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A Unidimensional Scaling Analysis of Pornographic Stimuli

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A UNIDIMENSIONAL SCALING ANALYSIS OF PORNOGRAPHIC STIMULI

by

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This thesis submitted by Gary R. Hackney in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota is hereby approved by the Faculty Advisory Committee under whom the work has been done.

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Signature Gary Hackney

Date July 5 1972

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Pornography has had a varied and interesting history which dates back to antiquity. Its popularity appears not to have diminished in the past 3000 years, in fact the recent level of interest in the subject was exemplified when President Lyndon Johnson formed a special committee (Commission on Obscenity and Pornography) in 1967 to study pornography and obscenity. This Commission directly and indirectly initiated many scientific studies in the field of pornography.

Subjective judgments of pornography have been scaled before. The kinds of scaling approaches employed in these scale measurement developments are open to criticism and alternative scaling approaches have been proposed. The purpose of this investigation was to employ some alternative scaling methods in a scaling analysis of a limited set of pornographic stimuli.

Judges were required to perform four different judgmental tasks--A Thurstonian pair-comparison task, an absolute judgment task, a magnitude estimation task, and a similarity estimation judgmental task. Results indicated that the utilized pornographic stimuli were readily scalable and that the interscale and intrascale reliabilities were high. Further data analyses indicated that certain stimuli could be regarded as clustering together. These stimuli cluster groups were labeled as pornographic, nonpornographic, and transition point. To account for the presently seen transition point, and a phenomenon of pornography in general, an availability hypothesis was formulated.

CHAPTER I

INTRODUCTION

History of Pornography

Pornography is defined by Webster's New International Unabridged Dictionary (3d ed.) as follows: "of or relating to licentious art or literature: pandering to base appetite or desire: descriptive or suggestive of lewdness." According to this definition, pornography would not be expected to be unique in our culture; in fact, various archeological investigations have discovered evidence which indicate that pornography has been present for centuries. The sexual scenes on the walls of Pompeiian Villas, the writings of the Greek and Roman poets, the extremely realistic erotic paintings on the walls of the Ajanta cave temple in India, the Venus of Milo, and the classic Hindu erotica like the Arango Ranga and the better known Kamasuta--all, according to the above definition, can be considered pornographic (Kronhausen, 1964).

According to the Report of the Commission on Obscenity and Pornography (1970), censorship of pornography was present in England certainly as early as 1538 under the rule of Henry the VIII. By 1642, the English parliament had abolished theatrical playhouses giving pornographic plays. In 1720, a man named Curl was prosecuted for writing a "pornographic" book, however, by the late 18th century, pornographic literature was freely available throughout England. In 1821, a United States court of law prosecuted and convicted the author of Fanny Hill

for writing and publishing pornographic literature. In 1842, the United States Congress passed a custom's law prohibiting anyone from importing "pornographic" prints, paintings, lithographs, or engravings. This law was obviously aimed at the predecessors of the French postcard trade.

Recently there has been a revived interest in the area of pornography. Just in the past few years, two Scandinavian countries have dropped all regulations and laws dealing with pornography. These countries are now claiming that the incidents of sex-related crime have diminished. In the United States, legal restrictions governing the sale and distribution of pornography have been greatly relaxed. Movies, novels, and even television greatly reflect society's revived interest in pornographic presentations. This revised interest was exemplified when President Lyndon Johnson, in 1967, formed a special committee (The Commission on Obscenity and Pornography) to study pornography and obscenity. This committee found a great deal of supposition but very few facts dealing with the matter of pornography. As a consequence, they instigated and supported research in this area (the committee's report was completed in President Nixon's administration and published in 1970). The studies initiated by this commission represent the majority of the psychological research conducted in the field of pornography. The reason for this shortage of formal investigation seems to be that pornography is considered taboo both by the common man and by the scientific researcher.[1]

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[1]An example of this phenomenon happened to Dr. LeRoy Stone, this writer's major professor. While explaining this present investigation to a visiting psychologist, Dr. Stone was told by this visiting psychologist that he (Dr. Stone) must have academic tenure (for professional safety) at his University even to attempt to investigate an area such as pornography (Personal Communication, Dr. LeRoy Stone, November 23, 1971).

Recent Pornographic Investigations

The studies directly undertaken by the Commission and the studies the Commission Report influenced indirectly have dealt mostly with the matter of sexual stimulation and arousal in relation to pornographic stimuli. In one of the more early investigations, Levitt and Brady (1965) studied the degree of sexual stimulation of 68 male graduate students. The graduate students were presented with three sets of 19 photographs depicting various sexual activities. Their task was to rate these photographs on a numerical rating scale where 0 (zero) represented sexually nonstimulating and 5 (five) represented highly sexually stimulating. They computed mean sexual stimulation values and ranked their 19 photographs from least to most stimulating. Results relevant to the present investigation showed that a depicted nude female was ranked to be more sexually arousing than one depicting female masturbation.

In a more recent investigation, Amoroso (1970) used pornographic slides to study stimulus characteristics which influence judgments pertaining to pornography. Using college students as judges, he found a high positive correlation between pornography ratings and ratings of sexual stimulation (rho = +.73). He and his colleagues found that sexual themes judged as most pornographic were, in order from most to least stimulating: fellatio, ventral-dorsal coitus, cunnilingus and ejaculation. They also found a high negative correlation between pornography ratings and "pleasantness" ratings (rho = -.70). "Pleasantness," however, was seemingly unrelated to ratings of sexual stimulation. This would seem to indicate that material which is highly stimulating as well as quite "unpleasant" is seen as highly pornographic.

Byrne and Lamberth (1970) carried out an investigation which used visual, texual, and imagined themes. Married couples were employed as judges in this investigation. These judges found that the most pornographic themes were homosexual anal intercourse, homosexual fellatio, group sex, male sadism toward females, and homosexual cunnilingus. Themes judged to be both pornographic and sexually stimulating were as follows: group sex, heterosexual cunnilingus and fellatio, female masturbation, and homosexual cunnilingus. In general, this group (with established heterosexual commitments) regarded depictions of heterosexual coitus as arousing and not pornographic, and judged homosexual depictions to be pornographic and not arousing. This particular study suggests that while characteristics of the stimulus determine pornography ratings, individual sexual disposition seems to determine other reactions to stimulus characteristics.

Other studies in the area of pornography have attempted to isolate the characteristics of erotic photographs. Higgins and Katzman (1969) presented 90 photographs to over 300 adults. These subjects were asked, "In your opinion, how obscene is this photograph?" Results showed that several photographic characteristics were associated with obscenity judgments. The photographs rated as obscene had the following characteristics: they were black and white rather than colored; they were aesthetically unappealing; they portrayed provocative backgrounds (such as bedrooms and bathrooms); and the model was regarded by the judges as unattractive. Total nudity with the pubic area exposed was characteristic of almost all photos judged as obscene.

Katzman (1970), in a follow-up investigation, found that characteristics such as clothing, pose, attractiveness, photography, body

exposure, and background were all highly related to obscenity ratings. These investigators found that the factor most highly connected with obscenity judgments was the degree of nudity thought to be acceptable to most other people, not just nudity per se. They also found that ratings of "sexually stimulating" were associated with "obscenity" ratings (male ratings: $r = +.54$; female ratings: $r = +.33$). Three other studies have also examined the stimulus characteristics which determine judgments of "pornography" (Mosher, 1970; Byrne & Lamberth, 1970; Amoroso, 1970). These investigations found that depictions of oral sexuality and homosexuality are judged "to be more pornographic than heterosexual coitus" (The Report of the Commission on Obscenity and Pornography, 1970, p. 251).

A seemingly popular investigative pursuit in the area of pornography study has been the characteristics of the judges involved in the judgment of pornographic stimuli. Occupation and education have been found to be significantly associated with judgments of pornography (Higgins & Katzman, 1969). These authors reported that, of six occupational groups, policemen and psychiatrists were significantly less likely to judge sexual stimuli as obscene or sexually stimulating than were probationary police, physicians, lawyers, and teachers. It was also found that persons with less than 16 years of formal education rated photos as more obscene and more sexually stimulating than did persons with graduate and professional training. Among the less educated judges, photographs which were rated as obscene were also judged to be sexually stimulating. More highly educated judges, however, seemingly rated obscenity independently of sexual stimulation.

Abse (1955), Byrne and Lamberth (1970), and Eliasberg and Stuart (1961) all report that proneness to judge stimuli as being pornographic is strongly related to authoritarianism.

A study completed by Wiggins, Wiggins and Conger (1968) employed nude female silhouettes as stimuli. These silhouettes were constructed in such a manner that three characteristics--breasts, buttocks, and legs--could be independently varied. Variation in the size of these body parts was considered in reference to a standard (average) figure. The judges, 95 college students, rated the silhouettes on a seven-point preference rating scale. Having completed this, each subject was given the Edward's Personality Preference Schedule, the MMPI, a value test representing four goals of life, a semantic differential for body parts, and a biographical interview. The data were analyzed and the following relationships were noted: preference for large female figures was associated with a need for achievement; preference for the standard figure was associated with heterosexuality and a tendency to be disorganized in personal habits; preference for the small figure was associated with perseverence. Men who preferred large-breasted figures had masculine interests and a need for heterosexual contact. Those who preferred small breasts tended to hold fundamentalist religious beliefs and tended to be mildly depressed. Preference for large buttocks was characterized by a strong need for social participation.

In summary, matters of arousal, characteristics of pornographic stimuli, and characteristics of judges seems to predominate in the scientific literature dealing with the topic of pornography. Little formal investigation has been carried out in the area of variability of classifications of pornographic stimuli. Subjective judgments of pornography

have been scaled before. The kind of scaling approach employed in these scale measurement developments has been open to criticism (e.g., Stevens, 1966; Guilford, 1954) and alternative scaling approaches have been proposed. Therefore, it was the purpose of this investigation to employ some alternative scaling methods in a scaling analysis of pornographic stimuli.

Scaling

The field of psychological scaling is not without controversy. The credit for the first formal development of scaling methodology is usually given to G. T. Fechner (1801-1887); however, more modern developments in this area are generally reserved for L. L. Thurstone (1887-1955) and S. S. Stevens (1906-Present). One of Thurstone's major contributions, which is relevant to this investigation, was related to his indirect method of obtaining a judgment scale. This method requires only a minimum amount of information from a judge. The task presented to the judge is essentially a rank order task, and the major concern of the investigator is with variability, either over trials for a given subject or over subjects for a given trial. S. S. Stevens, on the other hand, made an important contribution to scaling methodology in the form of developing methods in which the judge reports quantitative estimates based on subjective evaluations. This places the burden of the scale construction on the judge and represents a straight forward subjective, yet direct, approach to scaling methodology (Ekman & Sjöberg, 1965).

The four scaling approaches to be used in the present investigation represent both the direct and indirect methodologies. Cases III

and V of Thurstone's Law of Comparative Judgment (Guilford, 1954), and the absolute scaling paradigm (Guilford, 1954) represent the indirect methods. The magnitude estimation and similarity estimation scaling paradigms represent the direct method.

The Thurstonian approach (Guilford, 1954) requires judges to make subjective judgments on a chosen judgmental unidimension, using a pair-comparison presentation format. The absolute scaling judgmental scheme (Guilford, 1954) simply requires judges to place the presented stimuli into prescribed ordered categories. These categories may be dichotomies, tricohotomies, or any number of categorical partitions. The similarity estimation approach (Ekman, 1958; Ekman and Sjöberg, 1965) requires that the judges, using a prescribed scale, estimate the degree of similarity between the stimuli which are presented two at a time (pair-comparisons). Finally, the magnitude estimation approach (Guilford, 1954) requires judges to compare each stimulus with a presented standard and report the subjective ratio that appears to exist between the stimulus and the standard. Generally, such ratings take the form of numbers; the standard is given a fixed value (a number), and the remainder of the stimuli are numerically compared to that standard. Both the direct and indirect scaling paradigms can and have been used on a wide variety of stimuli (e.g., Ekman, 1965; Eisler, 1960; Stevens & Galanter, 1957; Stevens, 1965; Stone & Sinnett, 1968). Furthermore, when applied to the stimuli used in these above cited investigations, these scaling approaches appear very versatile.

