

A MULTIVARIATE ANALYSIS OF POPULAR CONCEPTIONS
AND ATTITUDES REGARDING THE ETIOLOGY
OF MALE HOMOSEXUALITY

by Ronald J. Skippon

Thesis presented to the School of
Graduate Studies of the University
of Ottawa as partial fulfillment of
the requirements for the degree of
Doctor of Philosophy



Ottawa, Canada, 1973



Ronald J. Skippon, Ottawa, 1974.



UMI Number: DC53915

INFORMATION TO USERS

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleed-through, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

UMI[®]

UMI Microform DC53915
Copyright 2011 by ProQuest LLC
All rights reserved. This microform edition is protected against
unauthorized copying under Title 17, United States Code.

ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106-1346

ACKNOWLEDGMENTS

This thesis was prepared under the supervision of Professor Charles E. McInnis, Ph.D., of the Faculty of Psychology. The writer wishes to acknowledge his advice, direction, and interest in the research.

CURRICULUM STUDIORUM

Ronald J. Skippon was born August 11, 1941, in Sarnia, Ontario. He received the Bachelor of Arts degree from the University of Western Ontario, London, Ontario, in 1964, and the Master of Arts degree in Psychology from the same university in 1966. The title of his Master's thesis was The Role of Personality in Small Group Interaction.

TABLE OF CONTENTS

Chapter	page
INTRODUCTION.	ix
I.- REVIEW OF THE LITERATURE.	1
1. Research on the Etiology of Male Homosexuality	1
2. Theoretical Relevance of This Investigation to a Social Interaction Deviance Theory of Homosexuality	23
3. Review of Differing Professional Views on a Disease or Adjustment Conception of Homosexuality	28
4. Statement of the Problem(s)	32
II.- EXPERIMENTAL DESIGN	35
1. Description of the Postulated Domains of the Etiology of Homosexuality	35
2. Statements Reflecting Postulated Domains of the Etiology of Homosexuality	37
3. Questionnaire and Answer Booklets	38
4. Procedure	39
5. The Subjects	41
6. Multidimensional Scaling of Judgment Data	45
7. Factor Analysis of Response Data	48
8. Description of the Statistical Procedures Used in the Multidimensional Scaling of the Judgment Data and the Factor Analysis of the Response Data	50
A. Description of Multidimensional Scaling Procedures	50
B. Description of Factor Analytic Procedures	58
III.- RESULTS.	59
1. Results of the Multidimensional Scaling of Judgment Data	59
A. The Number of Dimensions	65
B. Male and Female Data	75
C. Nature of the Dimensions	76
2. Results of the Factor Analysis of Response Data	84

TABLE OF CONTENTS

v

Chapter	page
V.- DISCUSSION	100
1. Comparison of Professional and Popular Views	102
2. Implications for a Social Interaction Deviance Theory of Homosexuality	104
3. Future Research	107
SUMMARY AND CONCLUSIONS.	109
BIBLIOGRAPHY	112
Appendix	
1.- COPY OF QUESTIONNAIRE C USED TO OBTAINED DESCRIPTIVE DATA ABOUT SUBJECT SAMPLE.	114
2.- CUMULATIVE PROPORTIONS OF ENDORSEMENT IN EACH SCALE CATEGORY FOR THE 190 ITEM PAIRS.	116
3.- ABSTRACT OF <u>A Multivariate Analysis of Popular Conceptions and Attitudes Regarding the Etiology of Male Homosexuality</u>	123

LIST OF TABLES

Table	page
I.- Educational Level Attained by Parents of the Subjects.	43
II.- Occupational Distribution of the Fathers of the Subjects.	44
III.- Category Boundary Values Derived from Successive Intervals Scaling.	61
IV.- Matrix of Discriminal Dispersions for Each of the 190 Item Pairs Derived from Successive Intervals Scaling	62
V.- Matrix of Scale Values for Each of the 190 Item Pairs Derived from Successive Intervals Scaling	63
VI.- Matrix of Relative Distances Between Each of the 190 Item Pairs Derived from Successive Intervals Scaling	64
VII.- Unrotated Scale Values for Each Item on Four Dimensions.	66
VIII.- Varimax Rotated Scale Values for Each Item on Four Dimensions	67
IX.- Product Moment Correlations Between Scale Values on the First Ten Dimensions of the Original Unrotated F Matrix for Two Groups of Randomly Selected Subjects	73
X.- Product Moment Correlations Between the Randomly Selected Subjects of Rotated Scale Values Using Hypothesized Dimensionalities of Four and Five.	74
XI.- Means and Standard Deviations of Each Item Derived from Subject Response Data.	86
XII.- Intercorrelation Matrix Between Items	87

LIST OF TABLES

vii

Table	page
XIII.- Unrotated Factor Matrix of Items on Six Factors.	88
XIV.- Projections of Each Item on Five Rotated Factors (First Unrotated Factor Removed)	90

LIST OF FIGURES

Figure	page
1.- Latent Roots Derived from Multidimensional Successive Intervals Scaling of Data from Total Sample	70
2.- Latent Roots Derived from Independent Multi- dimensional Successive Intervals Scaling of Two Random Halves of Total Sample.	72
3.- Projections of Items on Dimensions I and II.	77
4.- Projections of Items on Dimensions III and IV.	78
5.- Projections of Items on Factors I and II	91
6.- Projections of Items on Factors III and IV.	92
7.- Projections of Items on Factors I and V.	93

INTRODUCTION

Despite extensive investigation, there has been little agreement regarding the meaning and nature of homosexuality. Any search of the literature on homosexuality reveals a wide spectrum of opinion, with ardent exponents of each point of view.

Within this multiplicity of views regarding homosexuality definitional clarity is difficult due to the many interrelated conceptions and attitudes surrounding this complex behavior. Together with the pluralistic nature of most forms of homosexual behavior, etiological considerations advanced for the behavior are also pluralistic and defy reduction to a single factor.

In light of the complexity of the etiological domain pointing to homosexuality, the focus of this research is to undertake a popular (non-professional) explication of the multifactorial etiological domain of homosexuality. An empirical investigation of the popular conceptions of the differences and similarities of the various etiological sources of homosexuality is seen as lending definitional clarity to homosexuality in that it will provide a description of what it means to be a homosexual in the popular mind.

In addition to determining popular conceptions of the origins of homosexuality, this research also attempts to assess the extent to which conceptual dimensions appear in the actual beliefs and attitudes of the respondents.

The soliciting of non-professional conceptions and attitudes was deemed valuable, not only to clarify what it means to be a homosexual to the public, but also as an assessment of the extent to which professional views and popular views are congruent and, particularly, for the theoretical implications such data would have for a social deviance conception of homosexuality.

The strategy will be to apply two multivariate procedures, one to assess popular conceptions and the other to assess popular attitudes regarding this complex etiological domain.

Thus, the primary purpose of this research is to empirically explicate dimensions underlying popular conceptions and attitudes with respect to this complex etiological domain.

Chapter I will review the literature on the etiology of homosexuality, social deviance and its relationship to this research, as well as review current conceptions of the behavior in the minds of professionals. The chapter will conclude with a statement of the problems to be investigated.

Chapter II will present the experimental method, while Chapter III will present the results. Chapter IV will present a discussion of the findings and suggestions for further research.

CHAPTER I

REVIEW OF THE LITERATURE

This chapter presents the review of the literature. It begins with a review of the literature pertaining to the etiology of homosexuality. Next, the theoretical relevance of the investigation to a social interaction deviance theory of homosexuality is noted. This is followed by a review of the current status of the professional views of homosexuality as disease or behavior at variance from the norm. Finally, the chapter concludes with a statement of the problems to be investigated.

1. Research on the Etiology of Male Homosexuality.

Lindner states that the term homosexual should be applied only to:

[...] those individuals who more or less chronically feel an urgent sexual desire toward, and a sexual responsiveness to members of their own sex, and who seek gratification of this desire predominately with members of their own sex.¹

Homosexuality is frequently used generically to refer to both male homosexuality and lesbianism. For this study the term homosexuality refers only to male homosexuality.

¹ Robert Lindner, "Homosexuality and the Contemporary Scene," Must You Conform?, New York, Grove Press, 1960, p. 36-37.

A review of the current literature regarding the etiology of homosexuality exemplifies its multifaceted nature. Precipitating factors have been attributed by different investigators to etiological concepts which might reasonably be organized into psychodynamic, physical-constitution, situational-interpersonal, moral-characterological, and social-legal subgroupings. The current literature pertaining to the etiology of homosexuality is reviewed and the causes examined are assigned to one of the above five domains.

(a) Psychodynamic Etiology.- Within the multicausal network accounting for homosexuality one widely accepted view considers psychological disturbance as the basic predisposition to the development of homosexuality. Probably the most widely held psychodynamic theory on the etiology of homosexuality is the Freudian. The essence of the Freudian interpretation of homosexuality is found in the Oedipus complex. The Oedipus complex is the climax of infantile sexuality in the Freudian system and is manifest by the boy developing a love for the parent of the opposite sex and death wishes against the parent of the same sex.² In normal development the boy gives up his sensual and hostile Oedipus

² Otto Fenichel, The Psychoanalytic Theory of Neurosis, New York, Norton, 1945, p. 91.

wishes because of castration anxiety which derives from fear of retaliation by the father who is perceived as a sexual rival for the mother.³ Fenichel⁴ and Bieber et al.⁵ agree that in the genesis of homosexuality, the boy at the Oedipus stage develops a too intense and exclusive relationship with his mother and correspondingly strong guilt feelings and fears of punishment by castration. These overly strong feelings rather than being resolved at this stage are repressed and remain so through latency until the onset of adolescence. At adolescence the boy's renewed sexuality reawakens the repressed incestuous feelings he held toward his mother and the female's lack of male organs reawakens repressed castration fears. These renewed basic fears result in a strong aversion to the female and thus these mother-fixated men frequently reject women and respond only to their own sex.

As well as Freud, recent psychoanalytic thinking maintains that individuals who regularly engage in homosexual behavior have not progressed through the early psychosexual stages which culminate in the Oedipus complex. Specifically, psychoanalytic theory holds that the individual develops

3 Ibid., p. 108.

4 Ibid., p. 330-331.

5 Irving Bieber et al., Homosexuality, A Psychoanalytic Study, New York, Basic Books, 1962, p. 5-6.

through three early psychosexual stages, the first being the oral stage at the beginning of life where all sensual pleasures are focused in the oral zone, namely, the region of the mouth. Subsequently, sensuality is focused in the anal zone, typically during the toilet training period and finally sensuality is focused in the phallic zone at the onset of the Oedipus complex at four to five years of age.⁶ Sexual practices in homosexual relationships although understood as outcomes of the Oedipus complex are also viewed by psychoanalysts as regressions to the earlier developmental fixation points represented by the oral or anal stages. Recent writers such as Bergler⁷ stress pathogenic developments at the pre-Oedipal stage of orality as the primary determinant of homosexuality. He would see the homosexual as fundamentally a psychic masochist suffering from pre-Oedipal infantile fears which center on the mother image. Van Den Aardweg's⁸ neurotic grief theory of homosexuality approaches Bergler's theory of "psychic masochism." The affective reaction to very early psychic trauma is a negative self-image which is expressed as grief. The fact that later

6 Fenichel, op. cit., p. 62-80.

7 Edmund Bergler, Homosexuality: Disease or Way of Life?, New York, Hill and Wang, 1956, p. 42.

8 Gerald J. M. Van Den Aardweg, "A Brief Theory of Homosexuality," American Journal of Psychotherapy, Vol. 26, No. 1, 1972, p. 52-68.

education disapproves of abundant self-pity results in repression so the individual carries a self-pity concept unconsciously throughout his life. In the homosexual Van Den Aardweg consistently finds the neurotic structure best described as that of a self-pitying child.

Kolb and Johnson⁹ preferred to stress pathological parent-child situations as basic to the etiology of homosexuality. These pathologic parent-child situations involve unconscious communication of personality distortions in the parent to the child. Specifically they view overt homosexuality as caused by the mother's over seductive relationship with her son, her frustration of his heterosexual drive and her unconscious sanction of his homosexuality.

Bieber et al.¹⁰ conducted a major study of male homosexuals in psychoanalysis. Their findings report to find strong evidence for the importance of the Oedipus complex in the etiology of homosexuality. As well as highlighting the close mother fixation, the Bieber et al. data also note that the father plays as essential a role in determining the sexual outcome of the son. Bieber et al. concluded that

9 Lawrence C. Kolb and Adelaide M. Johnson, "Etiology and Therapy of Overt Homosexuality," Psychoanalytic Quarterly, Vol. 24, 1955, p. 506-515.

10 Bieber et al., op. cit., p. 303-310.

"the homosexual son emerged as the interactional focal point upon whom the most profound parental psychopathology was concentrated."¹¹ The Bieber et al. study also provided firm support for Rado's finding that homosexual adaptation is a result of "hidden but incapacitating fears of the opposite sex."¹² These fears were associated with disease or injury to the genitals, fear and aversion to the female genitalia and the frequency and intensity of anxiety accompanying actual or contemplated heterosexual behavior.

Depending upon individual orientation, psychoanalysts tend to emphasize different constellations of childhood constructs such as unresolved Oedipal complexes, oral fixations, castration anxiety, heterosexual fears and distorted communication patterns from the parents to the child to account for the etiology of homosexuality. All these dynamic inter-relationships and formulations take place early in the life of the child and are relegated to unconscious processes at the onset of a homosexual adaptation in later life. Recent psychoanalytic studies of homosexuality hold that these psychic malformations underlying homosexual behavior are indicative of an illness or disease process which affects

¹¹ Ibid., p. 310.

¹² Sander Rado (ed.), "An Adaptational View of Sexual Behavior," Psychoanalysis of Behavior, Collected Papers, Vol. 1, No. 19, New York, Grune and Stratton, 1956, p. 210.

the whole personality. Interestingly, these recent writers depart from Freud who wrote in his famous "Letter to an American Mother" (April 9, 1935):

Homosexuality is assuredly no advantage, but is nothing to be ashamed of, no vice, no degradation, it cannot be classified as an illness; we consider it to be a variation of the sexual functions produced by a certain arrest of sexual development.¹³

Recent writings, particularly of Bergler¹⁴ and Bieber et al.¹⁵ reject this point of view noting that their data strongly support the findings of homosexuality as a neurotic disturbance contraindicating sound mental health.

