudes Towards Sex and Marriage," Am. Sociol. Rev., 1937, 2, pp. 659-667.
- Pettigrew, T., Allport, G., and Barnett, E. "Binocular Resolution and Perception of Race in South Africa," Brit. J. Psych., 1958, 49, pp. 265-278.
- Pope, H., and Knudsen, D. "Premarital Sex Norms, the Family and Social Change," J. Marr. Fam., 1965, 27, pp. 314-323.
- Postman, Leo, Brenson, Wanda, and Grapper, George. "Is There a Mechanism of Perceptual Defense?" J. Abnorm. Soc. Psych., 1953, 48, pp. 215-224.
- Postman, Lee. "On the Problem of Perceptual Defense," Psych. Rev., 1953, 60, pp. 298-306.
- Putoff, O. "A Study of the Perception of Violence," Research Newsletter, 1962, 4, (1-2). A quarterly publication of the California Department of Correction.
- Reiss, Ira L. "Sexual Renaissance in America," J. Soc. Issues, 1966, xxi.
- Rommetveit, R. and Toch, H. H., with Dagmund Svendsen. "Effects of 'Contingency' and 'Contrast' Contexts on the Cognition of Words in a Stereoscopic Rivalry Situation," Unpublished paper, 1964.
- Rosenstock, Irwin M. "Perceptual Aspects of Repression," J. Abnorm. Soc. Psych., 1951, 46, pp. 304-315.
- Rosenzweig, Saul. "The Photoscope as an Objective Device for Evaluating Sexual Interest," Psychosomatic Med., 1942, 4, pp. 150-158.
- Rubin, I. "Transition in Sex Values, - Implications for the Education of Adolescents," J. Marr. Fam., 1965, 27, pp. 185-189.
- Sacks, Joseph M. and Levy, Sidney. "The Sentence Completion Test," in Projective Psychology, Abt, L. E. and Bellak, L. (ed.). New York: Alfred A. Knopf., 1950.

- Shelly, L. and Toch, H. H. "The Perception of Violence as an Indicator of Adjustment in Institutionalized Offenders," J. Crim. Law. Crim. and Pol. Sci., 1962, 53, pp. 463-469.
- Sherman, Lewis J. "Sexual Differentiation of Artistic Ability," J. Clin. Psych., 1958, 14. pp. 170-171.
- Sipprelle, Carl, and Swensen, Clifford. "Relationship of Sexual Adjustment to Certain Sexual Characteristics of Human Figure Drawings," J. Consult. Psych., 1956, 20, pp. 197-198.
- Sorokin, Pitirim A. The American Sex Revolution. Boston, Mass.: Porter Sargent, 1956.
- Stein, Morris. "Use of the Sentence Completion Test for the Diagnosis of Personality," J. Clin. Psych., 1947, 3, pp. 47-56.
- Stone, Herbert K. and Dellis, Nicholas P. "An Exploratory Investigation into the Levels Hypothesis," J. Proj. Tech., 1960, 24, pp. 333-340.
- Swensen, Clifford H. "Sexual Differentiation on the Draw A Person Test," J. Clin. Psych., 1955, 11, pp. 37-40.
- Swensen, Clifford H. and Sipprelle, Carl N. "Some Relationships Among Sexual Characteristics of Human Figure Drawings," J. Proj. Tech., 1956, 20, pp. 224-226.
- Toch, H. H. and Schultz, W. "Readiness to Perceive Violence as a Result of Police Training," Brit. J. Psych., 1961, 52, pp. 389-393.
- Walters, Paul A. "Promiscuity in Adolescence," Am. J. Orthopsychiat., 1965, 35, pp. 670-675.

APPENDICES

APPENDIX A

Distribution of Number of Test Slides Perceived

<u>Number Seen</u>	<u>Freshmen</u>	<u>Sophomores</u>
0	0	0
1	1	0
2	0	0
3	1	0
4	0	0
5	6	1
6	3	8
7	6	5
8	7	5
9	5	7
10	4	5
11	1	3
12	1	1
13	0	0

APPENDIX B

SUMMARY OF Z TESTS FOR MEANING ON THE TEST SLIDES AND THEIR CONTROLS

<u>Slide</u>	<u>Level of Significance</u>	
	<u>Freshmen</u>	<u>Sophomores</u>
excite erection, election, other	N.S. (trend to election)	N.S. (trend to election)
building erection, election, other	N.S.	.05 (in favor of election)
vote election, erection, other	>.001 (in favor of election)	.025 (in favor of election)

Note the strong pull of election

pregnant coed, cold, other	.005 (cold)	>.025 (cold)
studious coed, cold, other	N.S. (trend to coed)	N.S. (trend to coed)
ice cold, coed, other	>.001 (cold)	>.001 (cold)

Meaning works except when opposed to sex content.

kiss breast, breaks, other	N.S. (trend to breast)	>.025 (breast)
bra breast, breaks, other	.005 (breast)	N.S. (trend to breast)
drop breaks, breast, other	N.S. (trend to breaks)	N.S.
fondle breast, grease, other	.05 (breast)	N.S. (trend to breast)
bacon grease, breast, other	N.S. (trend to greast)	N.S. (trend to grease)

Generally, meaning works.

make love, lost, other	>.025 (love)	N.S. (trend to love)
in love, lost, other	.005 (love)	.005 (love)
hairpin love, lost, other	.005 (love)	N.S. (trend to love)

'Love' is dominant.

<u>Slide</u>	<u>Freshmen</u>	<u>Sophomores</u>
sleep with, wait, other	.005 (with)	.05 (with)
talk with, wait, other	>.005 (with)	>.025 (with)
short wait, with, other	>.05 (with)	N.S. (trend to wait)

Note the pull to 'with.'

become pregnant, fragrant, other	.005 (pregnant)	>.005 (pregnant)
mother pregnant, fragrant, other	>.005 (pregnant)	N.S. (pregnant)
smell fragrant, pregnant, other	>.025 (pregnant)	.005 (pregnant)

Strong pull to 'pregnant.'

overdue period, perish, other	.05 (perish)	N.S. (trend to period)
comma period, perish, other	N.S. (trend to period)	N.S. (trend to period)
insects perish, period, other	N.S. (trend to perish)	N.S. (trend to perish)

Meaning tends to work except in the test slide
in freshmen where meaning is avoided.

sex penis, pines, other	N.S. (trend to penis)	.05 (penis)
man penis, pines, other	N.S. (trend to penis)	N.S. (trend to penis)
needles pines, penis, other	.005 (other)	>.001 (other)
touch penis, pines, other	N.S. (trend to penis)	>.005 (penis)
tree pines, penis, other	N.S. (trend to other)	N.S. (trend to pines)

Quite a few choices fall into 'other' on these combinations
due probably to the great structural similarity between
'penis' and 'pines.'

tree bark, bank, other	N.S. (trend to bark)	N.S. (trend to bark)
money bank, bark, other	.005 (bank)	N.S. (trend to bank)
string loop, coop, other	.005 (loop)	>.025 (loop)
chicken coop, loop, other	.005 (loop, other)	N.S. (trend to coop)

Meaning generally works.

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