It is the purpose of this study to investigate the comparability of results between various approaches using in scaling

pornographic stimuli. To deal with all of what could be considered pornographic would be impractical. It was therefore decided to limit the present investigation to a reduced segment of pornography. The segment under investigation included only pictorial stimuli portraying female models. Furthermore, these female models were presented singularly (that is, one single female model per stimulus picture) and were placable along a continuum of dress-undress and/or activity-position. In the investigation of the scalability of pornography, the various scaling approaches were compared in order to answer the following three questions: (1) Is there sufficient judgmental reliability to justify the consideration of a unidimensional subjective pornographic scale? (2) What is the interscale reliability for several developed subjective pornographic scales? (3) Which stimuli are associated with the highest pornographic ratings and what stimulus characteristics were associated with these high ratings?

CHAPTER II

METHODOLOGY

Judges

The judges were 100 undergraduates obtained from an introductory psychology course at the University of North Dakota. The judges volunteered for the experiment as part of a psychology course requirement. Only male judges were used in order to eliminate any intersex-scale differences which may have been present if both male and female judges were used. Males were also chosen as judges because it was believed that their level of interest and motivation to participate in this type of experiment would be greater than for females. The level of motivation to participate was found to be extremely high. Many volunteers had to be turned away because the desired number of judges had already been selected. The experimental data were obtained in group sessions (groups ranged from 8 to 12 judges). The average group size was 10 judges.

Procedure

Each group of judges was required to perform four different judgmental tasks--a pair-comparison task, an absolute judgment task, a magnitude estimation task, and a similarity estimation task. The order of presentation of these four tasks was randomly varied for each group.

Judges were asked to be seated. The purpose of the experiment was then given to the group as follows:

> The purpose of this experiment is to attempt to do a scaling analysis of pornographic pictures. This will be done through the development of five pornographic scales which you, as judges, will create.

Each judge was then given a nine-page response booklet. On the cover of this booklet was a release of responsibility form (see Appendix A) which all judges were asked to read, consider, and sign. If any judge felt he could not sign the form, he was allowed to absent himself from participating in the experiment. However, this never occurred.

The remainder of the judgment-response booklet contained nine pages. Three pages were used for the Thurstonian pair-comparison judgment task. Prominently displayed on each of the 11 stimuli were alphabetical coded letters. On the top of the first of these three pages were the following instructions: "Circle the letter of the picture you believe to be the more pornographic of the two." Following these instructions were pairs of alphabetical coded letters corresponding to the lettered pairs of presented stimuli. N, the number of stimuli, was equal to 11, and the number of pair-comparisons presented totaled 55. To eliminate position and/or order effects of the paired stimuli, on the judges, the order was counterbalanced according to Phillip's (1964) model. One page was used for the absolute judgment task. Here the instructions read, "Rate each picture as either pornographic (P)or nonpornographic (N)." This was followed by 11 blank spaces corresponding to the 11 stimulus pictures. One page was used for the magnitude estimation judgment task. The instructions were as follows:

> On a pornographic scale ranging from 0 (zero) through infinity, picture F has been given a pornographic rating of 50. Rate the other ten pictures, comparing them with picture F on the same pornographic scale. For example, if you thought picture A was twice as pornographic as picture F you would give it a rating of 100; if you thought picture A was only half as pornographic as picture F, you would rate it as 25. Do this for all ten pictures.

This was followed by 10 blanks corresponding to the 10 remaining stimuli. Two pages were used for the similarity estimation tasks. The first page included the following instructions:

> This part of the study represents an attempt to perform a similarity analysis of eleven pictures. Would you please estimate the degree of overall similarity which you feel exists between each pair of pictures. Use a numbering scheme where 0 (zero) denotes no similarity at all and 100 denotes identity. Please attempt to base your estimate on your immediate impressions of similarity; that is, estimate the degree of similarity as it first comes to mind. In other words, your immediate perceived similarity.
>
> For example, let us estimate the degree of similarity in the meaning of the two word-pairs happy-content and happy-sad. Since the degree of similarity between happy and content is quite high, you would undoubtedly estimate the degree of immediately perceived similarity to be correspondingly high (with perhaps an 85). On the other hand, happy and sad are quite dissimilar (that is, their degree of similarity is low),

and you might estimate their degree of overall similarity to be perhaps 7. In like manner, you are to estimate the similarity as immediately perceived between all paired pictures presented on the screen.

Would you write your estimate on the line provided for you on your worksheet?

The next page included 55 blanks corresponding to the 55 pairs of stimuli presented.

Apparatus

The equipment used in the experiment consisted of 11 - two inch by two inch, black and white photographic transparencies, two Kodak Carousel 800 slide projectors with remote controls and rotary slide holders. The 11 stimulus slides depicted female figure models in various activities and various states of dress and undress (see Appendix B). These slides were placed in the rotary slide holder of the projector according to the random order obtained from Phillips (1964). Once the experiment began, stimuli could be presented efficiently by means of the remote control switches. For the pair-comparison, similarity estimation, and magnitude estimation approaches, both projectors were used in combination so as to depict the stimulus pairs. For the absolute scaling paradigm, only a single projector was required.

The order of the tasks was varied for each group; however, the order of stimulus presentation within each task remained constant. For each scaling task, the judges were asked to follow along as the experimenter read aloud the instructions. The experimenter then asked if there were any questions. Questions were answered, the lights were

lowered and the particular task presentation begun. Upon finishing the series of the four judgmental tasks, the booklets were collected and the subjects were thanked for their participation.

CHAPTER III

RESULTS

Both Case V and Case III of the Thurstonian indirect scaling paradigms were analyzed according to Thurstone's Law of Comparative Judgment (1927). The analysis of these two Thurstonian scaling paradigms was facilitated by the use of a computer program (Crano & Cooper, 1969). The remainder of the analyses were hand calculated using an electronic desk calculator. The results of the Case V solution are shown in Table 1. Mosteller's (1951) test for internal consistency for such a developed

TABLE 1

SCALING RESULTS OF THE CASE V SCALING APPROACH

Stimulus	Scale Value*
A	0.618
B	2.683
C	2.8312
D	2.756
E	0.000
F	1.252
G	0.222
H	1.887
I	1.059
J	1.123
K	0.947

*Higher scale values are associated with stimuli judged as more pornographic.

scale was employed (χ^2 = 28.18, df = 45, p ≅ .98). According to Mosteller's logic such a nonsignificant χ^2 would indicate that one or all of the assumptions of the particular scaling model under consideration were probably being met. The derived scale can be regarded as internally consistent and therefore acceptable. The obtained χ^2 value indicates that Thurstone's Case V scaling model does correspond very well with the obtained judgments. The derived scale can be regarded as generally acceptable.

The results of the Case III approximation of Thurstone's Law of Comparative Judgment can be seen in Table 2. Mosteller's test for internal consistency was also employed (χ^2 = 14.29, df = 35, p ≅ .99). The obtained χ^2 was obviously nonsignificant. One can infer that Thurstone's Case III fits the pornographic judgments well. Because of the nonsignificant χ^2, it can be concluded that this scaling model produces a resultant scale which has high internal consistency.

TABLE 2

SCALING RESULTS OF THE CASE III SCALING APPROACH

Stimulus	Scale Value*
A	1.624
B	4.223
C	5.5871
D	4.448
E	0.000
F	2.324
G	0.712
H	2.884
I	2.103
J	2.164
K	1.947

*Higher scale values are associated with stimuli judged as more pornographic.

The method of absolute scaling, the magnitude estimation approach, and the similarity estimation approach were also utilized. The absolute scale was derived from proportion values obtained by noting the number of subjects who stated that a particular stimulus slide was pornographic. These proportions were transformed into normal deviate Z scores; these Z scores were ordered from the largest negative to the largest positive. The resultant ordered Z scale constituted the derived scale (see Table 3).

TABLE 3

SCALING RESULTS OF THE ABSOLUTE SCALING APPROACH

Stimulus	Proportion Judged as Pornographic	Z Score Values*
A	.13	-1.13
B	.86	+1.08
C	.96	+1.75
D	.89	+1.23
E	.06	-1.56
F	.23	-0.74
G	.11	-1.23
H	.58	+0.20
I	.17	-0.95
J	.23	-0.74
K	.23	-0.74

*Higher scale values are associated with stimuli judged as more pornographic.

In the computation of the magnitude estimation scale, all of the magnitude estimations obtained from the judges were transformed

into common logarithms. For each of the 11 stimuli a mean of the common logarithms was then computed. The anti-logarithm for each of the 11 mean-logarithms was found, the smallest anti-logarithm was then set equal to unity, the remaining 10 stimuli were proportionately transformed, and the resulting ratio scale was formed (see Table 4).

TABLE 4

SCALING RESULTS OF THE MAGNITUDE ESTIMATION SCALING APPROACH

Stimulus	Magnitude Estimation Scale	Adjusted Magnitude Estimation*
A	39.24	2.110
B	114.59	6.164
C	122.39	6.583
D	117.72	6.332
E	18.59	1.000
F	50.00	2.689
G	19.81	1.065
H	87.34	4.650
I	52.04	2.799
J	53.64	2.885
K	61.61	3.314

*Higher scale values are associated with stimuli judged as more pornographic.

The similarity estimation scale was derived from the judge's estimations of degree of similarity shared between pairs of stimuli. A mean of the similarity estimates was computed for each of the 55

pairs of pictures. Using a scaling strategy described by Ekman and Sjöberg (1965), the mean similarity estimates were cast into a similarity matrix and were then transformed to a ratio matrix by means of a derived formula. In Ekman and Sjöberg's words:

> It has been shown in several investigations by Eisler, Ekman and coworkers, that Sij = 2Ri/(Ri+Rj) where Sij is the degree of perceived similarity (on a scale ranging from 0 to 1, or identity) and Ri and Rj are the scale values of the two percepts entering into the comparison (p. 461).

Ekman and Sjöberg believe that since such a relationship has been repeatedly observed, the ratio of Rj/Ri could be obtained in the following manner:

$$Rj/Ri = (2-Sij)/Sij$$

In this manner a ratio matrix can be derived from a matrix of similarity estimations. The rows and columns of this ratio matrix are summed ($\Sigma r, \Sigma c$), T is found (T = sum of all values in the matrix). The $T/\Sigma c$ values are computed for each column. From this a scale is derived by setting the lowest $T/\Sigma c$ value equal to 1.0000 and proportionately altering the remaining $T/\Sigma c$ values. The derived ratio matrix and the resulting scale can be seen in Table 5.

The five developed scales appear remarkably similar. In Table 6 these five subjective scales are shown and are compared. In Table 7 the intercorrelations between all of the derived scales are shown. The average interscale correlation was computed ($\bar{r}$ = .97). Both these tables support the contention that high interscale relationships were obtained between these five developed subjective pornography scales.

A graphic representation of the interscale relations was also made. These interscale relations are shown in Figures 1-10. Apparent

TABLE 5

RATIO MATRIX AND SCALING RESULTS FROM THE SIMILARITY ESTIMATION SCALING APPROACH

	E	G	A	F	I	J	K	H	B	D	C	Total
C	10.1172	11.2175	8.0050	6.7519	5.5295	5.6778	6.5019	2.2744	1.5552	1.3329		58.9628
D	9.2617	9.1677	6.9333	4.6148	5.4391	5.6467	4.6481	1.7685	1.4169		.7518	48.6482
B	8.7371	9.3734	7.1867	5.6979	5.1766	5.3653	5.3492	2.0501		.7042	.6410	50.2840
H	4.7620	3.9912	3.4296	2.4494	3.0633	2.7771	3.3956		.4878	.5649	.4405	25.3553
K	2.0826	2.0143	1.8612	1.6748	1.6075	1.7843		.2941	.1869	.2150	.1538	11.8745
J	2.4054	2.0830	1.6863	1.6330	1.7693		.5617	.3597	.1865	.1760	.1760	11.0375
I	1.9205	2.0840	1.6427	1.5018		.5649	.6211	.3267	.1930	.1838	.1808	9.2193
F	2.1250	2.1867	1.7403		.6666	.6134	.5988	.4081	.1754	.2169	.1481	8.8793
A	1.5546	1.6274		.6802	.6097	.5917	.5375	.2915	.1390	.1443	.1250	6.3009
G	1.4426		.6134	.4566	.4807	.4807	.4975	.2506	.1067	.1090	.8928	5.3305
E		.6944	.6451	.4716	.5208	.4166	.4807	.2100	.1144	.1079	.0990	3.7605
Total	44.4084	44.4395	33.8434	25.9320	24.8631	23.9185	23.2089	8.2337	4.5618	3.7549	3.6088	240.6528
$T/\Sigma c$	5.4190	5.4152	7.1107	9.2801	9.6791	10.0613	10.3689	29.2277	52.7539	64.0903	66.6849	
Scale	1.0007	1.0000	1.3131	1.7137	1.7873	1.8579	1.9147	5.3973	9.7418	11.8352	12.3143	

Higher scale values are associated with stimuli judged as more pornographic.