Criticism of the studies supporting the psychodynamic basis of homosexuality mainly rests on two issues.¹⁶ First, the analytic theories are based entirely on the limited sample of persons who came to a clinic and, secondly, the analysts' judgments of a disease process are based on those homosexuals who are sufficiently maladjusted to seek therapeutic aid. Despite the above criticisms, the psychoanalysts to date have been the most prolific contributors to the

¹³ Sigmund Freud, Three Contributions to the Theory of Sex (tr. by A. A. Brill), New York, Nervous and Mental Disease Publishing Co., 1930, p. 787.

¹⁴ Bergler, op. cit., p. 43.

¹⁵ Bieber et al., op. cit., p. 303-319.

¹⁶ Mark Freedman, Homosexuality and Psychological Functioning, Belmont, Cal., Brooks Cole Publishing, 1971, p. 29.

search for the etiology of homosexuality and their theories have a definite influence on the understanding of this behavior.

(b) Physical-Constitutional Etiology.- Research has been conducted for some time to attempt to explain homosexuality in terms of genetic and chromosomal determinants, but the results have been largely equivocal. Lang¹⁷ years ago advanced the theory that some male homosexuals were genetically female despite male morphological sex characteristics. One consequence of Lang's theory that some male homosexuals are genetically female would be that there should be a higher proportion of males among their siblings than among those of normal males. In other words, some individuals who were genetically female were being counted as males because they had male physical characteristics. Using large samples of the siblings of male homosexuals he found the ratio of males to females to be 121 to 100, whereas, the ratio in a control sample was 105 males to 100 females.

This theory was later tested by Pare¹⁸ using the technique of chromosomal sexing, a method that has

17 T. Lang, "Studies in the Genetic Determination of Homosexuality," Journal of Nervous and Mental Disease, Vol. 92, 1940, p. 55-64.

18 C. M. B. Pare, "Etiology of Homosexuality: Genetic and Chromosomal Aspects," in Judd Marmor (ed.), Sexual Inversion. The Multiple Roots of Homosexuality, New York, Basic Books, 1965, p. 70-79.

empirically proved that most female cells contained a characteristic spot in the nucleus not present in male animal cells. In all cases, the homosexuals were typically male and the incidence of spots was similar to those in normal male controls. These data provided strong evidence against Lang's theory. Lang's results were criticized by Pare on the basis of his method of statistical sampling. Pritchard¹⁹ subsequently conducted a chromosomal investigation of six male homosexuals and in each of his six cases he found the sex chromosome constitution was that of a normal male.

That genetic factors may nevertheless be important in the etiology of homosexuality is strongly suggested by "twin studies." Kallmann²⁰ investigated eighty-five predominately or exclusively homosexual male twin cases. All forty monozygotic index pairs were concordant as to overt practice of homosexuality. In the dizygotic group more than half the co-twins of distinctly homosexual subjects yielded no evidence of overt homosexuality. The striking 100% concordance ratio in the uniovular twins demonstrates that

19 Michael Pritchard, "Homosexuality and Genetic Sex," Journal of Mental Science, Vol. 108, 1962, p. 616-623.

20 Franz J. Kallmann, "Comparative Twin Study of the Genetic Aspects of Male Homosexuality," Journal of Nervous and Mental Disease, Vol. 115, 1952, p. 283-298.

heredity might be an important etiological factor in homosexuality.

Slater²¹ investigated the birth orders and maternal ages of homosexuals. He demonstrated in a sample of 401 homosexuals that they were generally born later in the family than would be theoretically expected. These findings suggest that a chromosomal anomaly which might be associated with late maternal age may play a part in etiology.

Although investigations into the genetic role of homosexuality are scarce, the evidence, particularly Kallmann's data, supports the consideration of a genetic hypothesis. Lang's theory suggesting homosexuals to be genetically female stands discredited at this time.

Homosexuality was for some time considered a manifestation of endocrine imbalance and attempts were made to determine whether abnormal ratios of androgen to estrogen might be the basis of homosexual behavior. Swyer,²² in his review of the literature, notes earlier studies where apparent success was obtained in re-adjusting the androgen to estrogen ratio by administering testosterone. He notes that many later studies, however, which have reported failure with this

21 E. Slater, "Birth Order and Maternal Age of Homosexuals," Lancet, Vol. 1, 1962, p. 69-71.

22 G. I. M. Swyer, "Homosexuality: The Endocrinological Aspects," Practitioner, Vol. 172, 1954, p. 374-377.

treatment and concludes that there is no convincing evidence that human homosexuality is dependent upon hormonal aberrations. Perloff²³ also finds no convincing evidence of a hormonal basis to homosexuality. He notes that large doses of estrogen administered to male homosexuals occasionally reduce their sexual drives but do not influence their choice of sex object. Money²⁴ notes that post pubertally, homosexuality does not correlate with hormonal measures presently available. However, he cites recent research on fetal hormonal differentiation of sexual morphology. Clinical findings particularly through observation of hermaphrodites offer promising leads regarding hormonal influence on the developing fetal brain, especially the hypothalamus. Money cautions that postnatal events also appear to exercise their own influence on gender identity differentiation and more than likely both prenatal and postnatal events interact to determine whether a homosexual outcome is realized.

Scientific evidence regarding correlates of physical appearance and structure with homosexuality indicates

²³ W. H. Perloff, "Hormones and Homosexuality," in Judd Marmor (ed.), Sexual Inversion. The Multiple Roots of Homosexuality, New York, Basic Books, 1965, p. 44-69.

²⁴ John Money, "Sexual Dimorphism and Homosexual Gender Identity," Psychological Bulletin, Vol. 74, No. 6, 1970, p. 425-440.

questionable results. West²⁵ notes that psychiatrists trying to support the assumption that the etiology of homosexuality must have a biological basis have apparently found many physical traits associated with it. Physical traits such as small stature, wide hips, smooth skin, narrow shoulders and boyish face have all been postulated to be associated with a homosexual disposition. Wortis²⁶ over three decades ago examined data of the time purporting to link homosexuality to body build. He found no relationship between these indices in any patients he examined and he criticized other reported results due to non-random statistical sampling. More recently Coppen²⁷ used two sensitive indices of sexual physique, one involving the relation of shoulder width to hip width and the other involving the ratio of bone thickness to the thickness of subcutaneous fat in the calf of the leg. These measures were applied to a group of male homosexuals in psychiatric treatment as well as to a group of neurotics under treatment and to a control

²⁵ Donald J. West, Homosexuality, London, Pelican Books, 1968, p. 44.

²⁶ J. Wortis, "A Note on the Body Build of the Male Homosexual," American Journal of Psychiatry, Vol. 93, 1937, p. 1121-1125.

²⁷ A. J. Coppen, "Body Build of Male Homosexuals," British Medical Journal, Vol. 3, 1959, p. 1443-1445.

group of business men. The fat bone measures revealed no significant differences but the shoulder-hip measures deviated significantly towards the female in the homosexual and neurotic groups. Coppen did not examine a group of homosexuals who were not psychiatric patients. Evans²⁸ as well as noting biochemical difference between homosexuals and heterosexual males found male homosexuals to have less muscle strength, smaller bone development, longer proportion to bulk and narrower shoulder width to pelvic width than a control group of male heterosexuals. His data support the contention of some unidentified common factor underlying physical characteristics of homosexuality.

Physical, constitutional and endocrinological factors have all been studied as determining causes of male homosexuality. Evidence to date in favor of this causal conception is at best inconclusive. Many authors presently discount physical-constitutional conceptions but recent data require that this form of conceptional understanding be considered in any etiological considerations of homosexuality. In fact, it may be particularly important in non-expert minds. West²⁹ notes that the label homosexual frequently

28 R. B. Evans, "Physical and Biochemical Characteristics of Homosexual Men," Journal of Consulting and Clinical Psychology, Vol. 39, 1972, p. 140-147.

29 West, op. cit., p. 44.

gives rise to stereotyped ideas in the minds of the public which particularly relate to the above conception of physical appearance as indicative of a basis for homosexual adaptation.

(c) Situational-Interpersonal Etiology.- Situational and interpersonal factors have also been viewed in the literature as predisposing a homosexual outcome. Seduction resulting in initial sexual experiences being homosexual in nature has been seen as conditioning a deviant sexual orientation for life. Ollendorf³⁰ has suggested that if the first orgasms shared with another person are obtained homosexually, this may condition the adolescent toward deviant sexuality. Bieber et al.³¹ found that homosexuals were often excessively preoccupied with sexuality in childhood, and that a larger proportion of homosexuals than of control patients had sexual fantasies about males at this age. Bieber et al. also reported that in their clinic sample most of the homosexual patients had participated in homosexual activity in pre-adolescence or early adolescence contrasting with his control sample group who began sexual activities later. Before fifteen years of age, 60% of the homosexuals

³⁰ R. Ollendorf, Juvenile Homosexual Experience and Its Effect on Adult Sexuality, New York, Julian Press, 1966, quoted by West, op. cit., p. 116.

³¹ Bieber et al., op. cit., p. 193.

had had homosexual experience. Westwood³² studied 127 adult homosexuals living in the community and 31% of this group reported homosexual contacts before age fifteen and 81% reported contacts before age sixteen. Although the Bieber et al. and Westwood data indicate a high incidence of homosexual contacts early in youth by later affirmed homosexuals, other investigators,³³ in contrast to Bieber's heterosexual group finding, have found a high incidence of reported early homosexual contacts by later affirmed adult heterosexuals. It is widely accepted now that there is a homosexual stage of adolescence and many homosexual contacts take place at this age as a natural developmental stage. These contacts are considered an extension of masturbatory behavior common at the adolescent stage. Craft³⁴ notes that even in the situation where youth put themselves into a position of male prostitution to satisfy homosexual clients, these deviant careers remain very short and their experiences have no detrimental effect on later heterosexual adjustment. These latter observations tend to support the view that the experience of seduction is not an important cause of

32 Gordon Westwood, A Minority, London, Longmans, 1960, quoted by Bieber et al., op. cit., p. 191.

33 West, op. cit., p. 118.

34 Michael Craft, "Boy Prostitutes and Their Fate," British Journal of Psychiatry, Vol. 112, 1966, p. 1111-1114.

homosexual fixation. Bieber et al. note that seduction in itself is often difficult to determine suggesting that in many instances the "so-called victim was often the tempting seducer who encouraged or actively sought out the sexual act with the older male."³⁵ Whether seduction in the above sense was due to intrapsychic conflict or pecuniary gain would be difficult to ascertain. West³⁶ attributes reluctance on the part of legal authorities to relax criminal penalties for homosexual acts to the widespread belief that sexual deviation is the result of seduction of young persons by homosexuals.

Treatment or recognition by homosexuals as one of them has been considered a situational variable predisposing a homosexual adjustment. Hooker³⁷ notes the role of the "Gay" bar serving as induction, training and integration center. Hooker cites the situation of the young man who may have had no homosexual experience or an isolated homosexual experience in adolescence and who is taken to a "Gay" bar by a group of friends whose homosexuality is not suspected by him. In the bar situation the young man may

35 Bieber et al., op. cit., p. 192.

36 West, op. cit., p. 119.

37 Evelyn Hooker, "Male Homosexuals and their 'Worlds'," in Marmor (ed.), op. cit., p. 83-107.

find the sexual license exciting and appealing and thus becomes a participant in the homosexual community. This renunciation of his heterosexual identity is considered by the homosexual community as "coming out" and is seen as an end to the struggle an individual has maintained against his basic homosexual orientation. The subgroup then quickly educates the initiate into the subgroup norms of sexual practice. The cross-section of occupational and socioeconomic levels represented in this subgroup may erroneously convince the initiate of the extensive following the subgroup maintains in society. Such strong group pressure reinforcing a probable transitory sexual disposition in a young person may tend to consolidate sexual expression to a homosexual outcome.

While reinforcement of a homosexual disposition in a person by homosexuals may have imbued the inverted form of sexual expression, the learning of negative beliefs and unsatisfactory experiences with heterosexuality have also been attributed to the etiology of homosexuality. Bieber et al.³⁸ note that persons who have learned to expect heterosexual intercourse to be humiliating, dirty or painful may avoid the practice in favor of homosexuality. Likewise, unfortunate heterosexual experiences may also induce a person to revert to homosexuality. Bieber et al. admit

38 Bieber et al., op. cit., p. 11.

that these and other causes may have some support but they criticize such formulations as being oversimplified and unidimensional.

(d) Moral-Characterological Etiology.- Moral and ethical considerations have always been applied to homosexual indulgence in terms of moral lapse, sinful practice and perversion. Christian thinking has long considered homosexual behavior in all circumstances as immoral and inexcusable. For all homosexual acts continence has been demanded.

Recently some church thinking has taken a more liberal position³⁹ by questioning the total rejection of all homosexuals. A very radical view was put forward by a Quaker group⁴⁰ which concluded that the nature of the physical sex could not be the basis on which the morality of homosexuality was decided. Their line of argument takes the position that homosexual affection could be as charitable as heterosexual affection and hence they question why it should be consistently condemned as morally unacceptable.

Notwithstanding some recent radical conceptions, orthodox church conceptions maintain homosexual acts to be

³⁹ West, op. cit., p. 95.

⁴⁰ Alastair Heron (ed.), Towards a Quaker View of Sex, London, Friends House, 1964, p. 26-37.

in error. Buckley,⁴¹ in an account of moral questions and homosexual practices, carefully examines the available scientific findings and concludes that the status of the present knowledge must leave the homosexual culpable for his acts. Recognizing the difficulties in assessing moral responsibility regarding homosexuality, Buckley concludes his investigation stating five principles which he feels provide the real circumstance of the homosexual's moral responsibility. The first of these notes that "the homosexual may not will to remain in the homosexual condition."⁴² Buckley recognizes that in some cases the homosexual may be "conditioned" prior to an act of his own will but states that the homosexual is generally responsible to some extent for the origin of his particular sexual adaptation. The second caveat notes that where the behavior is a bad habit it should be renounced by the will. Buckley sees the will as an important vehicle of control which must be used since there is relatively little evidence that psychiatric intervention can alleviate the problem. A third point allows the homosexual to be as capable of controlling the expression of his sexuality as the heterosexual his. Buckley notes that generally the homosexual is aware of what he does and is also generally aware that homosexual acts are sinful.

⁴¹ Michael Buckley, Morality and the Homosexual, London, Sands, 1959, p. 162-165.

⁴² Ibid., p. 163.

The fourth and fifth points further elaborate the need to renounce the homosexual condition and to accept personal responsibility where any advertant acts follow.

The upshot of Buckley's analysis is the idea that Christians could not tolerate this form of sexual behavior and must exert moral principle and force of will to desist in such practices. Such practices are considered sinful and intrinsically evil and must definitely be renounced.

(e) Social-Legal Etiology.- Social and legal influences as predispositions to homosexuality have been given more credence in recent years. Lindner⁴³ views homosexuality as a form of rebellion and the homosexual as a non-conformist acting out against uncompromising social pressures. Lindner suggests the sex drive, which underwrites almost the whole of human behavior, is throughout the individual's life the object of every kind of repressive force. He traces these repressive forces from birth onward and notes that conjugal marriage, the only socially accepted place for sexual expression, is itself strictly regulated by law, religion and custom. It is in this above repressive framework that Lindner feels the genesis of homosexuality becomes clear. Homosexuality is a pattern of sex orientation adopted by certain individuals as a solution to the

⁴³ Lindner, op. cit., p. 40.

constant strain between their sexual expression and the repressive forces brought to bear by society on heterosexual sex expression.

Kardiner⁴⁴ sees homosexuality on the increase in America and Western Europe and attributes this to the impact of many social forces operating in concert to produce this effect on the western male population. He sees the trend as a "flight from masculinity." Kardiner analyzes the situation and concludes that sex roles are subtly being altered due to inconsistencies between developmental phases of life and future adult sex roles. Specifically, the mother is in the role the father used to occupy and the father pays for this with loss of dignity. Kardiner proposes that this father no longer provides a masculine ideal and the son develops a fear of the mother based on the idea that "if the mother can do this to the father, another woman can do it to me."⁴⁵ The result is a general social trend toward an increased incidence of homosexuality which will be adopted by these weakened males particularly in times of social hardship. Kardiner in the end sees homosexuality as part of the price extracted by the unique pressures of western civilization today.

⁴⁴ Abram Kardiner, "The Flight from Masculinity," in Sex and Morality, New York, Bobbs-Merrill, 1954, p. 160-192.

⁴⁵ Ibid., p. 178.

Schur⁴⁶ points out the finding that labelling persons as homosexual, thus giving them an official definition, predisposes a homosexual outcome. Szasz⁴⁷ notes that individuals given a psychiatric label of homosexual are more or less branded by the implications of such a designation. The social pressures which accrue in terms of job refusal and similar stigma denoting society's rejection as well as expectations, frequently lead to the behavior being consolidated. Schofield⁴⁸ in the same vein as Szasz notes that once an individual comes before the courts and is labelled a homosexual all his future behavior is influenced by the event. Future chances of marriage and heterosexual adjustment are usually considerably prejudiced by such a designation.

Schofield,⁴⁹ in his comprehensive study of the sociology of homosexuality, states that outdated laws create social pressures which can augment rather than ameliorate

⁴⁶ Edwin M. Schur, Crimes Without Victims: Deviant Behavior and Public Policy, Englewood Cliffs, N. J., Prentice Hall, 1965, p. 97.

⁴⁷ Thomas S. Szasz, "Legal and Moral Aspects of Homosexuality," in Marmor (ed.), op. cit., p. 134.

⁴⁸ Michael Schofield, Sociological Aspects of Homosexuality: A Comparative Study of Three Types of Homosexuals, London, Longmans, 1965, p. 194.

⁴⁹ Ibid., p. 193-202.

the condition. He would maintain that the social consequences of restrictive legislation is almost wholly negative, leading in many instances to additional social malaise such as blackmail and suicide, as well as supporting the prolongation of hostile social attitudes. Schofield notes the general opprobrium accorded to outdated legislation by professionals in the disciplines of theology, psychology and medicine, together with large sections of the popular press. Recently the adoption of the Wolfenden Commission⁵⁰ findings into British law has provided a model for changes of legislation in other countries.

Many investigators adhering to the social conception of the etiology of homosexuality see the behavior as indicative of other social malaise such as confused masculine identity. There is unanimity, however, over the fact that many social stratagems used to control the behavior, rather than solving the problem tend to promote it.

2. Theoretical Relevance of This Investigation to a Social Interaction Deviance Theory of Homosexuality.

The results of the present study are seen as having empirical relevance for a social deviance theory of homosexuality. Kitsuse states that:

⁵⁰ Report of the Committee on Homosexual Offenses and Prostitution (Wolfenden Report), H. M. S. O., London, 1957.

The ascription of sex statuses is presumed to provide a complex of culturally prescribed roles and behaviors which individuals are expected to learn and perform. Homosexual roles and behaviors are conceived to be inappropriate to the individual's ascribed sex status, and thus theoretically they are defined as deviant.⁵¹

Becker⁵² reviews several specific meanings of deviance with their implications and ends by positing a social interaction theory to which this study has relevance. Becker sees the simplest view of deviance as the statistical approach which defines any activity which departs too widely from the average, as deviant. This view necessarily removes any question of value which is usually associated with deviance and has usually been found to result in a very heterogeneous grouping of both deviant and non-deviant individuals.

A second and more frequently ascribed view of deviance identifies it as a pathological process pointing to the existence of a "disease." Although there is little disagreement regarding the concept of physical disease, when the term is used analogously to classify types of deviant behavior, definitional problems ensue. The disease analogy is frequently used more specifically to represent deviance

⁵¹ John I. Kitsuse, "Societal Reaction to Deviant Behavior," Social Problems, Vol. 9, 1962, p. 249.

⁵² Howard S. Becker, Outsiders: Studies in the Sociology of Deviance, New York, Free Press of Glencoe, 1963, p. 3-14.

as a mental disease. The mental disease designation is seen as comparable to the physical disease designation, only in metaphor. If taken to be a similar analogy, deviant behavior such as "homosexuality can be seen as illness because heterosexuality is the social norm."⁵³ The disease or medical conception is limited by its omission of the "social judgment" role in the designation of deviant behavior. A similar deviance definition is utilized by sociologists who observe a society and question whether certain social processes embodied within it are indeed pathological and are likely to endanger the stability of the total social system. In practice this procedure again raises definitional questions regarding what behavior is functional and what is dysfunctional for a society. The issue of whether a particular social process is functional or dysfunctional is often a political question and the decision as to what is to be regarded as deviant frequently only derives from political conflict within the society.

A more relativistic sociological view identifies deviance as the failure to obey group rules. Once the rules a group enforces on its members have been defined, it is possible to know with some precision whether a person has

⁵³ Thomas S. Szasz, The Myth of Mental Illness, New York, Hoeber, 1961, p. 44-45, quoted by Becker, op. cit., p. 6.

violated them and is thus considered deviant. Difficulties arise with this approach when a person may be seen as violating the rules of one group in order to fulfill the rules of another. This problem does not arise with rules that are generally agreed to by everyone but Becker suggests a definition which permits one to deal with both these situations. This last view which is clearly delineated by Becker concerns a conception of deviance resulting from the responses of others to it, and is the understanding of deviance to which this study has theoretical implications.

According to Becker the central fact about deviance is that it is caused by society. By this Becker means that "social groups create deviance by making the rules whose infraction constitutes deviance and by applying those rules to particular people and labeling them as outsiders."⁵⁴ This concept reflects the basic recognition that deviant behavior, like other forms of social behavior, is learned through social interaction. One of the earliest systematic attempts to elucidate a theory of social deviance based on interactional or process terms was done by Lemert.⁵⁵ A key aspect of his analysis was the interplay between the deviant and his judges which highlighted important ways in which the

⁵⁴ Becker, op. cit., p. 9.

⁵⁵ Edwin M. Lemert, Social Pathology, New York, McGraw-Hill, 1951, p. 75-77.

deviance becomes shaped by the attitudes and actions of others. Lemert specifically notes the impact of societal reactions on the organization of deviants by drawing a distinction between primary and secondary deviation. Primary deviation is defined as merely troublesome adjuncts within a socially accepted role, whereas, in secondary deviance:

The person begins to employ his deviant behavior or a role based upon it as a means of defence, attack, or adjustment to the overt and covert problems created by the consequent societal reaction to him.⁵⁶

Thus, the societal reaction to the deviant is vital to understanding the deviance itself and a major element in the source of deviance.

It is in the context of the above conception of social deviance that the popular conceptions of and attitudes toward homosexuality are seen to have theoretical relevance. Cast in the framework of an interactional theory of deviance, popular (non-professional) conceptions and attitudes concerning the etiology of homosexuality are clearly capable of providing one social reaction index which has implications for understanding a social deviance theory of homosexuality.

While etiological sources of homosexuality provide only one form of social reaction, they are considered a

⁵⁶ Ibid., p. 76.

productive area to investigate due to the multiplicity of current causes advanced and the inherent attitude and value dimensions which underlie the various points of view.

3. Review of Differing Professional Views on a Disease or Adjustment Conception of Homosexuality.

In addition to being one measure of the societal reaction important in the understanding of a social deviance theory of homosexuality, the results also provide important data regarding the current status and characteristics of homosexuality understood by non-professionals as compared with professionals. Conceptions of homosexuality, as with other behavior, have changed over time with the result that it is viewed differently in different quarters. Current professional views indirectly become shared with the public and help to formulate public views toward a behavior. The results of this study are particularly seen to provide data on the lay views of the current disease or "adjustment" controversy regarding homosexuality.

The utility of the disease paradigm to understand and treat persons who do not present somatic complaints but who present behavior which violates normative prescriptions has been called into question in recent years. Szasz⁵⁷

⁵⁷ Thomas S. Szasz, "The Myth of Mental Illness," American Psychologist, Vol. 15, 1960, p. 113-118.

was the first to articulate the view that "problems in living" should not be cloaked within the definition of mental illness. Albee⁵⁸ equates the general acceptance of a disease model to many of the manpower problems within mental health and suggests a social learning theory of disturbed behavior to offer a better opportunity to utilize current research findings. Crocetti, Spiro, Lemkau and Siosse⁵⁹ basically accept a mental illness point of view but qualify it by suggesting the need for multiple models of mental illness to account for the many kinds of mental disease. They report data which indicate the general public to be accepting of the medical model of mental illness, optimistic about prognosis and able to identify the simple schizophrenic, the alcoholic and the juvenile character disorder as mentally ill. Crocetti et al. argue with data reported by Sarbin and Mancuso⁶⁰ which support the conclusion that the general public rejects the urging of professionals to look upon norm violators as the victims of disease.

58 George W. Albee, "Conceptual Models and Manpower Requirements in Psychology," American Psychologist, Vol. 23, 1968, p. 317-320.

59 Guido M. Crocetti et al., "Multiple Models and Mental Illness: A Rejoinder to 'Failure of a Moral Enterprise: Attitudes of the Public Toward Mental Illness,' by T. R. Sarbin and J. C. Mancuso," Journal of Consulting and Clinical Psychology, Vol. 39, 1972, p. 1-5.

60 Theodore R. Sarbin and James C. Mancuso, "Paradigms and Moral Judgments: Improper Conduct Is Not Disease," Journal of Consulting and Clinical Psychology, Vol. 39, 1972, p. 6-8.

These extremely divergent points of view have also been directed at homosexuality. Many mental health professionals maintain that homosexuality is a disease and that homosexuals are neurotic or mentally ill.^{61,62} Ellis⁶³ goes further, suggesting most homosexuals are borderline psychotics or outright psychotics. On the other hand, other professionals believe homosexuality to be not necessarily a form of psychopathology. Freud,⁶⁴ as noted earlier, believed homosexuality could not be classified as an illness. Ford and Beach⁶⁵ reported that in forty-nine societies out of seventy-six where information was available, homosexuality was considered acceptable for certain members of the community. Hooker^{66,67,68} found many homosexuals to be well adjusted individuals.

61 Bergler, op. cit., p. 14.

62 Bieber et al., op. cit., p. 303-139.

63 Albert Ellis, "The Right to be Wrong," Journal of Sex Research, Vol. 4, 1968, p. 96-107.

64 Sigmund Freud, "Letter to an American Mother," American Journal of Psychiatry, Vol. 107, 1951, p. 786-787.

65 C. S. Ford and F. A. Beach, Patterns of Sexual Behavior, New York, Harper, 1951, p. 137.

66 Evelyn Hooker, "A Preliminary Analysis of Group Behavior of Homosexuals," The Journal of Psychology, Vol. 42, 1956, p. 217-225.

67 -----, "The Adjustment of the Male Overt Homosexual," Journal of Projective Techniques, Vol. 21, 1957,

68 -----, "What is a Criterion?" Journal of Projective Techniques, Vol. 23, 1959, p. 278-318.

The major reason ascribed to the contradiction in findings has related to sampling procedures. Many of the studies supporting a disease conception of homosexuality were based on findings compiled with prison or clinic populations with the probability that other difficulties were as much to account for their admission to these institutions as their sexual adjustment. Studies on both sides of the question have been criticized for not doing necessary comparisons with heterosexual samples. Siegelman⁶⁹ undertook a comparison of non-clinical homosexuals and heterosexuals and found the homosexuals reported better adjustment on six factors, no differences on six, and atypical adjustment on one factor. Some investigators who disagree with the illness conception of homosexuality frequently see it simply as a form of behavior different from the norm.⁷⁰ Other investigators view it as sinful and reprehensible but not an illness.