TABLE 6

STIMULUS COMPARISON OF THE FIVE DERIVED PORNOGRAPHIC SCALES*

Scale Values	Case V	Case III	Absolute	Magnitude Estimation	Similarity Estimation
-2.00			E		
-1.50			A G		
-1.00					
-0.50			I		
0.00	E G	E	FJK		
0.50	A K I J	G			
1.00	F H		B H	E G	GE
1.50			D		A
2.00		A K	C	A	F
2.50		F I J			IJK
3.00	B C D	H		F J I K	
3.50					
4.00		B			
4.50		D		H	
5.00					
5.50		C			H
6.00					
6.50				B D C	
7.00					
7.50					
8.00					
8.50					
9.00					B
9.50					
10.00					
10.50					
11.00					D
11.50					
12.00					
12.50					C

*Cases III, V and the Absolute scales may be assumed to possess interval measurement properties while the magnitude and similarity estimation scales may be assumed to possess ratio scale properties.

TABLE 7

RESULTS OF THE INTERSCALE CORRELATIONAL ANALYSIS OF THE FIVE SCALING METHODS

	Absolute	Case III	Case V	Magnitude Estimation	Similarity Estimation
Absolute		.97	.98	.97	.98
Case III	.97		.98	.98	.93
Case V	.98	.98		.99	.94
Magnitude Estimation	.97	.98	.99		.92
Similarity Estimation	.98	.93	.94	.92	
Mean Correlations	.98	.97	.98	.97	.95

Mean Interscale Correlation = .97

linear relationships can be inferred from the interscale plots shown in Figures 3, 4, 7, 8, 9 and 10. These linear relationship representations can be interpreted as indicating high interscale reliability. The only noticeable deviations from linearity with these graphic representations seems to be in the middle ranges of the scales. According to Guilford (1954) this phenomenon is not atypical and would seem to indicate that the interscale reliability diminishes in the middle of these scales. Figures 1, 2, 5 and 6 depict interscale relationships which are seemingly nonlinear (i.e., curvilinear).

Fig. 1.--Graphic representation of the relationship between the derived Magnitude Estimation Scale and the derived Similarity Estimation Scale.

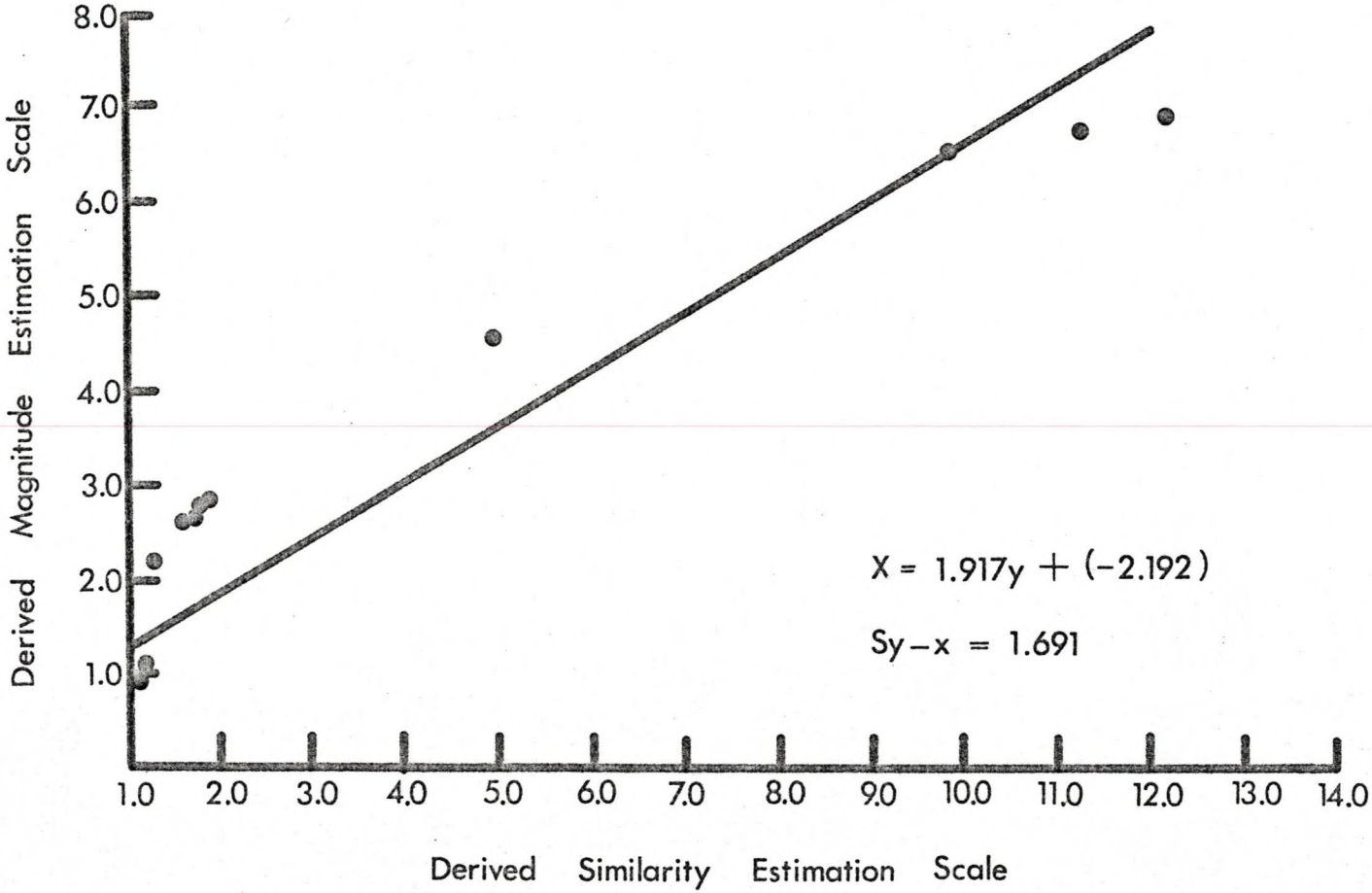

8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
Derived Magnitude Estimation Scale
X = 1.917y + (-2.192)
Sy-x = 1.691
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
Derived Similarity Estimation Scale

Fig. 2.--Graphic representation of the relationship between the derived Case V Scale and the derived Similarity Estimation Scale.

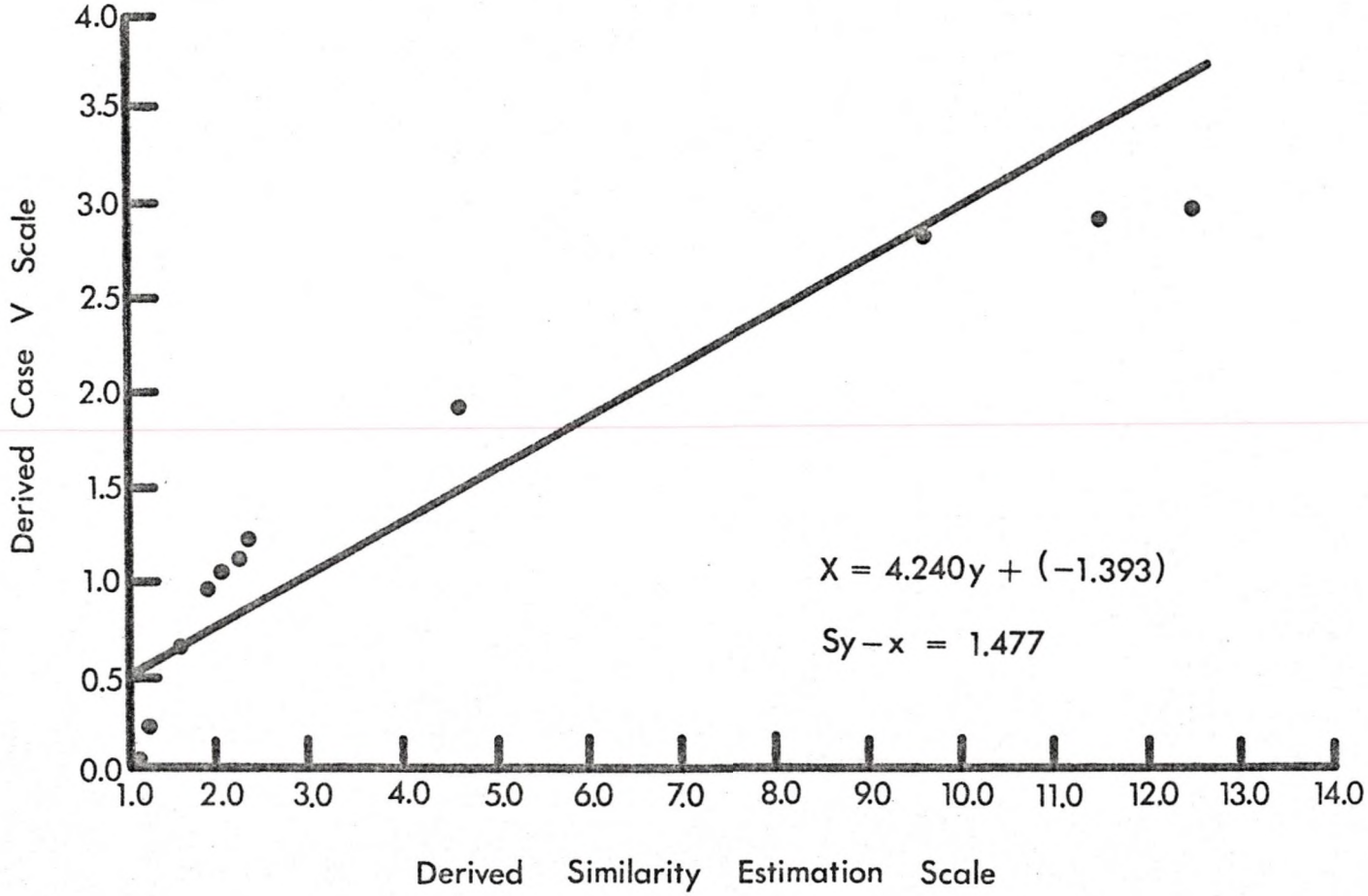

4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Derived Case V Scale
X = 4.240y + (−1.393)
Sy−x = 1.477
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
14.0
Derived Similarity Estimation Scale

Fig. 3.--Graphic representation of the relationship between the derived Case V Scale and the derived Magnitude Estimation Scale.