The current expert views far from represent a position of unanimity regarding the status or characteristics of homosexuality. Since these varying positions are also

69 Marvin Siegelman, "Adjustment of Male Homosexuals and Heterosexuals," Archives of Sexual Behavior, Vol. 2, 1972, p. 9-25.

70 Judd Marmor, "Homosexuality in Males," Psychiatric Annals, Vol. 1, 1971, p. 44-49.

reflected in etiological considerations of homosexuality, the empirical data obtained in this investigation provides further information regarding the extent to which non-professionals have shared the current expert views.

4. Statement of the Problem(s).

This section of the chapter briefly outlines the problems to be investigated and states them in question form.

The first problem in this study involves an empirical explication of the popular conceptions of the etiological domain of homosexuality. In order to determine popular conceptions a judgment scaling procedure was used. Since little is known regarding the nature of the popular definition of this complex conceptual space, it is important that the scaling procedure does not impose a priori assumptions regarding the number of dimensions necessary to define the space. In order to provide such flexibility, a multidimensional judgment scaling strategy was used in assessing the popular conceptions of homosexual etiology. Although it is difficult to predict the nature and kinds of dimensions comprising the popular conception of this domain, five dimensions, derived from a review of the professional literature, were postulated to represent this unknown conceptual space. A Psychodynamic, Physical-Constitutional, Situational-Interpersonal, Moral-Characterological and a Social-Legal

domain were postulated and statements were developed to reflect each domain. While these postulates were considered as reasonable domains contributing to the broadest definition of the space, it was hoped the empirical explication of the popular domain could resolve alternative and equally plausible popular interpretations of the etiology of homosexuality.

The second problem addressed in the study investigated the extent to which conceptual dimensions of the etiology of homosexuality appeared in the actual beliefs and attitudes of the respondents. A factor analysis of the subjects' responses to the statements reflecting each postulated domain was undertaken to assess the actual beliefs and attitudes of the subjects toward the causes of homosexuality.

Thirdly, it was hoped that the results would provide valuable data permitting an assessment of the current popular view of the origin of homosexual behavior as compared with the professional view.

Fourthly, it was hoped that the results would be seen as having theoretical relevance to a social deviance theory of homosexuality.

Thus, the present study purported to address the following four problems:

1. What is the number and nature of dimensions underlying the popular conceptions of the etiology of homosexuality?

2. To what extent do the conceptual dimensions of the etiology of homosexuality emerge in actual beliefs and attitudes?
3. How does the popular view of the etiology of homosexuality compare with the current professional view?
4. What do these results imply for a social deviance theory of homosexuality?

CHAPTER II

EXPERIMENTAL DESIGN

This chapter presents the methodology of the research. The chapter begins with a presentation of the postulated dimensions representing various etiologies of homosexuality, together with the statements written to reflect each dimension. Next, the chapter presents a description of the questionnaire and answer booklets, the administration procedure and the subject sample participating in the research. This is followed by an overview of multidimensional scaling and factor analysis which are used to analyze the data in problems one and two, respectively. Particular attention is given to the nature of the judgment and response data derived from each method. Finally, the statistical procedures involved in the treatment of the judgment data by the multidimensional successive intervals scaling model are presented followed by a presentation of the statistical procedures involved in the treatment of the response data by factor analysis.

1. Description of the Postulated Domains of the Etiology of Homosexuality.

From the review of the literature five domains, encompassing as broad a spectrum of the professional

literature as appeared warranted, were postulated. A description of each of the five domains follows.

(a) Psychodynamic Etiology.- Homosexuality results from neurotic illness, psychological complexes, distorted early parental relationships, or other unconscious psychic malformations, all of which signify poor mental health.

(b) Physical-Constitutional Etiology.- Homosexuality is due to genetic inheritance, endocrine imbalance, physical or bodily structure.

(c) Situational-Interpersonal Etiology.- Specific events happening to an individual which foster homosexual behavior such as seduction, disappointment with the opposite sex, learned fear of heterosexual coital activity, or acceptance by homosexuals as one of them result in a homosexual outcome.

(d) Moral-Characterological Etiology.- Homosexuality is due to poor character, faulty moral upbringing, lack of religious values or lack of responsibility and will power.

(e) Social-Legal Etiology.- Pressures from the society, whether in the form of legal strictures, social norms or social pressures account for homosexual adaptations.

For each of the five areas four items were developed to reflect that domain using the most authoritative opinions falling in that domain as sources of item content.

2. Statements Reflecting Postulated Domains of the Etiology of Homosexuality.

(a) Psychodynamic Etiology.-

1. Persons with a basic fear of the opposite sex are likely to become homosexual.
2. Homosexuality can usually be traced to unresolved childhood complexes.
3. Distorted early parent-child relationships are often found to be related to homosexuality.
4. Homosexuality is a symptom of an underlying neurotic conflict signifying poor mental health.

(b) Physical-Constitutional Etiology.-

5. Future research undoubtedly will uncover the exact physical cause of homosexuality.
6. Most homosexuals would have remained normal if they had not suffered from a hormonal imbalance in their body chemistry.
7. Persons are led into a pattern of homosexual behavior because of their external physical characteristics.
8. Because of a sex chromosome impairment, a homosexual cannot help developing his particular form of sexual expression.

(c) Situational and Interpersonal Etiology.-

9. Seduction at an early age is a crucial factor in the formation of homosexuality.
10. Unhappy and unfortunate experiences with members of the opposite sex certainly are likely to influence a person toward homosexuality.
11. Being treated by homosexuals as one of them is an important circumstance leading to adoption of homosexual practices.
12. Early learned beliefs that heterosexual intercourse is degrading, humiliating or painful induce many persons to choose homosexuality.

(d) Moral-Characterological Etiology.-

13. The main factor in becoming a homosexual is a lack of will power.
14. Anybody possessing strong religious convictions would never be induced into homosexuality.
15. People who have strong moral stamina and a sense of uprightness seldom become homosexuals.
16. People who indulge in various forms of loose living may also be drawn into homosexual practices.

(e) Social-Legal Etiology.-

17. Conflict between strong sexual needs of the individual and the strict control of sex by society causes the sexual drive to be deflected into homosexuality.
18. People frequently become homosexual because others have labeled or interpreted their behavior as being homosexual.
19. Homosexuality is indirectly caused through the harmful pressures created by outdated legislation and laws condemning homosexual practices.
20. Homosexuality can usually be attributed to the changing sex roles in modern western society.

3. Questionnaire and Answer Booklets.

The questionnaire booklet contained three parts. In Part A, the judgment scaling task, each of the twenty statements was paired with every other statement. With twenty statements, the number of unique pairs was $\frac{n(n-1)}{2}$ or 190. To facilitate scoring of these data, the order of the pairs in the question booklet was systematic. For

example, statements 1 and 2 comprised the first pair on page one of the questionnaire, statements 1 and 3 the first pair on page two, statements 1 and 4 the first pair on page four, and so on. The order of the statements within each pair was random.

In Part B, the response scaling task, the twenty statements were presented on a single page in random order.

Part C was a brief five-item questionnaire designed to provide an index of the respondents' social class (see Appendix 1). Respondents gave their age, sex, parents' educational level and father's occupation. Aside from the above information the subjects retained their anonymity.

The answer booklets contained a series of nine-point scales, one for each of the 190 pairs in the judgment scaling task and one for each of the twenty individual statements in the response task.

4. Procedure.

In obtaining the judgment and response data, the questionnaires were administered in a classroom to groups varying in size from 26 to 42. The complete task which was done at a single sitting took the subjects on an average one-and-a-quarter hours to complete.

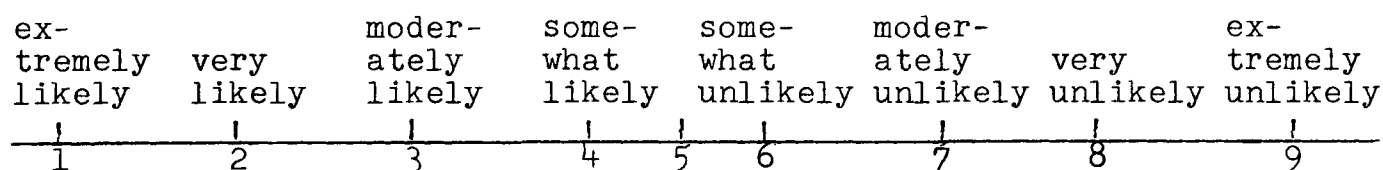
In Questionnaire A the subject's task was to judge the similarity between each of the 190 statement pairs.

The instructions in Part A were read aloud by the examiner and were as follows:

"The following is a judgment task concerning the causes of male homosexuality. Below you will find a series of pairs of statements labeled "A" and "B", indicating probable causes of homosexuality. Your task is to indicate your judgment of the similarity between members of each pair by circling a number on a nine-point scale in your answer booklet. For each pair you are to: imagine a person who is in complete agreement with statement A, and then estimate the amount of agreement that this same imaginary person would express regarding statement B."

An example was given as follows:

- A. Labor unions should become stronger and have more influence generally.
- B. Most of the benefits enjoyed by working men are the result of efforts by organized labor unions.



After the subjects worked this example, the instructions were continued as follows:

"In each pair of statements below indicating probable causes of homosexuality, circle the appropriate number on the nine-point scale in your answer booklet. Try to use all

nine categories in making your judgments of the similarity or dissimilarity of the statement pairs and be sure to make a decision for each pair."

In Questionnaire B, the instructions read as follows:

"Please read each of the following statements indicating probable causes of homosexuality and give your own opinion regarding your agreement or disagreement with each of the statements by circling a number on the nine-point scale provided in your answer booklet."

The nine-point scales were the same as above with the exception that the labeling of the nine points read from "very strongly agree" to "very strongly disagree."

In Questionnaire C, the subjects were asked to "Please check or indicate the items most appropriate to you and your family members."

5. The Subjects.

The subjects were 178 students, eighty-six males and ninety-two females, enrolled in undergraduate introductory psychology courses at the University of Ottawa for the 1972-73 academic year. Data gathering was conducted early in the school year before any topics potentially related to the understanding of homosexuality were discussed.

Descriptive data were obtained from each subject regarding sex, age, educational level attained by parents, and father's occupation. The last two items were used to assess the social class of the sample. The mean age of the males was 22.3 years and of the females was 21.8 years. Analysis of the parents' educational data (Table I) shows both parents to be well educated, 35% of the fathers having done university or university graduate studies as compared with 16% of the mothers. Considering that the parents probably finished their education in the late 1940's, it is assumed the parents of the sample attained an above-average formal education. The occupational distribution of the fathers supports the above assumption. Table II shows over 54% of the fathers held positions in the first two occupational classes, the professional and the managerial. Another 17% were employed as craftsmen in the skilled trades. Clerical, operatives, service workers and laborers made up the remaining 28% of the occupations.

The nature of this sample probably does not depart too far from the typical university group. The sample comes from middle to upper middle class homes and probably ascribes to more liberal views than the society as a whole. Since the present investigation is concerned with the popular conceptions and attitudes regarding the etiology of homosexuality,

Table I.-
Educational Level Attained by Parents
of the Subjects.

Educational Level	Fathers		Mothers	
	N	%	N	%
Grade school	45	25.2	36	20.2
High school	55	30.8	85	47.7
Community college	15	8.4	27	15.1
University	36	20.2	25	14.0
University graduate school	27	15.1	5	2.8
Total N	178		178	

Table II.-
Occupational Distribution of the Fathers
of the Subjects.

Occupational Level	N	%
Professional and semi-professional	59	33.1
Proprietors, managers and officials	39	21.9
Clerical, sales and kindred workers	19	10.6
Craftsmen, foremen	31	17.4
Operatives and kindred	13	7.3
Service workers	5	2.8
Laborers	12	6.7
Total N	178	

the results should be viewed in light of these characteristics of the sample.

6. Multidimensional Scaling of Judgment Data.

The first problem addressed in the study was an empirical explication of the popular conceptions of the causes of homosexuality. A multidimensional scaling procedure was used in this part of the study due to its demonstrated ability to map a conceptual space as well as its lack of restriction to a unidimensional structuring of a domain.

In traditional scaling methods used in psychology, it is assumed that the investigator knows the dimensions of the area he is studying. The subject is usually required to make judgments about a dimension which is specified by the experimenter. The above methods also assume that the attribute being measured is unidimensional. However, as Messick¹ indicates, in many areas of psychological investigation the number of relevant dimensions is unknown and an a priori abstraction of "reasonable" or "psychologically meaningful" dimensions may be misrepresenting the true nature of the stimulus domain. Postulated dimensions may

¹ Samuel J. Messick, "Some Recent Theoretical Developments in Multidimensional Scaling," Educational and Psychological Measurement, Vol. 16, 1956, p. 82-100.

under or over represent the complexity of the domain or be completely irrelevant to the domain under scrutiny. Thus, when applied to psychological domains of unknown dimensionality, unidimensional scaling methods are inadequate.

Multidimensional scaling techniques circumvent the problems created when applying unidimensional methods to unknown domains. Rather than assuming a unidimensional domain, multidimensional scaling assumes an n -dimensional domain. Thus, an attribute can vary with respect to several dimensions at the same time. Rather than assigning a single number (scale value) to represent the judged stimulus along a unidimensional continuum, as many numbers (scale values) are assigned to the judged stimulus as there are relevant dimensions in the psychological space. These scale values are the projections of the judged stimulus on the axes or dimensions within the space. Similarly, all stimuli are represented as points on the dimensions in the space.

The distance between two of these points is their "psychological distance" representing the judged dissimilarity of the stimuli. Psychological distance is a key concept in the multidimensional scaling model. Judgments of psychological distance can be obtained in terms of agreement or disagreement between pairs of stimuli. If a person who strongly agrees with one attitude statement would also be likely to agree strongly with another, then the two

statements can be considered to be psychologically close together. If a person who strongly agrees with one statement would not be very likely to agree with the other, then the two statements can be considered to be psychologically far apart. The multidimensional model obtains the dimensionality of the Euclidean space defined by these distances as well as scale values for the stimuli.

Although multidimensional scaling was originally a psychophysical technique, it has been shown to have utility for studying a wide variety of complex behaviors such as perception of political relationships,² judgment concerning the structure of an attitude domain³ and of particular relevance to this thesis, the multidimensional scaling of popular conceptions of the etiology of alcoholism.⁴

The advantage of utilizing this model to examine the popular conceptions of the etiology of homosexuality resides in the fact that the complexity of the domain need

2 Samuel J. Messick, "The Perceived Structure of Political Relationships," Sociometry, Vol. 24, 1961, p. 270-278.

3 J. Edwin Boyd and Douglas N. Jackson, "The Perceived Structure of Social Attitudes and Personality: A Multidimensional Scaling Approach," Multivariate Behavioral Research, Vol. 2, 1967, p. 281-298.

4 Paul Verden, Douglas N. Jackson and G. A. King, "Popular Conceptions of the Etiology of Alcoholism: A Multidimensional Investigation," Quarterly Journal of Studies on Alcohol, Vol. 30, 1969, p. 78-92.

not be lost due to unidimensional conceptions. The lay judges can structure the domain utilizing as many or as few dimensions as they choose. By determining the number of dimensions, the scale values of the stimulus projections on them, and their interrelationships, one can obtain the lay public's structure of this domain concerning the etiology of homosexuality.

The multidimensional scaling procedure used in this study is a judgment scaling task. In the stimulus centered or judgment approach the subject is asked to judge one stimulus with respect to its relation among other stimuli.⁵ The subject is not asked about his personal agreement or disagreement with a particular statement. Thus, the results of the multidimensional judgment scaling provide only a measure of the respondent's conceptual definition of the etiological domain of homosexuality and cannot necessarily be construed to reflect the respondent's own personal beliefs or attitudes toward homosexuality.

7. Factor Analysis of Response Data.

The second problem addressed in this study is the extent to which popular conceptions of the etiology of

⁵ Warren S. Torgerson, Theory and Methods of Scaling, New York, Wiley, 1958, p. 48.

homosexuality appeared in actual beliefs and attitudes of the respondents. Since the multidimensional scaling requires the subject only to judge one stimulus in relation to another, and not to indicate whether he agrees or disagrees with the statements, the resulting conceptual structuring of the judgment space need not necessarily represent a similar structuring of the subject's own attitudes and beliefs. To assess the subject's own attitudes, a factor analysis of self-referent responses to the same statements was undertaken. In the response approach the subject is required to respond to each stimulus in terms of his own personal agreement or disagreement with the result that variability of reactions to stimuli is ascribed to both variation in the subjects and to variation in the stimuli.⁶

The methodological procedures involved in multidimensional scaling and factor analysis are different. Essentially, the multidimensional scaling analysis centers on the extraction of a number of factors to account for the major portion of the mutual interpoint variance, while the factor analysis centers on the extraction of a number of factors to account for common variance in a matrix of correlation coefficients. Research conducted by Boyd and Jackson⁷ comparing both judgment and response methods in a multivariate attitude

⁶ Ibid.

⁷ J. Edwin Boyd and Douglas N. Jackson, "An Empirical Evaluation of Judgment and Response Methods in Multivariate Attitude Scaling," London, Canada, University of Western Ontario Research Bulletin, No. 26, 1966. American Psychologist, 1966, p. 718 (Abstract).

scaling situation found that multidimensional judgment scaling provided a clear definition of items in a postulated conceptual space but the same items when administered in a response format and factor analyzed, provided less reliable results due to the influence of acquiescence response bias. Variables other than perceived content can also act to effect response results but the pervasive influence of acquiescence found by Boyd and Jackson on the response scaling data suggests that control of such a bias may be necessary in this study if response data are to reflect only perceived content responding.

8. Description of the Statistical Procedures Used in the Multidimensional Scaling of the Judgment Data and the Factor Analysis of the Response Data.

A. Description of Multidimensional Scaling Procedures

The multidimensional scaling model utilized in the present investigation can be considered as involving three basic steps. In the first step a scale of relative distances between all pairs of stimuli or statements is obtained. The second step involves estimating an additive constant and using this estimate to convert the relative distances into absolute distances. In the third step the dimensionality of the psychological space necessary to account for

these absolute distances is determined and projections of the stimuli on axes of this space are obtained.

(a) Scale of Comparative Distances.- A successive intervals model⁸ was used to obtain a scale of comparative distances between all pairs of stimuli. The experimental method of successive intervals requires the 190 stimulus or statement pairs to be sorted into $k+1$ categories. This procedure yields a frequency distribution for each stimulus pair over several of the categories. The basic problem in successive intervals scaling is to transform the n (190) frequency distributions to a single psychological scale, the psychological scale values associated with each stimulus pair being distributed along this scale with a mean and standard deviation characteristic of each stimulus pair. The means of transformed frequency distributions would correspond to the stimulus scale values and the standard deviations to the "discriminal dispersions" as named by Thurstone. Scale values of the category boundaries are also obtained in the method of successive intervals thus permitting the size of the categories to vary rather than assuming them to be equal as in the method of equal appearing intervals.

⁸ Gertrude W. Diederick, Samuel J. Messick and Ledyard R. Tucker, "A General Least Squares Solution for Successive Intervals," Psychometrika, Vol. 22, 1957, p. 157-173.

The first step in the successive intervals scaling model involves obtaining from each stimulus pair frequency distribution the proportion of p_{ig} of times stimulus pair i was placed below the g th category boundary, t_g . These cumulative proportions are then converted into normal deviate values z_{ig} . Category boundaries t_g are expressed as follows: $t_g = m_i - s_i z_{ig}$ where m is the scale value of stimulus pair i , s_i is the discriminial dispersion for stimulus pair i , and z_{ig} is the normal deviate value derived from cumulative proportions of endorsements.

The above equation is a special case of the Law of Categorical Judgment⁹ used for scaling data collected by the method of successive intervals. Essentially, this law assumes that the boundaries between adjacent categories behave like stimuli. The complete law of categorical judgment is a theoretical equation requiring certain simplifying assumptions to be solvable. By assuming that the dispersions of the category boundaries are all equal and that all correlation terms vanish the theoretical equation reduces to the simplified expression of t_g described above. An iterative solution for successive estimates of m_i , s_i and t_g was used in which categories were weighted in proportion to their frequency of endorsement. The weighting procedure was

9 Torgerson, op. cit., p. 206.

incorporated to allow for the situation of incomplete overlap of certain categories. Weights of zero were assigned to these missing entries and higher weights to filled entries. The final solution for M_i , the scale value for each stimulus pair, represents the perceived similarity between members of all possible pairs of stimuli. The successive intervals scaling for all the subjects yielded a matrix S (20X20) of relative interpoint distances. In order to utilize the Young-Householder theorems to obtain the dimensionality of the psychological space, the relative distances must be converted to absolute distances. This procedure requires the determination of an additive constant which will be discussed following a description of the Young-Householder theorems and their applicability to this multidimensional scaling model.

(b) Rationale for Multidimensional Scaling.- Young and Householder¹⁰ have given the method for determining whether a set of absolute interpoint distances can be considered to be the distances between points lying in a real Euclidean space. Their theorems provide the basis for determining the dimensions of the smallest Euclidean space containing such points and for obtaining the projections of the

¹⁰ Gale Young and A. S. Householder, "Discussion of a Set of Points in Terms of Their Mutual Distances," Psychometrika, Vol. 3, 1938, p. 19-22.

points on a set of orthogonal axes in the space. Their theorems involve the scalar products matrix B . If i, j and k be alternate subscripts for n points ($i, j, k=1, 2, \dots, n$) and d_{ij}, d_{ik}, d_{jk} be the distances between the points, then B is an $(n-1) \times (n-1)$ symmetric matrix with elements $b_{jk} = 1/2(d_{ij}^2 + d_{ik}^2 - d_{jk}^2)$. The element b_{jk} is considered to be a scalar product of vectors from point i to points j and k . This follows from the cosine law, that is, given three points i, j and k $d_{jk}^2 = d_{ij}^2 + d_{ik}^2 - 2d_{ij}d_{ik}\cos\theta_{jik}$ where rearranged becomes $d_{ij}d_{ik}\cos\theta = 1/2(d_{ij}^2 + d_{ik}^2 - d_{jk}^2)$.

From the above equations it is seen that $b_{jk} = d_{ij}d_{ik}\cos\theta_{jik}$. Matrix B is then a matrix of scalar products of vectors with origin at point i . There are n possible B matrices since i may assume any value from 1 to n . The B matrix may be factored to produce an F matrix, the rank of which is the dimensionality of the space and the elements of which are the projections of the points on axes.

Two important Young-Householder theorems that apply to such B matrices are stated as follows:

Theorem 1.- If any matrix B is positive semi-definite, i.e., if none of the latent roots of B are negative, the distances may be considered to be distances between points lying in a real Euclidean space.

Theorem 2.- The rank of any positive semi-definite matrix B is equal to the dimensionality of the set of points.

The distances to which these theorems are applied must have certain properties, namely, (a) the distances should be represented by non-negative real numbers; (b) the distances between points should be the same in both directions, i.e., $d_{jk} = d_{kj}$ and (c) a distance d_{jk} should equal zero if and only if j and k are identical. A space defined by distances having the above properties is called a semi-metric space. If, in addition, the sum of any two distances is greater than or equal to a third, then the space is metric. The metric space concerned with this multidimensional scaling model is the Euclidean space.

If data are errorless, Theorem 1 provides a method for determining whether a set of semimetric distances can be considered Euclidean, that is, none of the latent roots of B are negative. However, with fallible data the small roots will not likely equal zero but vary positively and negatively around zero. If the small positive and small negative roots can be considered as error variations of zero roots, then the dimensionality of the space can be taken as the number of large positive roots.

Thus, as seen above, Young and Householder have presented a method for obtaining the dimensionality of the space

and the projections of the stimuli on axes, given a matrix of absolute interpoint distances. The analytical procedure consists of converting the matrix D^2 of squared absolute interpoint distances into a matrix B of scalar products taken from any one of the points and then factoring B to yield an F matrix. For fallible data, however, each point is in error so B matrices centered at different points will yield different results.

Torgerson¹¹ developed a solution which places the origin at the centroid of the stimuli thus allowing errors in individual points to cancel one another. The present model utilizes Torgerson's solution of converting the matrix, D^2 , of squared interpoint distances directly into a matrix B of scalar products among vectors with origin at the centroid and then factoring B to obtain F . The elements of F are the projections of the points on orthogonal axes placed at the centroid of points, and the rank of F is equal to the dimensionality of the space.

(c) Additive Constant Solution.- Absolute interpoint distances d_{jk} are required by the Young-Householder theorems and the multidimensional successive intervals scaling procedure yields only relative distances S_{jk} measured from an

¹¹ Warren S. Torgerson, "Multidimensional Scaling: 1. Theory and Method," Psychometrika, Vol. 17, 1952, p. 401-419.

arbitrary origin. The additive constant problem is concerned with selecting a constant c which will translate S_{jk} to d_{jk} . The selection of a particular additive constant will effect the multidimensional mapping of stimuli. If the constant is too small, Euclidean distances may be made non-Euclidean and a constant which is too large may increase the dimensionality of the stimulus space. The criterion used to select the best constant value is that which will minimize the dimensionality of the stimulus space and at the same time yield a Euclidean representation of the relative distances.

Messick and Abelson's¹² solution for the additive constant is used in this model. This procedure involves an initial estimation of c and an iterative procedure to eliminate the distortion caused by the estimation. A trial value constant, the largest relative distance, is chosen and used to construct the symmetric scalar products matrix B which is subsequently analyzed by the principal components technique to form a matrix F . For any symmetric matrix the sum of all the latent roots is equal to the sum of the diagonal elements. Since the c value desired is one which will produce a minimum number of large positive roots with

¹² Samuel J. Messick and Robert P. Abelson, "The Additive Constant Problem in Multidimensional Scaling," Psychometrika, Vol. 21, 1956, p. 1-15.

the remaining roots being negligible, the procedure used sets the sum of only the large latent roots of the B matrix equal to the sum of the diagonals. This procedure which involves the solution of a quadratic in c , provides that value of the constant which sets the sum of the small latent roots equal to zero. The space may be distorted by this process since the latent roots were obtained from a B matrix based on a trial constant. But the new c value is then selected and the solution iterated to form another B matrix which is refactored. If iteration indicates the distortion introduced by c to be negligible then the latent roots can be plotted and the large dimensions determined by the size and patterning of the roots.

B. Description of Factor Analytic Procedures

Part B of the scaling questionnaire yields response data for each of the 178 subjects on the twenty stimulus scales. Pearson product moment correlation coefficients were calculated between the twenty response scales yielding a 20X20 correlation matrix. The 20X20 correlation matrix was then factored by the principal components method and significant factors were rotated analytically to a normalized varimax criterion of orthogonal simple structure.

CHAPTER III

RESULTS

This chapter which presents the results of the analysis of the data begins with a presentation of the results of the multidimensional successive intervals scaling of the judgment data. Specific attention is given to the selection of the exact number of empirical dimensions and the stability of the indicated dimensions across samples. Then the nature of the selected empirical dimensions is reported. Next, the results of the factor analysis of the response data are presented which include the selection of the relevant factors and the nature of those factors. Finally, the judgment results and the response results are compared.

1. Results of the Multidimensional Scaling of Judgment Data.

Multidimensional successive intervals scaling was applied to the judgment data for the 178 subjects. For each of the 190 item pairs a cumulative frequency distribution of endorsements on a nine-point continuum was obtained. Cumulative proportions were then computed and the results are presented for each of the 190 item pairs on the nine-point continuum in Appendix 2. Since the cumulative

proportion in the highest category is necessarily 1.00, this extreme proportion contributes no information and was ignored in further analysis. The remaining cumulative proportions were converted to normal deviate values and successive intervals scaling was applied to these data to obtain category boundaries, dispersions, and scale values of the item pairs. The category boundaries are reported in Table III and the standard deviations or dispersions and scale values for all 190 item pairs are presented in Tables IV and V.