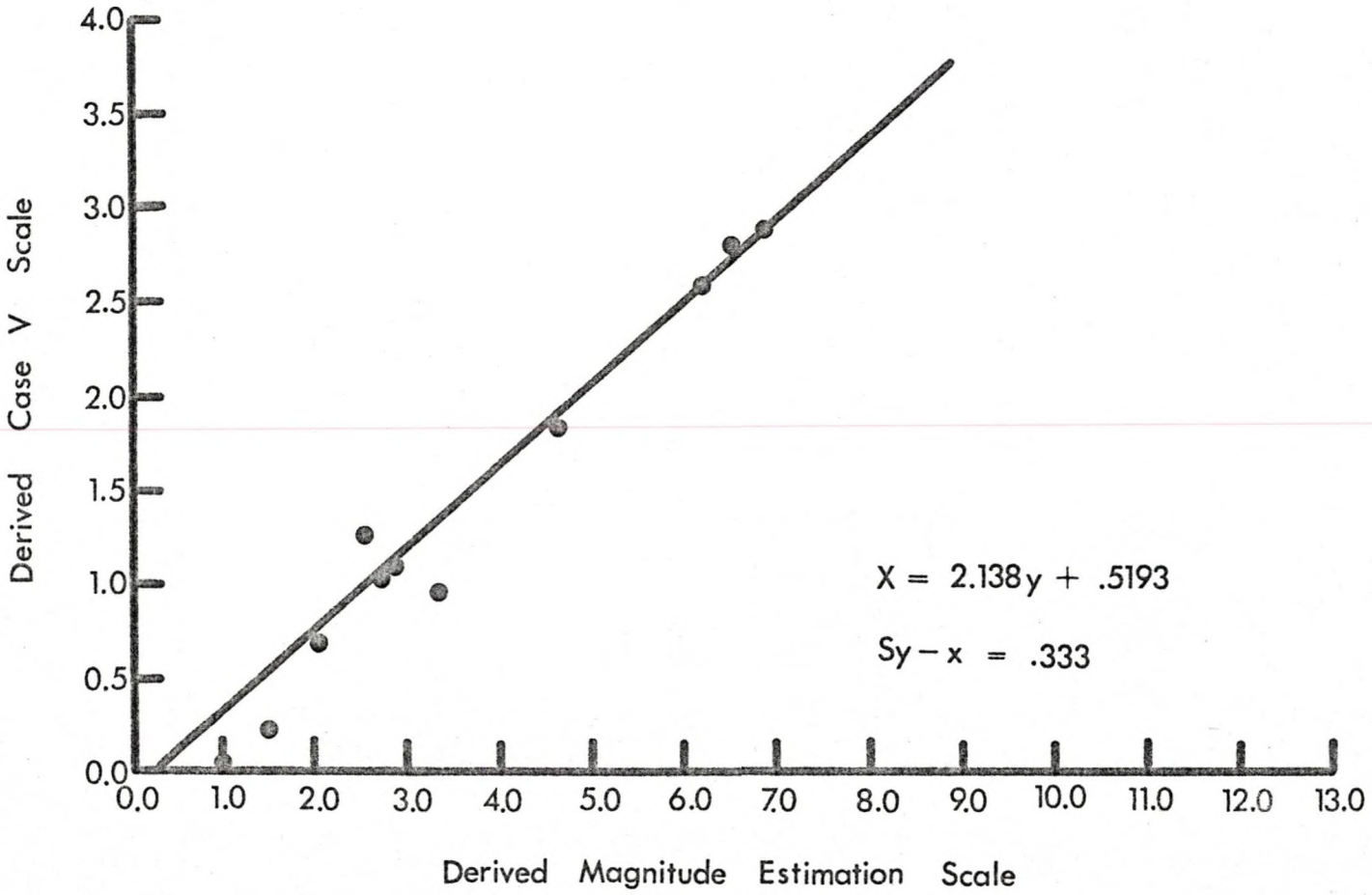

4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Derived Case V Scale
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
Derived Magnitude Estimation Scale
X = 2.138y + .5193
Sy−x = .333

Fig. 4.--Graphic representation of the relationship between the derived Case III Scale and the derived Magnitude Estimation Scale.

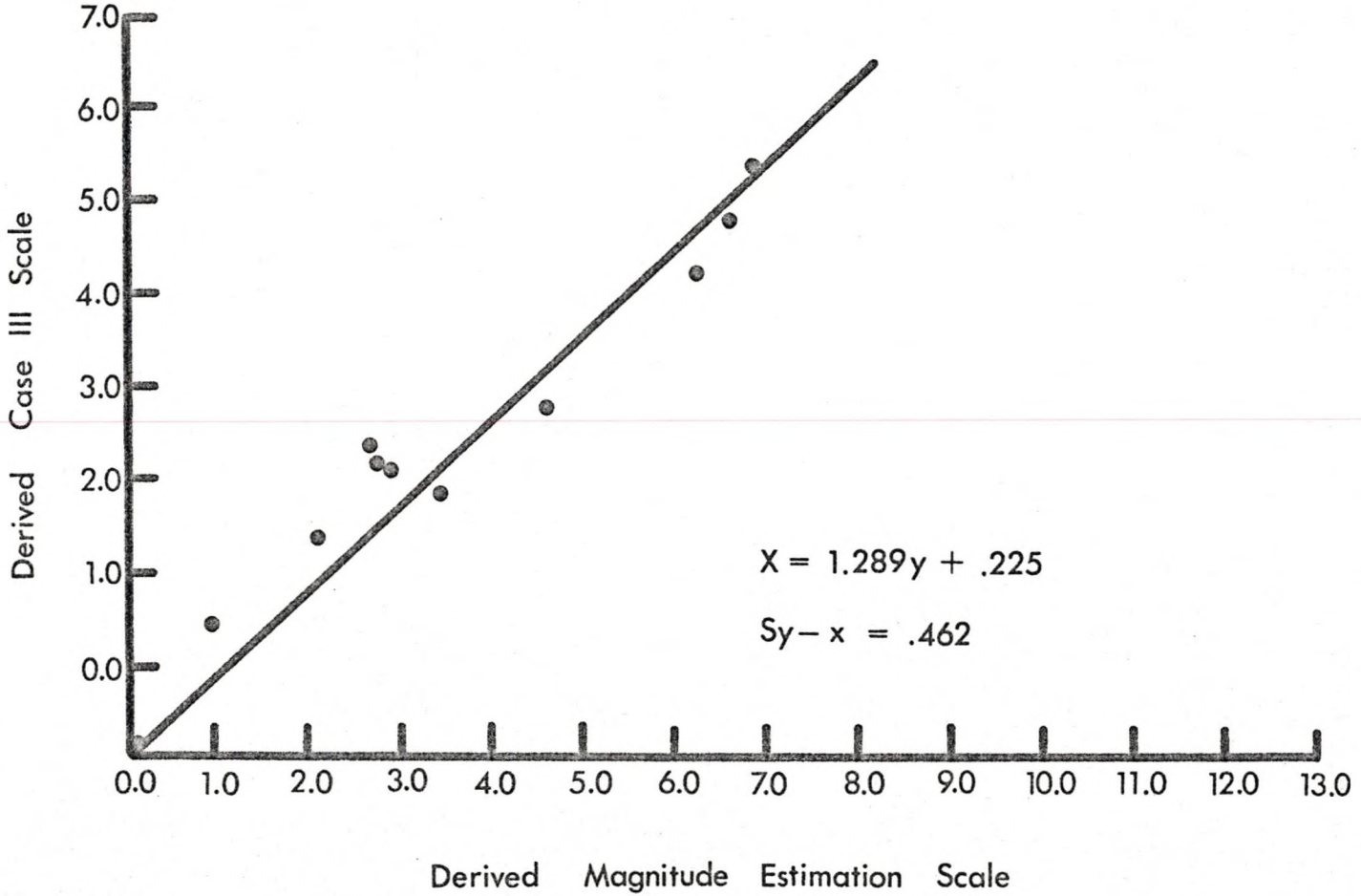

7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Derived Case III Scale
X = 1.289y + .225
Sy−x = .462
0.0 1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0
Derived Magnitude Estimation Scale

Fig. 5.--Graphic representation of the relationship between the derived Case III Scale and the derived Case V Scale.

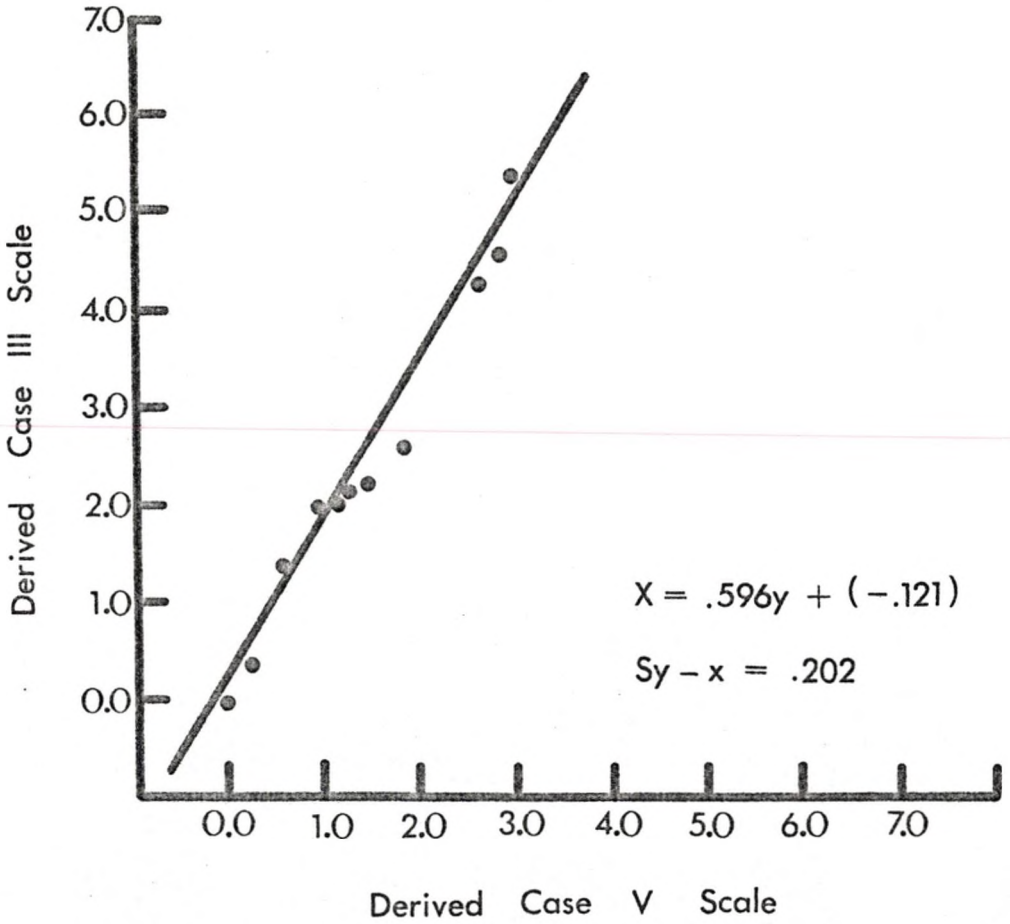

7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Derived Case III Scale
X = .596y + (−.121)
Sy − x = .202
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
Derived Case V Scale

Fig. 6.--Graphic representation of the relationship between the derived Case III Scale and the derived Similarity Estimation Scale.

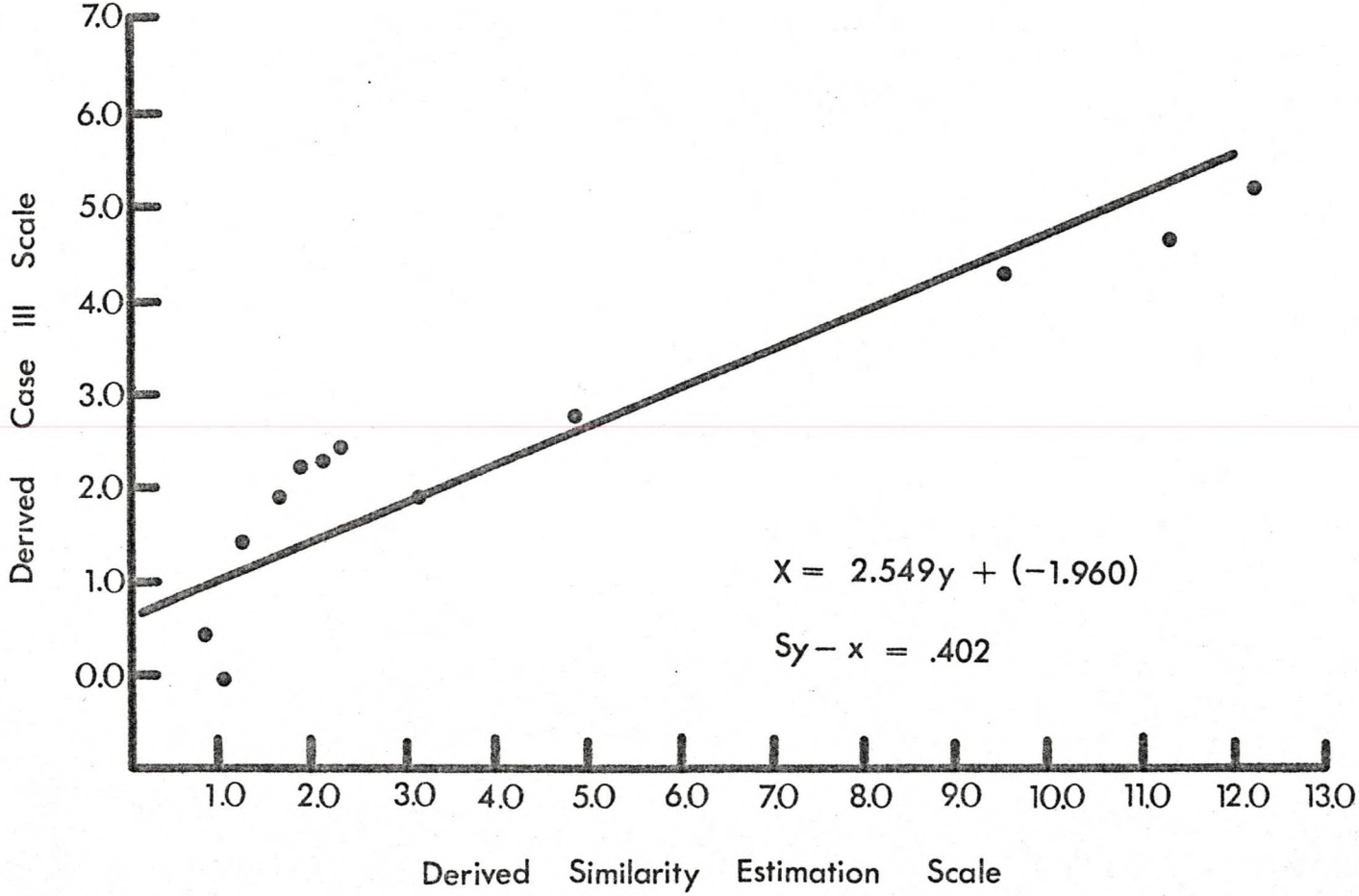

7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Derived Case III Scale
X = 2.549y + (−1.960)
Sy − x = .402
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
Derived Similarity Estimation Scale