The successive intervals scaling also yielded a matrix S of relative distances between all possible pairs of the twenty stimuli. The smallest distance was set equal to zero and the other distances altered respectively. The relative distance matrix is presented in Table VI.

In order to apply the Young-Householder theorems to determine the dimensionality of the relative distance matrix, an additive constant was estimated which converted the relative distances to absolute distances. Convergence on a final value was obtained using the Messick and Abelson solution. This final value was -0.8370 . This constant was used to construct the scalar products matrix B which was then factored using the principal components method to yield an F matrix. The first four dimensions deemed necessary to

Table III.-

Category Boundary Values Derived from Successive
Intervals Scaling (N=178).

Category Boundary								
1	2	3	4	5	6	7	8	
Category boundary value	-1.890	-1.062	-0.550	-0.069	0.171	0.500	0.936	1.669

Table IV.-

Matrix of Discriminal Dispersions for Each of the 190 Item
Pairs Derived from Successive Intervals Scaling (N=178).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
2	.889																			
3	.961	.963																		
4	1.099	.996	.942																	
5	.958	1.140	1.115	1.141																
6	.878	.990	1.023	1.067	1.437															
7	.964	1.065	1.061	.769	1.172	1.173														
8	1.000	1.037	1.000	1.152	1.309	1.668	1.182													
9	1.005	1.023	.934	.913	1.016	.946	.957	.970												
10	1.382	.865	.804	1.033	1.042	.876	.874	1.031	.966											
11	.985	.818	.970	.953	1.045	.956	.883	1.194	.892	1.120										
12	.935	1.011	1.050	1.062	.985	.957	.803	1.030	.972	1.197	.890									
13	.974	.867	.815	1.021	1.269	.928	1.004	1.294	1.046	.982	1.063	.899								
14	.885	.920	1.002	1.008	1.386	1.200	.887	1.108	.946	.965	.892	1.241	1.698							
15	.790	.821	.848	1.424	1.247	1.024	.889	1.052	.872	.949	1.082	1.137	2.286	1.870						
16	.929	.799	.839	.947	1.159	.962	.942	1.071	.925	.836	.953	1.188	1.075	1.640	1.830					
17	.955	.921	.765	.914	1.072	1.174	.884	1.027	.904	.948	.977	1.063	1.194	1.328	1.164	.998				
18	.774	.773	.802	.934	.949	1.008	1.105	.948	.834	.825	.994	.792	1.055	1.226	1.133	.984	.855			
19	.775	.815	.916	.815	.964	.961	.926	.993	.953	.855	1.099	1.014	.932	1.304	.914	.965	1.103	.870		
20	.895	.858	.858	.881	.933	.927	.936	1.005	1.031	.851	.967	.900	.857	.885	.938	1.076	1.006	.858	1.038	

Table V.-

Matrix of Scale Values for Each of the 190 Item Pairs Derived
from Successive Intervals Scaling (N=178).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
2	-.460																			
3	-.530	-1.016																		
4	-.659	-.644	-.713																	
5	.164	.177	.329	.205																
6	.500	.600	.879	.261	-1.084															
7	-.030	-.049	.181	.270	-.296	-.205														
8	.511	.507	.713	.850	-1.089	-2.034	-.149													
9	-.824	-1.213	-.734	.146	.456	.609	-.127	.677												
10	-1.764	-1.001	-.799	-.340	.309	.513	-.366	.663	-1.227											
11	-.703	-.362	-.484	-.304	.363	.328	-.578	.743	-.427	-.905										
12	-1.054	-.940	-.861	-.496	.578	.682	.223	.768	-.727	-1.419	-.527									
13	.001	.063	.290	-.124	.814	1.124	.350	1.234	.298	.182	-.368	.315								
14	.424	.381	.154	-.114	.627	.821	.804	1.220	.583	.454	.693	.195	-1.028							
15	.205	.067	.077	-.453	.263	.830	.622	.950	.339	.273	.286	.241	2.101	-2.213						
16	.286	.016	.008	-.120	.216	.761	.108	.306	-.197	-.249	-.358	-.248	-1.050	-.814	-1.474					
17	.008	-.200	-.188	-.180	.086	.766	.266	.396	-.120	-.274	-.304	-.671	-.051	.696	.008	-.164				
18	-.100	-.096	-.207	-.081	.231	.779	-.943	.333	.022	-.373	-1.096	-.027	-.105	.487	.349	-.175	-.024			
19	.273	.224	.032	.108	.315	.794	.439	.610	.487	.079	.233	-.228	.311	.300	.387	-.021	-1.109	-.121		
20	.007	-.027	.026	.224	.249	.656	.130	.726	.065	-.217	-.465	-.007	.247	.216	.275	-.519	-.286	-.283	-.403	

Table VI.-

Matrix of Relative Distances Between Each of the 190 Item Pairs
Derived from Successive Intervals Scaling (N=178).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
2	1.753																			
3	1.683	1.198																		
4	1.554	1.569	1.500																	
5	2.377	2.390	2.542	2.418																
6	2.713	2.813	3.092	2.474	1.129															
7	2.183	2.164	2.394	2.483	1.917	2.008														
8	2.742	2.720	2.927	3.063	1.124	0.179	2.064													
9	1.389	1.000	1.479	2.359	2.669	2.822	2.087	2.890												
10	0.449	1.202	1.414	1.873	2.522	2.726	1.847	2.876	0.986											
11	1.510	1.851	1.729	1.909	2.576	2.541	1.635	2.956	1.786	1.308										
12	1.154	1.273	1.352	1.717	2.719	2.895	2.436	2.981	1.486	0.794	1.686									
13	2.214	2.276	2.503	2.089	3.027	3.337	2.563	3.447	2.511	2.395	1.845	2.528								
14	2.037	2.594	2.367	2.099	2.840	3.034	3.017	3.433	2.796	2.667	2.906	2.408	1.185							
15	2.418	2.280	2.290	1.760	2.476	3.043	2.835	3.163	2.552	2.486	2.499	2.454	0.112	0.000						
16	2.409	2.230	2.221	2.093	2.429	2.975	2.321	2.519	2.016	1.964	1.855	1.965	1.163	1.399	0.739					
17	2.221	2.013	2.025	2.033	2.299	2.979	2.479	2.609	2.093	1.939	1.909	1.542	2.162	2.909	2.221	2.049				
18	2.113	2.117	2.006	2.132	2.444	2.992	1.270	2.546	2.236	1.840	1.117	2.186	2.108	2.700	2.562	2.038	2.189			
19	2.486	2.437	2.245	2.322	2.528	3.007	2.653	2.823	2.700	2.292	2.446	1.985	2.524	2.513	2.600	2.192	1.104	2.092		
20	2.220	2.186	2.239	2.437	2.462	2.869	2.343	2.939	2.278	1.996	1.748	2.206	2.460	2.429	2.488	1.694	1.927	1.930	1.810	

describe the space were selected and were then rotated by the varimax procedure to orthogonal simple structure. The matrix of unrotated scale values and the varimax rotated scale values for each item on the first four dimensions are presented in Table VII and VIII.

A. The Number of Dimensions

In an analysis of an unknown conceptual domain such as the etiology of homosexuality, the number of real empirical dimensions is crucial and necessitates objective criteria independent of the investigator's subjective interpretations. Two objective features of the results of a multidimensional scaling analysis provide information regarding the dimensionality of the cognitive domain. The first consists of the relative sizes of the latent roots of the matrix of scalar products, the number of large roots obtained from the analysis representing the dimensionality of the space. The second feature pertains to an evaluation of the stability of the indicated dimensions across samples.

Walters and Jackson¹ describe the procedure for determining the dimensionality from the patterning of the

¹ Herman A. Walters and Douglas N. Jackson, "Group and Individual Regularities in Trait Inference: A Multidimensional Scaling Analysis," Multivariate Behavioral Research, Vol. 1, 1966, p. 145-163.

Table VII.-
Unrotated Scale Values for Each Item on Four
Dimensions (N=178).

Item Content	Dimensions			
	I	II	III	IV
I. Psychodynamic				
1. Basic Fear	-0.074	-0.528	-0.433	-0.069
2. Childhood Complexes	-0.151	-0.478	-0.340	-0.207
3. Distorted Parent-Child	-0.374	-0.490	-0.208	-0.338
4. Neurotic Conflict	-0.325	0.099	-0.515	-0.320
II. Physical-Constitutional				
5. Physical Cause	1.117	0.507	-0.058	-0.223
6. Hormone Imbalance	1.440	0.432	-0.520	-0.063
7. External Characteristics	0.765	-0.244	0.013	0.739
8. Sex Chromosome	1.567	0.302	0.203	-0.106
III. Situational-Interpersonal				
9. Seduction	-0.123	-0.721	-0.337	0.054
10. Unhappy Experience	-0.142	-0.659	-0.131	0.048
11. Treatment by Homosexuals	-0.108	-0.503	0.059	0.567
12. Early Learned Beliefs	-0.387	-0.570	-0.071	-0.468
IV. Moral-Characterological				
13. Will Power	-0.958	0.560	-0.024	0.594
14. Religious Convictions	-0.807	1.089	-0.353	-0.051
15. Moral Stamina	-0.617	0.861	-0.295	-0.104
16. Loose Living	-0.404	0.605	0.223	0.268
V. Social-Legal				
17. Social Pressure	-0.123	-0.163	0.675	-0.475
18. Labelled Homosexual	0.015	-0.239	0.480	0.637
19. Outdated Laws	-0.149	0.154	0.970	-0.572
20. Sex Roles	-0.158	0.011	0.664	0.092

Table VIII.-

Varimax Rotated Scale Values for Each Item on
Four Dimensions (N=178).

Item Content	Dimensions			
	I	II	III	IV
I. Psychodynamic				
1. Basic Fear	<u>-0.640*</u>	-0.033	-0.255	-0.015
2. Childhood Complexes	<u>-0.622</u>	0.003	-0.098	-0.115
3. Distorted Parent-Child	<u>-0.676</u>	0.172	0.118	-0.193
4. Neurotic Conflict	<u>-0.248</u>	0.197	-0.216	<u>-0.580</u>
II. Physical-Constitutional				
5. Physical Cause	<u>0.612</u>	<u>-1.056</u>	-0.169	-0.194
6. Hormone Imbalance	<u>0.511</u>	<u>-1.332</u>	<u>-0.683</u>	-0.182
7. External Characteristics	<u>0.173</u>	<u>-0.509</u>	<u>-0.477</u>	<u>0.822</u>
8. Sex Chromosome	<u>0.656</u>	<u>-1.458</u>	-0.068	0.196
III. Situational-Interpersonal				
9. Seduction	<u>-0.753</u>	0.030	-0.212	0.196
10. Unhappy Experience	<u>-0.637</u>	0.060	-0.041	0.252
11. Treatment by Homosexuals	<u>-0.307</u>	0.220	-0.174	<u>0.667</u>
12. Early Learned Beliefs	<u>-0.740</u>	0.137	0.310	-0.193
IV. Moral-Characterological				
13. Will Power	<u>0.430</u>	<u>1.160</u>	-0.230	-0.030
14. Religious Convictions	<u>0.634</u>	<u>0.866</u>	-0.245	<u>-0.867</u>
15. Moral Stamina	<u>0.482</u>	<u>0.664</u>	-0.177	<u>-0.735</u>
16. Loose Living	<u>0.586</u>	<u>0.550</u>	0.049	-0.066
V. Social-Legal				
17. Social Pressure	-0.079	-0.037	<u>0.846</u>	0.002
18. Labelled Homosexual	0.134	0.176	<u>0.087</u>	<u>0.798</u>
19. Outdated Laws	0.262	0.005	<u>1.112</u>	-0.088
20. Sex Roles	0.221	0.201	<u>0.527</u>	0.328

*The underlined scale values represent the high loadings (values greater than $\pm .40$).

latent roots. The procedure is equated to factor analysis where extraction of all the common variance from a matrix leaves as residual the variance specific to the measures and variance due to errors of measurement. In the present case extraction of reliable latent roots is done by estimating the point at which the extraction of additional roots, ordered as to size, no longer results in substantial decreases in their relative sizes. When latent roots are plotted with regard to size, the result typically is a curve with a break or inflection point. This inflection of the curve is taken as the point at which the major proportion of the interpretable reliable variance has been extracted.

Figure 1 shows the latent roots of the B matrix plotted in descending order of size. From this figure, it can be seen that there are four large latent roots of 9.01, 5.63, 3.40 and 2.83. The remaining values have a net sum of zero. It is also noted that the fifth root is at the inflection point of the curve and the extraction of these remaining values does not result in substantial decreases of their relative sizes.

Evaluation of the stability of the dimensions across samples also supports the choice of four dimensions. The total sample was randomly divided into two subsamples of eighty-nine subjects each. Separate multidimensional

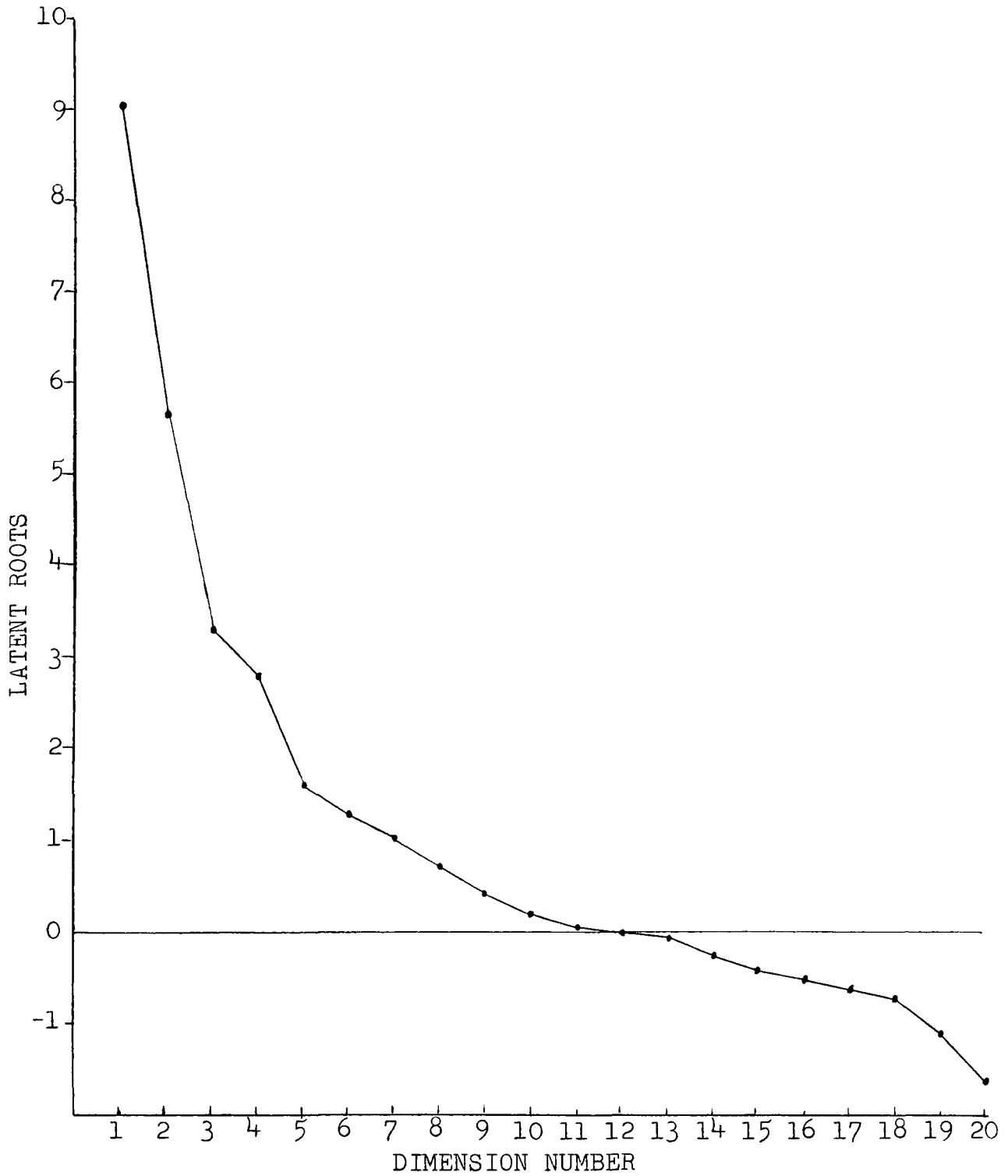


Figure 1.- Latent Roots Derived from Multidimensional Successive Intervals Scaling of Data from Total Sample (N=178).

scaling analysis was done for each subsample. Figure 2 presents a plot of the latent roots for both random halves. Comparison of the latent root plots for both samples shows definite similarity and provides clear evidence for the presence of four interpretable dimensions.

Another criterion of stability of the results is obtained from correlation coefficients computed between scale values across dimensions for both groups of randomly selected subjects. The data are shown in Tables IX and X. Table IX presents the correlations between both samples based upon scale values from the first ten dimensions of the original unrotated F matrices. When the first four unrotated dimensions are subjected to varimax rotation and the scale values from each dimension intercorrelated, the correlations are further amplified. The coefficients of stability for the first four dimensions after rotation were .992, .966, .967 and .966.

Since it was possible to specify a hypothesized number of dimensions in the analysis, a further analysis of stability was conducted between random halves with five hypothesized dimensions. The correlations between the scale values of the first four of five rotated dimensions were also strong, the coefficients being .942, .878, .934 and .889. The coefficient of stability calculated between the fifth

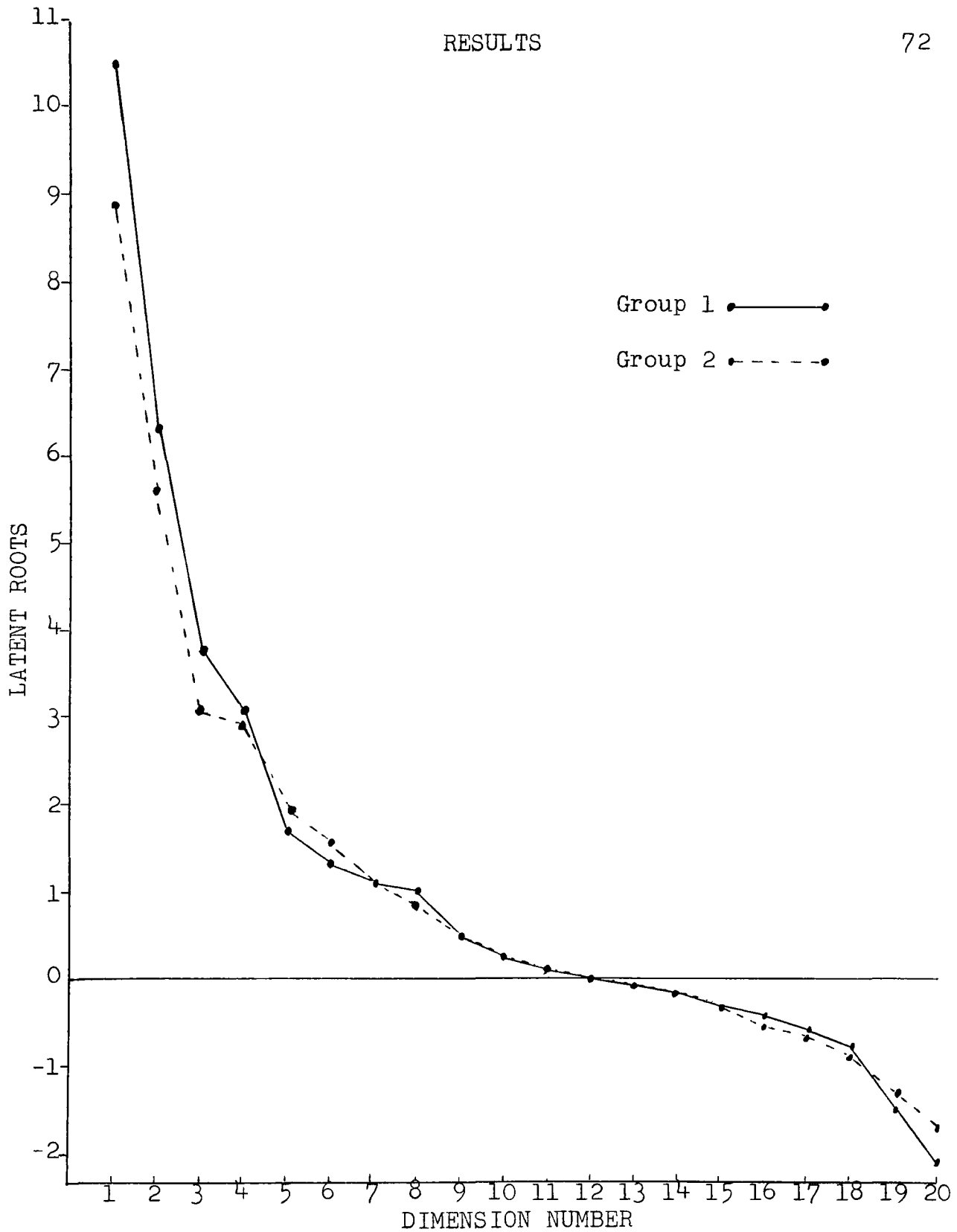


Figure 2.- Latent Roots Derived from Independent Multi-dimensional Successive Intervals Scaling of Two Random Halves of Total Sample (N-89 in each half).

Table IX.-

Product Moment Correlations Between Scale Values on the First
Ten Dimensions of the Original Unrotated F Matrix for Two
Groups of Randomly Selected Subjects
(N=89 for Each Group).

Dimension	Correlation	Dimension	Correlation
I	.910	VI	.778
II	.845	VII	.605
III	.934	VIII	.566
IV	.968	IX	.559
V	.843	X	.352

Table X.-

Product Moment Correlations Between the Randomly Selected
Subjects for Rotated Scale Values Using Hypothesized
Dimensionalities of Four and Five
(N=89 for Each Group).

Hypothesized Dimensionalities	Dimensions				
	I	II	III	IV	V
4	.992	.966	.967	.966	
5	.942	.878	.934	.889	.868

rotated dimension was slightly lower than the others but still robust with a value of .868. However, a subjective appraisal of this last rotated dimension showed only three loadings high enough to consider for interpretation and these when examined were uninterpretable. Table X shows the correlation between the random samples of subjects for rotated scale values using hypothesized dimensionalities of four and five.

Considering the patterning of the large roots, the size of the correlation coefficients of stability between dimensions of randomly split groups, and the subjective criteria of interpretability, the evidence argues strongly for the domain containing four dimensions.

B. Male and Female Data

Since it was considered possible that male and female conceptions of the etiological domain of male homosexuality might differ, separate multidimensional scaling analyses of the male and female data was undertaken. Examination of the male and female data indicated both to organize the domain into four dimensions and correlations calculated between the first four unrotated dimensions ranged from .93 to .97. On the basis of the high stability of the results across sex, only the combined sample was used to assess the popular conceptions of homosexuality.

C. Nature of the Dimensions

Separate and combined multidimensional scaling analysis of the data provided evidence that the subjects used four dimensions to describe the conceptual space. The rotated scale values of the stimulus items on these first four dimensions are presented in Table VIII. Only those loadings with a value equal or greater than 0.40 are considered for interpretation. Figures 3 and 4 depict graphically the positions of the statements having high loadings on the four major dimensions.

Dimension 1:

8. Sex Chromosome	.65
14. Religious Convictions	.63
5. Physical Cause	.61
16. Loose Living	.58
6. Hormone Imbalance	.51
15. Moral Stamina	.48
13. Will Power	.43
2. Childhood Complexes	-.62
10. Unhappy Experience	-.63
1. Basic Fear	-.64
3. Distorted Parent-Child	-.67
12. Early Learned Beliefs	-.74
9. Seduction	-.75

Dimension 1 is the most extensively defined dimension and contrasts Moral-Characterological and Physical-Constitutional items with Psychodynamic and Situational-Interpersonal items. The highest positive loading was item number 8, Sex Chromosome. This item together with number 5, Physical Cause, and number 6, Hormone Imbalance, define

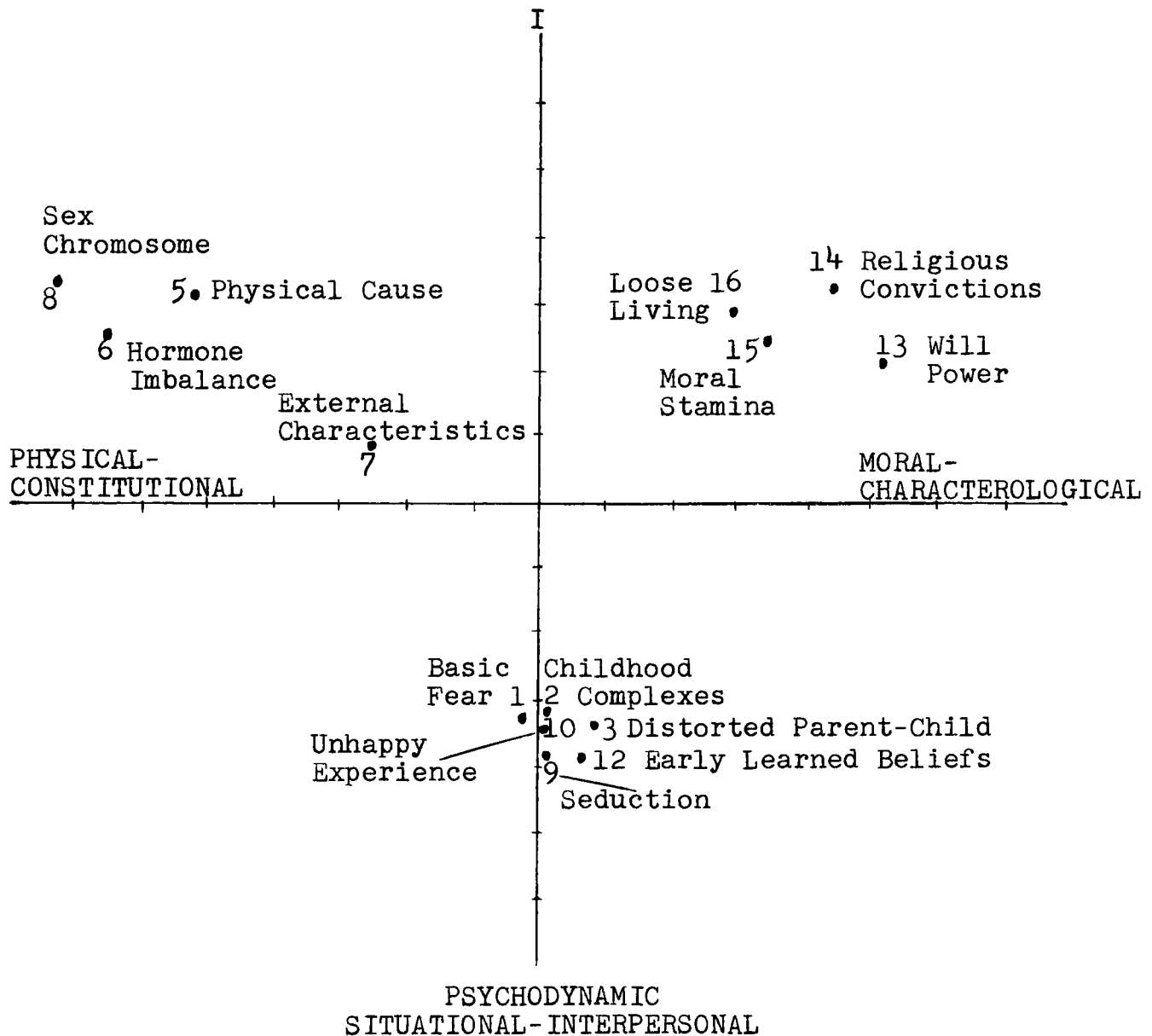


Figure 3.- Projections of Items on Dimensions I and II (values greater than = .40 only).