Fig. 7.--Graphic representation of the relationship between the derived Absolute Scale and the derived Case III Scale.

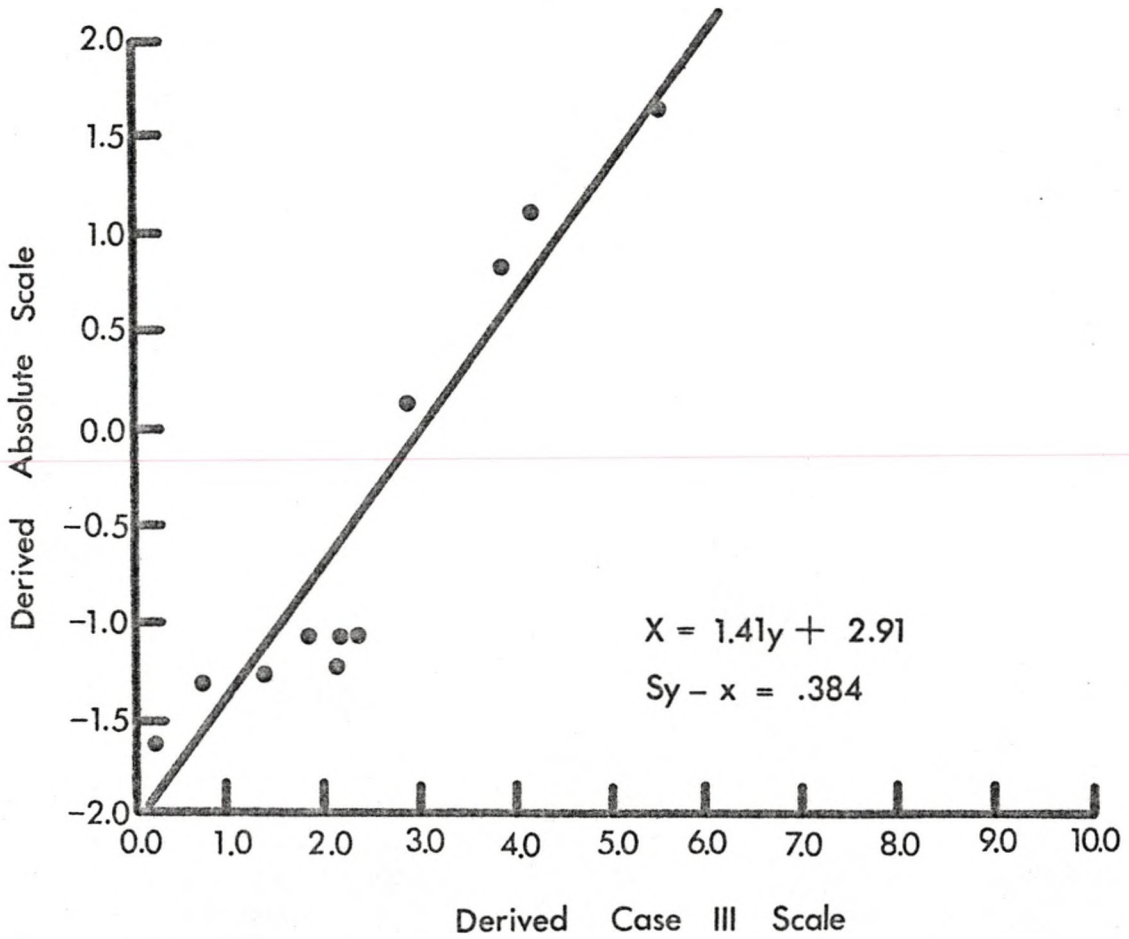

2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
Derived Absolute Scale
X = 1.41y + 2.91
Sy – x = .384
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
Derived Case III Scale

Fig. 8.--Graphic representation of the relationship between the derived Absolute Scale and the derived Similarity Estimation Scale.

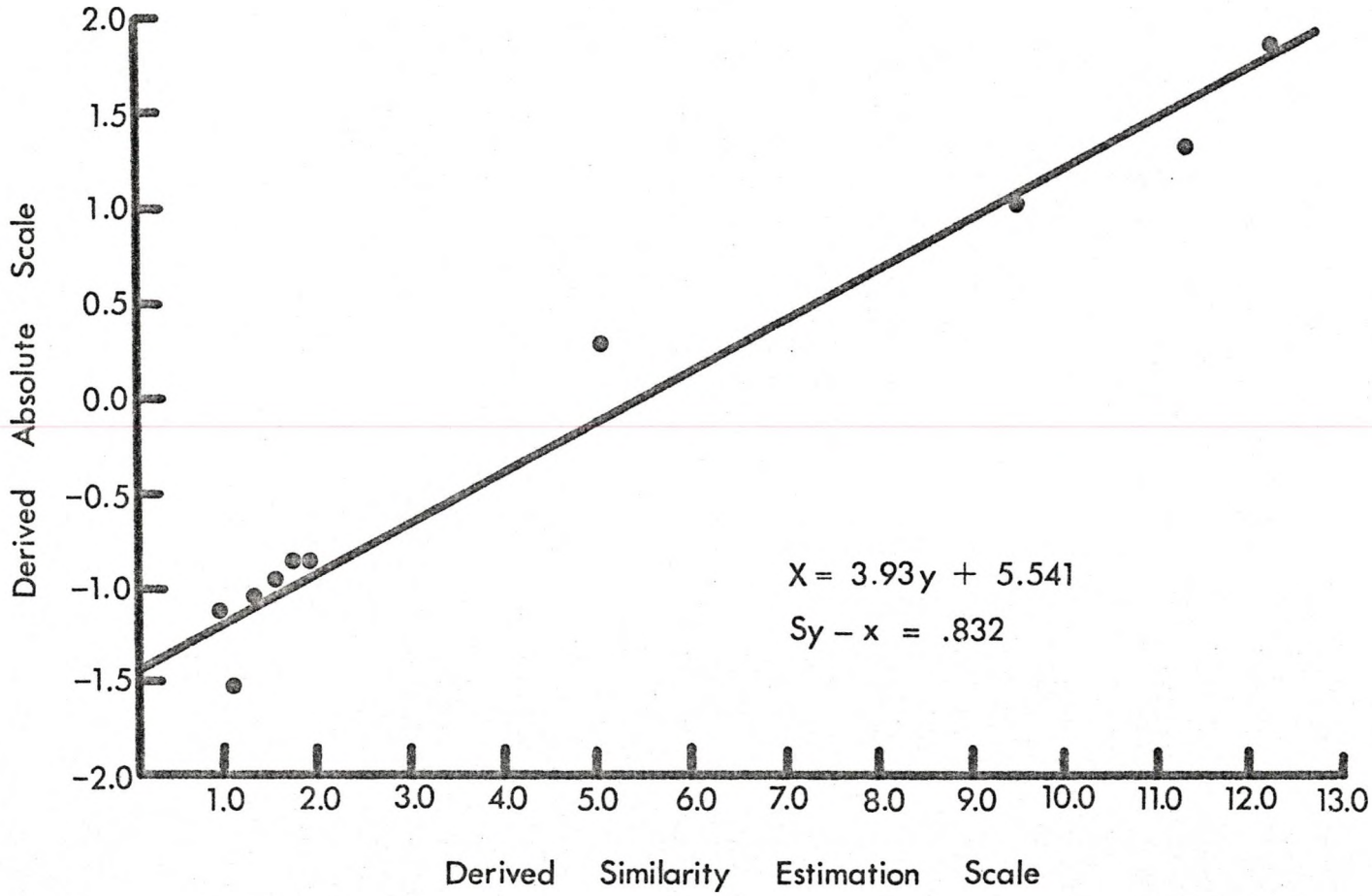

2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
Derived Absolute Scale
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
12.0
13.0
Derived Similarity Estimation Scale
X = 3.93y + 5.541
Sy – x = .832

Fig. 9.--Graphic representation of the relationship between the derived Absolute Scale and the derived Case V Scale.

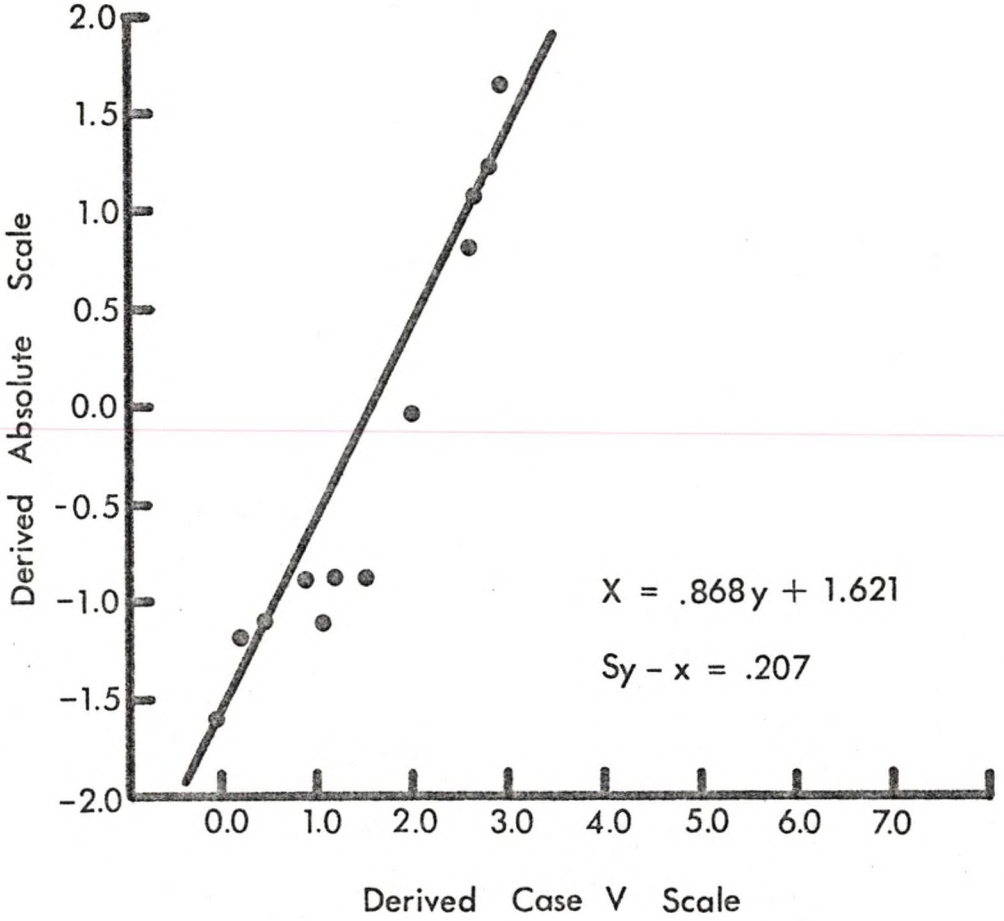
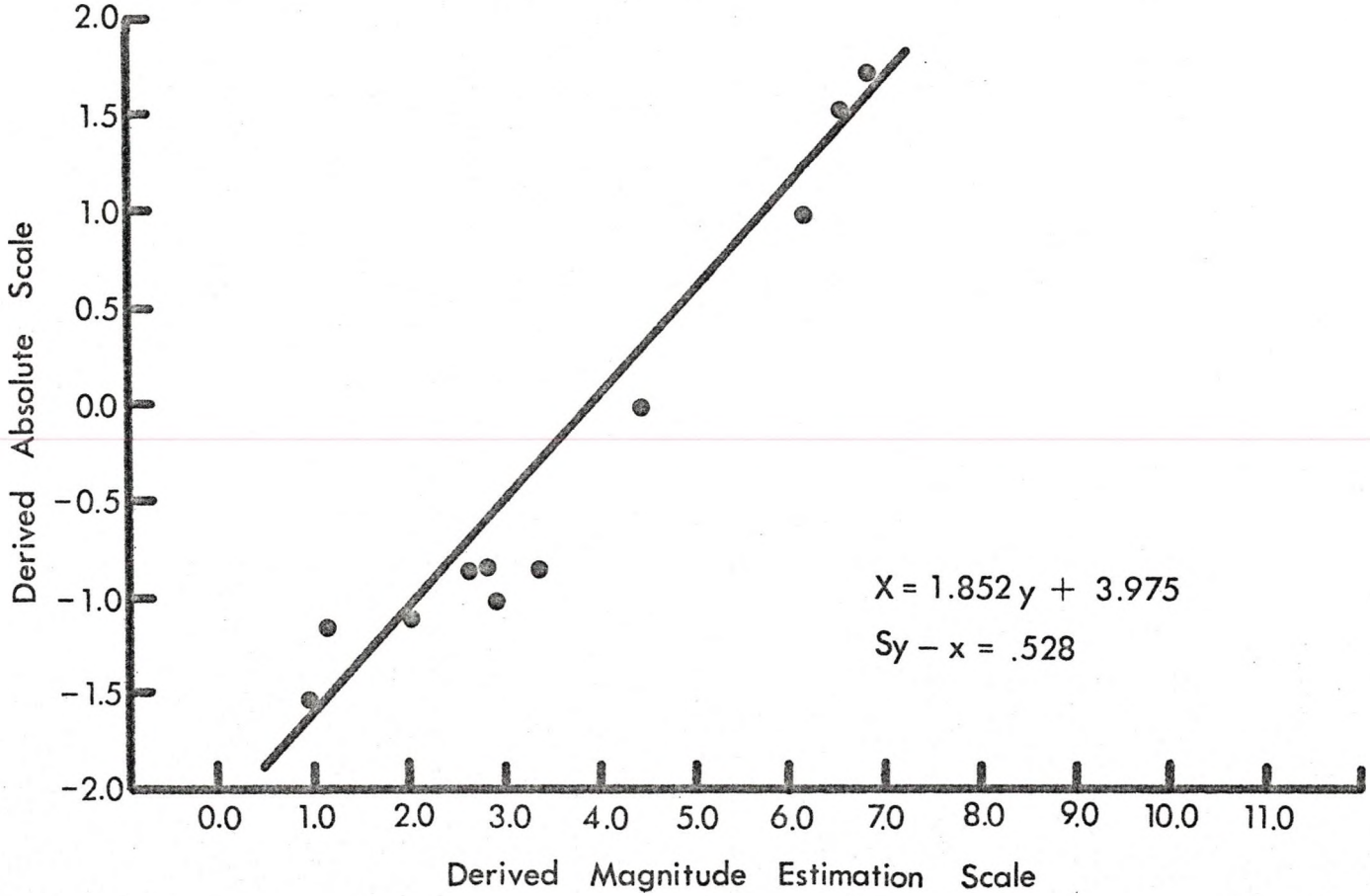

2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
Derived Absolute Scale
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
Derived Case V Scale
X = .868y + 1.621
Sy - x = .207

Fig. 10.--Graphic representation of the relationship between the derived Absolute Scale and the derived Magnitude Estimation Scale.


2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
Derived Absolute Scale
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
9.0
10.0
11.0
Derived Magnitude Estimation Scale
X = 1.852 y + 3.975
Sy – x = .528

The third question posed in this investigation was "which stimuli are associated with the highest pornographic ratings and what stimulus characteristics were associated with these high ratings?" To answer this question a cluster analysis was computed for the data and a graphic analyses to determine the just noticeable difference (JND) groupings was made.

The particular cluster analysis scheme (Stone, 1969) used, bases its technique on Ekman's similarity estimation paradigm discussed earlier in this chapter. The similarity matrix and derived scale values (see Table 8) associated with Ekman's approach are used as the basis for the clustering analysis. One begins by listing the similarity coefficients for each stimulus according to scale magnitude. Adjacent even and odd numbered stimuli are inspected to see which of the coefficients are larger. A check is made by the larger coefficient. This is done for all even coefficients, and if any remain unchecked, a cross is placed next to that coefficient. For the stimuli linked by checks, three statistics are computed as follows: mean similarity between stimuli in the tentative cluster (A), mean similarity between stimuli in the tentative cluster and the remaining stimuli (B), and the ratio of the former to the latter (A/B). Two criteria are used to judge the clusters. The first is concerned with the A/B ratios. One adds or subtracts coefficients to the tentative clusters until a maximum A/B ratio is achieved. The second criterion, the more minor one, is subjective. Do the derived clusters appear logical to the investigator? If they do, and the A/B ratios are maximal, the cluster analysis is deemed to be satisfactory.

The results of the cluster analysis of the similarity matrix (Table 5) can be seen in Table 8. Stimuli C, D, and B cluster well

TABLE 8

CLUSTER ANALYSIS OF SIMILARITY COEFFICIENTS

Stimuli Comparisons	Similarity Coefficients	Tentative Clusters	Mean Incluster Similarity (A)	Mean In-outcluster Similarity (B)	A/B
C-D	85.73✓	CDB(H)	78.016 (69.887)	31.435 (31.469)	2.481 (2.2220)
D-B	82.75				
B-H	65.57✓				
H-K	45.50				
K-J	71.83x	JI(K)	72.025 (63.183)	55.511 (52.735)	1.297 (1.1981)
J-I	72.22✓				
I-F	79.94				
F-A	80.96✓				
A-G	76.12				
G-E	81.88✓	FAGE	79.725	46.187	1.7261
		(I)	(78.224)	(43.201)	(1.8106)
		(J)	(77.224)	(37.418)	(2.0620)
		(K)	(72.6357)	(29.578)	(2.4556)
		(H)	(72.6357)	(31.282)	(2.3209)

together; however, when stimuli H was added, the A/B ratio dropped (from 2.481 to 2.222). After trying stimuli K, J and I as a tentative cluster and obtaining only minimal results, (A/B = 1.198), it was decided to add these stimuli to the final cluster. The final cluster then became stimuli K, J, I, F, A, G and E. When stimulus H was added to the cluster, the A/B ratio dropped again (from 2.455 to 2.321). It was decided to regard stimulus H as a single stimulus cluster. Therefore, three separate clusters emerged: stimuli, C, D and B in cluster-one, stimulus H in cluster-two, and stimuli K, J, I, F, A, G and E in cluster three.

Since the scaling methods used were originally developed as procedures in psychophysical investigate matters, some parallel constructs from psychophysics were introduced. This was done in the form of an analysis to determine the JND groupings (or difference thresholds) and the point of subjective equality (PSE). The PSE in the present investigation may be defined as that point on a scale where judges label a stimulus as pornographic as often as they label it as non-pornographic. In other words, that stimulus which is labeled as pornographic 50 percent of the time (Andreas, 1967) was regarded as the PSE. The PSE (defined in these terms) is identical to another psychophysical construct, the absolute threshold. The PSE and the absolute threshold denote a point of maximum classification confusion.

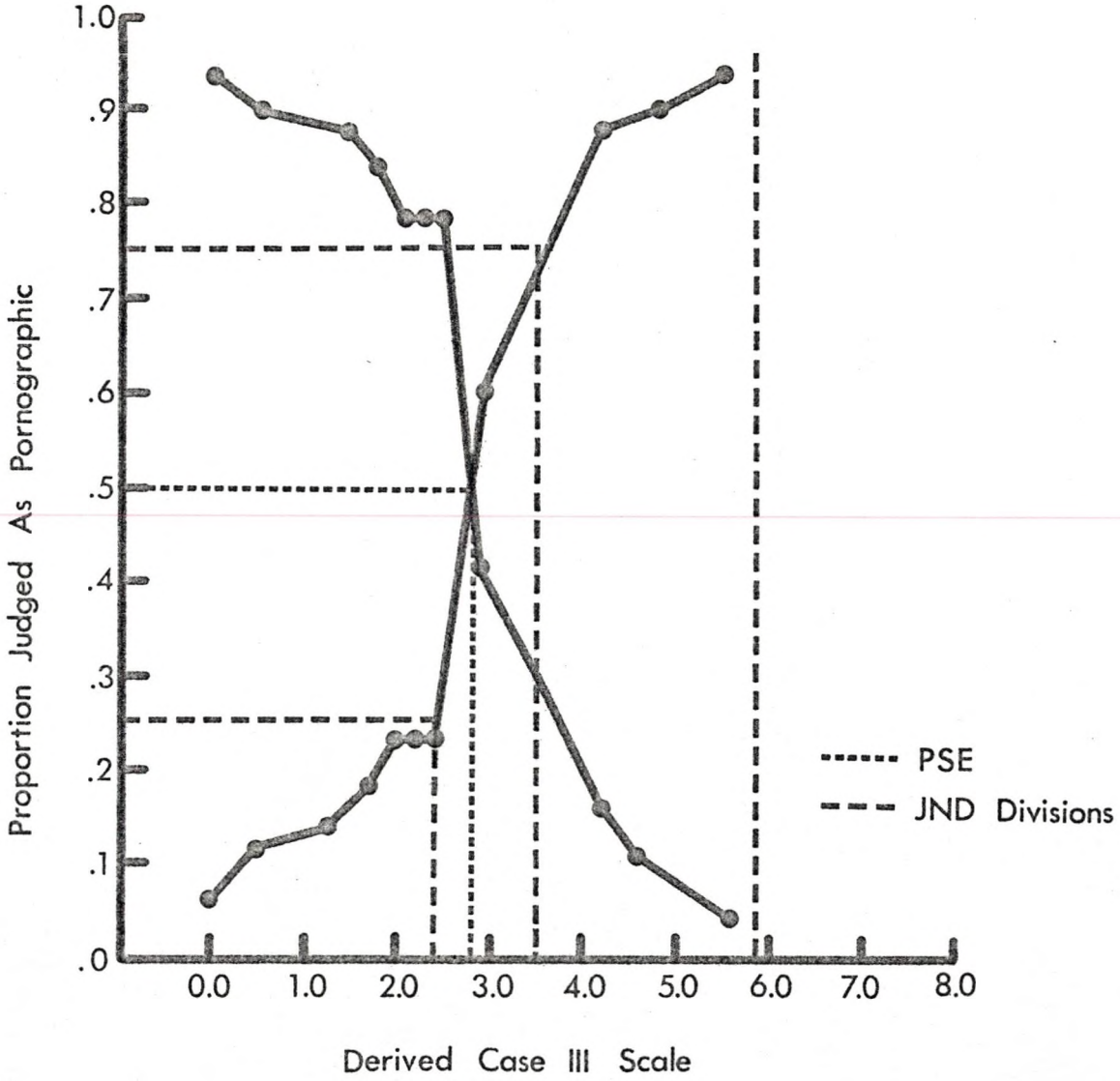
The JND or difference threshold can be defined as "the minimum detectable difference between two stimuli" (Harriman, 1947). The JND is the smallest difference between two stimuli which can be reliably detected by an observer. This implies that any stimulus would then have to be increased or decreased by one JND in order for a change to be reliably detected. For the purpose of this investigation, the JND's

are points on an ascending scale at which the observers "notice a difference" (in terms of degree of pornography) in the stimulus pictures. The first JND (the lower difference threshold) in the model employed was set at the point of which judges classified stimuli as being pornographic only 25 percent of the time. The second JND (the upper difference threshold) was set at the point at which judges judged stimuli as being pornographic 75 percent of the time. Remaining JND's were computed by a system of proportions. In the present investigation the derived proportion scale was plotted against the derived scale of Thurstone's Case III scaling paradigm. The Case III solution was chosen because of its high internal consistency. The graph depicting this interscale relationship can be seen in Figure 11.

In observing Figure 11, it is interesting to note the similarity of these psychophysical kinds of results to those obtained using the unidimensional cluster analysis methodology. It can be seen in Figure 11 that the PSE falls approximately on stimulus H (PSE = 2.72; Stimulus H = 2.80 on the Case III scale). When the upper and lower difference thresholds are plotted, the stimulus scale is divided into three parts or three partitions. The first partition consists of seven stimuli; the second consists of one stimulus; the third consists of three stimuli. When these stimulus are identified (first group = E, G, A, I, F, J, K; second group = H; and third group = B, C, D) it is apparent that these three stimulus groupings agree perfectly with the cluster analysis results.

It appears that perception of pornography is scalable by a number of different scaling approaches. Of the five scaling approaches

Fig. 11.--Graphic representation of the Point of Subjective Equality and the Just Noticeable Difference division points.


1.0
.9
.8
.7
.6
.5
.4
.3
.2
.1
.0
Proportion Judged As Pornographic
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
Derived Case III Scale
PSE
JND Divisions

used, only two had a measure of internal consistency (Thurstone's Cases III and V approaches). Of these two, Thurstone's Case III approach had the highest internal consistency and therefore appeared to be the most reliable. It was also found that the stimuli can be grouped into three definable categories and that it may be possible to attach labels to these categories.

CHAPTER IV

DISCUSSION AND CONCLUSIONS

The main purpose of this investigation was to study the scalability of a specific set of pornographic stimuli. Three questions were examined: (1) Is there sufficient judgmental reliability to justify the consideration of a unidimensional subjective pornographic scale? (2) What is the interscale reliability of several developed subjective pornographic scales? (3) Which stimuli are associated with the highest pornographic ratings and what particular stimulus characteristics were associated with these high ratings? In Chapter III, two additional points were made. The first dealt with the concept of a pornographic threshold, and the second dealt with the three developed stimulus groupings.

The first question which dealt with the scalability of pornography was answered in the affirmative. Of the two scaling methods where a measure of internal consistency (i.e., reliability) was available (Thurstone's Cases III and V approximations to his Law of Comparative Judgment) it was found that both had very high internal consistency. Of these two methods, Thurstone's Case III approach, which assumes only that correlations between response proclivities towards the stimuli are zero, and that discriminal dispersions distribute normally, had the highest intrascale reliability.

The perception of pornographic stimuli is therefore apparently scalable. The question, in which category of perception does pornographic stimuli belong, now arises. S. S. Stevens (1957) has designated two categories of perception. He has named these two categories "prothetic" or "class I" and "metathetic" or "class II." Perceptions dealing with "how much" belong to class I and perceptions dealing with "what kind" belong to class II. Stevens provides a criterion which may be used here to distinguish between a prothetic or metathetic scale. Stevens labels this functional criterion "category rating scales." He states that when class I perceptual continua are judged in terms of a set of categories (a rating scale), the resulting function when plotted against a subjective ratio scale is concave downward (similar to that seen in Figures 1 and 2). When class II perceptual continua are judged in these terms, Stevens states that a linear function will be obtained between the subjective ratio scales and the category (rating) scales. In plotting the figures depicting the relationship between the magnitude estimation scale and the Case V scale, (Figure 3) the magnitude estimation and the Case III scale, (Figure 4) and the magnitude estimation scale and the absolute scale, (Figure 10) a somewhat linear function resulted.

If a label of prothetic or metathetic had to be chosen, the label metathetic would probably be subject to the least criticism. This would indicate that evaluations of pornography made on the basis of "how much," what quantity, or to what degree a pornographic stimulus has some characteristics might be incorrect. Instead, evaluations of pornography could be based on a "what kind," quality, or a position

basis. It could then be said that a stimulus is judged pornographic because it is of a certain type on a scale of subjective pornography. Because of its position in relation to the other stimuli a particular stimulus could be labeled pornographic. Ordered clusters of stimuli on a pornographic scale would be a good criterion for judging a stimulus as being either pornographic or nonpornographic. If the stimulus in question fits into a cluster which had been designated as pornographic because of its position on a pornographic scale, the new stimulus too could be then labeled as pornographic.

Labeling pornography as metathetic would appear to agree with Byrne and Lamberth's (1970) interpretation cited earlier. They reported that "characteristics of the stimulus determine pornographic rating." Higgins and Katzman (1969) also report that "characteristics" of the stimuli are associated with pornographic judgments.

The second question posed in this paper is concerned with how closely the derived scales resemble one another. All of the scales have very high interscale reliability. Table 7 and Figures 1-10 indicate that all five of these scaling methods agree very closely with one another. It therefore appears that, because of the high interscale reliability and intercorrelations obtained, any one of the five derived scales may be used in evaluating pictorial stimuli with respect to pornographic or nonpornographic classifications.

One other point can be made when comparing the scaling results of these five scales. It is interesting to note in Figures 1-10 that the only confusion in an otherwise linear relationship occurs in the middle of the scale (stimuli F, I, J, and K). This would seem to

indicate that there is a reduction of interscale relationships concerning these "mid-scale" stimuli. No clear linear interscale relationship order was seen for these few stimuli. The judges appear to have a clear idea as to the order of the stimuli at each end of the derived scales; however, order does not seem as reliable in the middle of the scale as no apparent linear interscale relationship was obtained. This fact is also evident in Tables 1-6 presented in this paper. Inspection of these tables will reveal that the scale values separating these middle stimuli are extremely small, so small that when compared to the rest of the stimuli differences, it can be concluded that these stimuli appear to have been judged as almost identical. This judgmental confusion is probably caused by the fact that these "mid-scale" stimuli share many of the same stimulus characteristics.

In Chapter III, the point of subjective equality (PSE) on a subjective scale was equated with the absolute threshold. Both of these constructs were roughly defined as a point of decision or point of maximum confusion. Figure 11 places, on Thurstone's Case III derived scale, the PSE at 2.72, which corresponds to stimulus H (see Table 4). Therefore, it appears that stimulus H is a decision point or confusion point in the scaling of pornographic stimuli. The upper and lower difference thresholds also isolate stimulus H as does the cluster analysis determination. These difference thresholds, as well as the cluster analysis partitioned the pornographic stimuli into three distinct groupings. Can these three groupings be identified and labeled? If so, what particular qualities of a stimulus are associated with its membership in an appropriate cluster? These two questions constitute the third

question posed in this paper: Which of the stimuli are associated with high pornographic ratings and what particular stimulus characteristics account for these high ratings?

According to the cluster analysis and the JND analysis presented, pornography (as this paper defines it) appears to start with picture B on the scales. The definition would also seem to include pictures D and C, with picture C representing even a more extreme level of pornography than pictures B and D. Pictures E, G, A, K, I, J and F were considered to be sub-pornographic, and picture H seems to be the transition point.

Subjectively, what characteristics are associated with ratings of pornography? Going directly to the stimuli, the pictures reliably judged as pornographic (stimuli B, C, D) consisted of photographs emphasizing the female genitalia and an act of apparent female masturbation. Picture H, which on Thurstone's Case III derived scale was close to the determined PSE, did not emphasize the female genitalia; however, pubic hair was clearly depicted. The sub-pornographic pictures showed various states of dress and undress; but neither genitalia nor pubic hair were exposed.

The present data indicated that the most pornographic stimulus was the depiction of female masturbation. Levitt and Brady (1965) found that while female masturbation was considered pornographic, photographs of nude females were rated as more stimulating than the photographs of female masturbation. Byrne and Lamberth (1970) found that female masturbation was judged to be both pornographic and sexually stimulating. Although the research area of sexual stimulation and pornography ratings seems to be the only scientific attempt of pornographic investigations, no consensus of opinion in this area has yet been achieved.

Pictoral stimuli, such as female masturbation, can not as yet be said to be pornographic because they are or are not judged to be sexually stimulating. The question of degree of relationships between these two variables (sexual stimulation and pornographic ratings) still poses interesting research problems.

It is a popular belief that individual judgments of pornography are highly personal. The President's Commission report states that "The majority view of the commission implies that pornography, like beauty, is in the eye of the beholder (p. xiv)." This is an old and accepted cliche, however is it true? The present investigation has presented a number of findings which are relevant to the question, "is pornography in the eye of the beholder?" It was found that judgments of pornography are scalable, and that the reliability of these judgments is very high. It was found that the developed subjective scales had a considerable range and that by using these scales a psychometric definition of pornography could be developed. Most importantly, it was found that there was a clear consensus of opinion as to what should be labeled pornographic. These findings indicate that the subjects used in this investigation were in agreement with one another as to what is and what is not pornographic. This is not surprising when a closer look is taken at the subjects used in this investigation. The group of subjects was very homogeneous; about the same ages, all freshmen or sophomores and all from approximately the same geographical area. An interesting follow-up to this investigation would be to try to replicate the obtained results using another, more heterogeneous population.

The findings seem to indicate that pornography is based more on a consensus of opinion rather than on highly personal evaluations.

This has implications for the censorship boards, judges and citizen groups who are interested in evaluating stimuli as being pornographic or not pornographic. Pornography can be evaluated objectively, however, one must make use of formal scaling methodologies. All of the scaling methodologies used in the present investigation obtained roughly comparable results. Therefore, any one of the five scaling approaches presented in this investigation can be used to make evaluations of "pornographic" or "nonpornographic."

According to Guilford (1954) and Ekman and Sjöberg (1965) the five scaling paradigms used in this investigation achieve different levels of measurement sophistication. Thurstone's Cases III and V approximation of his Law of Comparative Judgment and the Absolute scaling approach all have the potential of achieving an interval level of measurement. The magnitude estimation and similarity estimation approaches both have the potential of achieving a ratio level of measurement.

What are some of the measurement properties the derived scales possess and what do these measurement properties imply about the way these scales could be used? S. S. Stevens (1951) has suggested that measurement be divided into four levels. These levels are the nominal, ordinal, interval and ratio. The nominal level simply discriminates between objects, while the ordinal level also orders objects in terms of more or less of a given quality. Interval measurement implies that the objects be quantifiable and the ratio level of measurement requires that an absolute zero point be established.

The five derived scales all have the potential of achieving at least the interval level of sophistication. If these measurement levels

have in fact been met, the following additional statistical procedures could now be employed: The average interscale correlations of each of the various scaling paradigms could be computed; the average subjective scale value of each of the three obtained clusters could be evaluated; and the ratio of the degree of pornography of one picture to another could be determined.

In Table 7, the mean interscale correlations for each scaling approach were presented. The similarity estimation approach has the lowest interscale correlation ($\bar{r}$ = .95), while the remaining four approaches all achieved mean interscale correlations of .97 or .98. This would seem to indicate that while all five scale approaches are in close agreement with each other, the similarity estimation paradigm is where the greatest subjective scaling differences occurred.

The Case III derived scale was used to determine the average subjective scale value of each of the three obtained clusters. Cluster-one had an average scale value of 4.03, cluster-two had an average scale value of 2.70, and cluster-three had an average scale value of .83. The Case III approach was used here because it had the highest tested internal consistency.

The magnitude estimation and similarity estimation approaches supposedly both achieve the ratio level of measurement. This implies that both of these derived scales have an absolute zero point. With the establishment of an absolute zero point one can determine the ratio of the degree of pornography of one picture to another picture, and one cluster to another cluster. For example, the ratio of the picture judged as least pornographic (stimulus E) on the magnitude estimation scale to the picture judged as most pornographic (stimulus C) is 6.6

to 1. This would indicate that judges perceived stimulus C as almost seven times more pornographic as stimulus E. The similarity estimation derived scale, which has a range almost double to that of the magnitude estimation scale, indicates that stimulus C is seen as 12.3 times as pornographic as stimulus E. A similar analysis of the three obtained clusters indicates that the mean of cluster III is seen as 7.4 times as pornographic as the mean of cluster I and twice as pornographic as the mean of cluster II. This ratio method of assessing pornography not only provides information concerning the question "is a certain stimulus more or less pornographic than another" but also indicates how many more times a stimulus is more or less pornographic than another.

The findings presented in this study pose some interesting suggestions for further research. The judges in this study viewed pornography as that point and beyond where the female genitalia is exposed. This result seems to agree with those of Higgins and Katzman (1969) and Byrne and Lamberth (1970). These judges viewed the exposure of pubic hair as neither pornographic or nonpornographic. This seems to follow the general change in society's attitude toward what is and what is not acceptable to offer commercially. A few years ago no pubic hair was shown in "respectable" men's magazines (i.e., Playboy, Penthouse, etc.). However, within the last six months, these same magazines have shown photographs of females which show pubic hair. It seems likely that the fact that this kind of picture is becoming more available and easier to purchase would seem to decrease its "pornographic" value. Since this trend is just beginning, the "pornographic" values have not dropped to the point of the "pin-up" type pictures (which have been readily available for years), so they seem to be placed on the

pornographic scales somewhere between these pin-up type pictures and the hard-core pornography group. This is indicated in the present data where picture H was grouped in a category entirely its own.

An interesting hypothesis for further research could now be generated: Pornography may be a direct function of availability. That is if a certain type of stimulus is readily available, it would appear that it loses its pornographic connotation. A similar hypothesis, as yet unpublished, has been proposed by Paul Gebhard, the present director of the Kinsey Institute for Sex Research. He believes that the labeling of stimuli as pornographic or nonpornographic is a function of its availability in the society.[2]

Pornography being a function of availability might be attributable to two factors. The first could be satiation. Possibly the more available a stimulus is, the more satiated the judge becomes with it; hence, he does not judge it as a unique stimulus or in a special class of stimuli (for example, a pornographic class). The second possible explanation could be social. The judge sees that this stimulus is readily available. He concludes that society does not deem it unique or undesirable, and therefore, he himself accepts society's attitude toward the stimulus. In both explanations it seems apparent that a stimulus must be unique or taboo before it can be placed in a special category (e.g., pornographic). By removing its uniqueness, by making it readily accessible, and by socially sanctioning it, these particular types of pornographic pictures have become less acceptable as pornography.

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[2]Personal communication from Dr. Leland Lipp. Dr. Lipp had recently (1971) attended a summer seminar given by the Kinsey Institute where he had occasion to hear Paul Gebhard speak.

Stimulus H seems to be in this position. By making this type of picture readily available society has given its approval to it. The judges are sensitive to this approval and seemingly do not regard it as pornographic. This type of picture has not been readily available for a lengthy period of time, therefore a satiation effect may not have occurred, and judges have placed it with the nonpornographic group. It could be hypothesized that the position held by stimulus H is fluid. That is, if this study was repeated, using the exact stimuli 6 months later, stimulus H would have moved closer to the nonpornographic group. Again, if the study was repeated at a still later date, this stimulus would have moved yet closer to the nonpornographic group until, at a future date, it would be readily grouped with the nonpornographic stimuli. This would all seem to be a function of society's liberal or conservative attitudes toward what it deems acceptable to make readily available to the purchaser.

Stimuli E, G, A, K, I, J and F were also grouped together. It was also shown that it was in this grouping that interscale discrepancies were found. This could be accounted for by the availability hypothesis sighted above. All of these types of pictures have been readily available for years. They have lost their individual uniqueness as classes of erotica and are seen simply as a group of nonpornographic stimuli rather than individual stimuli in a specific order. The grouping of the stimuli is important, but the order in the group seem insignificant.

In conclusion, the results show that pornography is reliably scalable on any of the five scaling paradigms presented. The interscale reliability was found to be high, indicating that all of the

scaling approaches are highly reliable and that their derived scales are in close agreement. It was further shown that pornographic stimuli are possibly "what kind" variables (metathetic). The cliche that pornography is in the eye of the beholder was discussed and the five derived scales were shown to have the potential of possessing different levels of measurement sophistication. Finally, the stimuli were evaluated, and an hypothesis for possible further research stating that the labeling of a stimulus as pornographic is a function of its availability was formulated.

APPENDIX A

Release Form Used in Study

I the undersigned am participating in this study under my own free will, and am aware of the sexual nature of the stimuli to be used. Furthermore, I affirm that I am 18 years old or older and I agree not to hold the University of North Dakota, the psychology department or any individual connected with this study responsible for any personal embarrassment, mental unrest or distress, or future deed or misdeeds resulting from my exposure to this study.

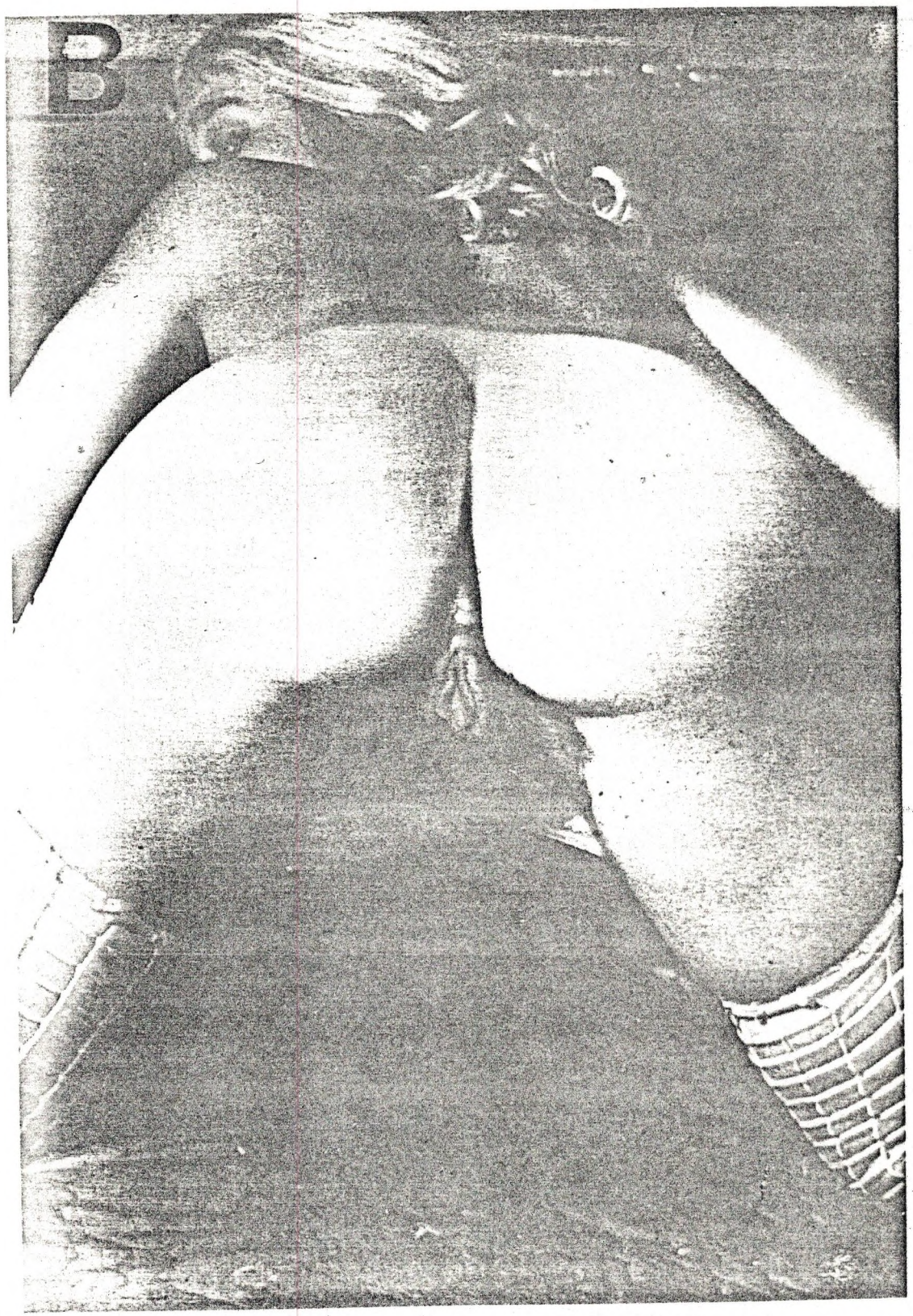
_____

Age _____

Class _____

APPENDIX B

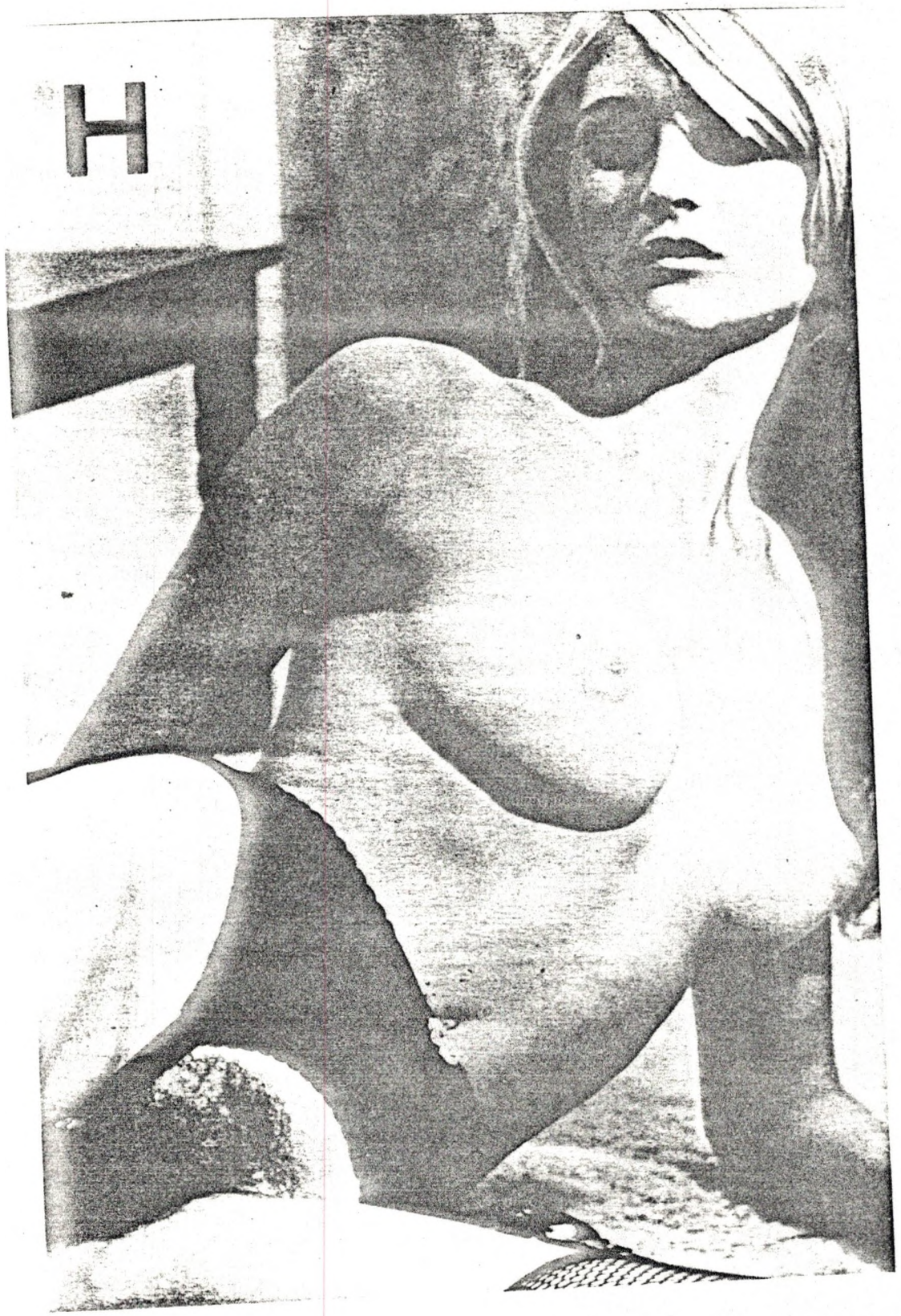

A


B


D


E


F


H


K

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