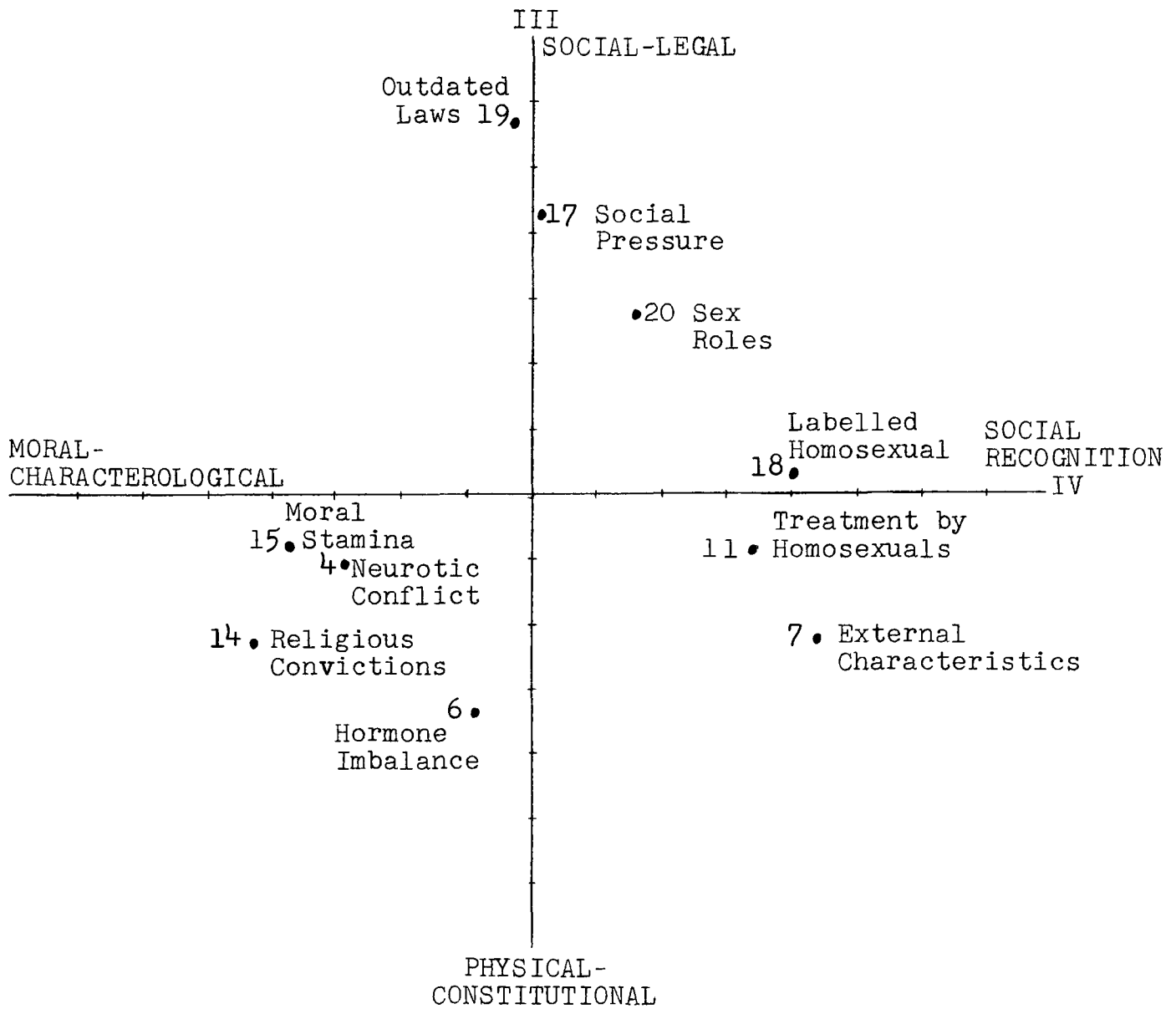


Figure 4.- Projections of Items on Dimensions III and IV (values greater than $\pm .40$ only).

the Physical-Constitutional contribution to the positive pole. Item number 14, Religious Convictions, number 16, Loose Living, number 15, Moral Stamina, and number 13, Will Power, comprise the Moral-Characterological contribution to the positive pole. The Moral-Characterological and Physical-Constitutional items, although loading on the same pole of Dimension 1, are conceptualized together only as a contrast to the Psychodynamic and Situational-Interpersonal domains. Examination of Dimension II shows the Moral-Characterological and the Physical-Constitutional domains to be conceptually distinct bipolar factors. On the negative pole of Dimension I, item number 9, Seduction, obtained the highest loading. This item together with item 12, Early Learned Beliefs, and item 10, Unhappy Experience, comprised the Situational-Interpersonal items defining the negative pole. Psychodynamic item number 3, Distorted Parent-Child, item 1, Basic Fear, and item 2, Childhood Complexes, defined the negative pole with the above Situational-Interpersonal statements. The loading of these latter two etiological groupings on the negative pole of Dimension I indicates that the subjects do not make a conceptual distinction between these domains. The reduction of the majority of the Psychodynamic and Situational-Interpersonal items into a unitary conception could be due to the lay judges understanding both domains to reflect homosexual etiology arising from particular interpersonal relationships whether they be parental or close extrafamilial relationships.

Dimension II:

13. Will Power	1.16
14. Religious Convictions	.86
15. Moral Stamina	.64
16. Loose Living	.55
7. External Characteristics	-.50
5. Physical Cause	-1.05
6. Hormone Imbalance	-1.33
8. Sex Chromosome	-1.45

Dimension II is bipolar contrasting all the Moral-Characterological statements with the Physical-Constitutional statements. This dimension is the most clearly defined and is represented by statements obtaining substantial loadings. The highest positive loading is item number 13, Will Power. This item together with item 14, Religious Convictions, item 15, Moral Stamina, and item 16, Loose Living, sharply define the Moral-Characterological domain. The highest negative loading is item number 8, Sex Chromosome. Together with item number 6, Hormone Imbalance, item 5, Physical Cause, and item 7, External Characteristics, these statements sharply define the Physical-Constitutional domain at the negative pole of Dimension II.

Dimension III:

19. Outdated Laws	1.11
17. Social Pressure	.84
20. Sex Roles	.52
7. External Characteristics	-.47
6. Hormone Imbalance	-.68

Dimension III is bipolar contrasting a Social-Legal conception of the etiology of homosexuality against a

Physical-Constitutional conception. The highest loading on the positive pole is item number 19, Outdated Laws. Together with item 17, Social Pressure, and item 20, Sex Roles, these statements define the Social-Legal conception at the positive pole. The highest negative loading is item number 6, Hormone Imbalance. Together with item 7, External Characteristics, these statements characterize a Physical-Constitutional definition of the negative pole.

Dimension IV:

7. External Characteristics	.82
18. Labelled Homosexual	.79
11. Treatment by Homosexuals	.66
4. Neurotic Conflict	-.58
15. Moral Stamina	-.73
14. Religious Convictions	-.86

Dimension IV was defined by an unexpected positive pole. This pole involved three items each of which was drawn from a different postulated domain. Item number 7, External Characteristics, loaded most heavily on this pole although it also had low loadings on the Physical-Constitutional poles of Dimensions II and III. Item 18, Labelled Homosexual, and item 11, Treatment by Homosexuals, originally postulated to define the Social-Legal and Situation-Interpersonal domains, respectively, also defined the positive pole of Dimension IV. Neither item 18 nor item 11 was defined on any other dimension.

The negative pole of this dimension was generally defined by the Moral-Characterological conception of homosexuality. Item number 7, Religious Convictions, and item 15, Moral Stamina, comprised the heavy loadings. Item number 4, Neurotic Conflict, originally postulated to define the Psychodynamic domain was the lowest loading on the negative pole of this dimension.

The newly defined positive pole appears to best be described as a Social Recognition conception of the etiology of homosexuality. Individuals manifesting certain characteristic physical traits become labelled by others as homosexual or become identified by other homosexuals as one of their own. This combination of circumstances, at least in the popular mind, contributes to the adoption of homosexual practices. This particular view tends to reinforce a conception existent in the public mind that homosexuals can be identified through outward appearance.

The negative pole of this dimension implying a Moral-Characterological view as psychologically opposite to the Social Recognition conception is also interesting. The lay subjects apparently conceive of individuals who manifest moral stamina and strong religious convictions as not being susceptible to the circumstances which may arise in the Social Recognition situation. Item 4, Neurotic Conflict, which also has a low loading on this pole, is more difficult

to integrate within this pole of the domain. One possible explanation might conceive neurotic conflict as representing a hidden conflict implying homosexual causality as distinct from a socially visible cause such as physical characteristics. An equally plausible explanation could conceive of neurotic conflicts conducive to the etiology of homosexuality existing within the psychodynamic organization of an individual maintaining strict moral values.

An overview of the multidimensional scaling dimensions highlights a number of findings. First, the subjects reduced the postulated conceptual domain from five to four dimensions meaning the popular conception of this domain is more succinct than that encompassing professional views. Secondly, although the popular view describes the multidimensional space in four dimensions rather than five, the definition of the etiological statements in the four dimensions is clear. The first three empirically derived dimensions provide support for Physical-Constitutional, Moral-Characterological and Social-Legal conceptions. The fourth dimension was composed of a new factor at the positive pole. This new factor which reflected a Social Recognition conception was a composite of items which had been postulated to define other domains and not expected to be organized in this manner.

Thirdly, the subjects collapsed the Psychodynamic and Situational-Interpersonal domains into one pole of

Dimension I. Apparently these two postulated domains were not conceptually distinct in the minds of the respondents.

Fourthly, an overview of the multidimensional conceptual space clearly highlights the pervasive influence of the Physical-Constitutional and Moral-Characterological conception in determining homosexuality. The lay subjects are able to cognitively accept diversified views regarding the origin of homosexuality but the Physical-Constitutional and Moral-Characterological views are used as reference points. Examination of the multidimensional space shows these two reference views defining one pole of Dimension I, both poles of Dimension II and one pole each of Dimensions III and IV.

2. Results of the Factor Analysis of Response Data.

The personal opinions of the respondents to each of the statements pointing to the origins of homosexuality were also obtained in order to identify the extent to which the cognitive conceptions held by the lay sample used in this study would also be reflected in their own beliefs and attitudes. As noted previously, the judgment scaling procedures provide data only regarding the cognitive understanding of homosexuality. The extent to which this understanding is manifest in actual attitudes must be determined through response measures.

The statements were randomized and presented to the same group of subjects with the request that they indicate on a nine-point scale their agreement or disagreement with each item. Pearson product moment correlation coefficients were calculated between the twenty response scales yielding a 20X20 correlation matrix. The means and standard deviations of each item and the correlation matrix are presented in Tables XI and XII, respectively.

The 20X20 correlation matrix was factored by the principal components method. Six large factors were identified which accounted for 59% of the total variance and these unrotated factors are presented in Table XIII.

Examination of the unrotated factor matrix in Table XIII indicates fourteen out of twenty variables representing all five postulated domains load substantially on one pole of the first factor despite prior multidimensional scaling results indicating many of these items to be conceptually distinct. Since this first factor, as distinct from the remaining five, was defined at one pole by conceptually distinct items, it was clear that this factor was chiefly composed of acquiescence response variance. In order that response data would mainly reflect perceived content variance, as distinct from extraneous variance, the first factor was removed and the remaining five factors were retained for

Table XI.-

Means and Standard Deviations of Each Item Derived from
Subject Response Data (N=178).

Item	Mean	S.D.	Item	Mean	S.D.
1	3.81	1.76	11	4.31	1.93
2	3.26	1.56	12	4.19	2.04
3	3.36	1.62	13	6.87	2.10
4	4.40	2.17	14	6.49	2.30
5	4.59	2.58	15	5.49	2.40
6	4.86	2.26	16	4.83	2.14
7	5.24	1.89	17	4.88	2.04
8	4.38	2.27	18	5.53	2.12
9	4.56	2.01	19	6.02	1.96
10	3.50	1.66	20	5.76	1.98

Table XII.-

Intercorrelation Matrix Between Items
(N-178).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
2	.18																			
3	.15	.47																		
4	.02	.17	.02																	
5	-.03	-.11	-.15	.11																
6	.10	-.04	-.03	.08	.51															
7	.05	.02	.09	-.03	.02	.06														
8	-.00	-.06	.00	.00	.29	.60	.11													
9	.12	.23	.25	.02	.00	-.02	.22	-.14												
10	.40	.15	.20	-.08	-.16	-.04	.07	.04	.12											
11	.08	.10	.18	-.02	.08	.07	.26	-.07	.25	.12										
12	.45	.11	.18	-.14	.05	.03	.03	.00	.18	.35	.00									
13	-.02	.04	-.19	.30	.06	.02	.17	-.11	.07	-.16	.19	-.13								
14	-.02	-.18	-.22	.18	.17	.10	-.06	-.05	-.02	-.06	.03	-.13	.31							
15	.03	-.09	-.14	.29	.08	.02	.01	-.06	.00	-.12	.07	-.12	.45	.63						
16	.03	.04	.08	.08	.02	-.02	.22	-.07	.12	.08	.20	.01	.14	.15	.03					
17	.00	.09	.10	.04	.06	.09	.21	-.06	.31	.07	.22	.13	.11	-.01	.00	.22				
18	.12	.00	.08	-.10	.03	.06	.39	-.03	.24	.24	.44	.17	.21	.04	.06	.27	.22			
19	.10	.06	.15	-.04	.02	.06	.15	.01	.25	.05	.16	.14	.03	.09	.08	.21	.33	.24		
20	-.02	.08	-.05	.01	.00	-.08	.16	-.08	.17	-.02	.01	.11	.21	.03	.02	.15	.32	.16	.21	

.01 level of significance ($r = .20$).05 level of significance ($r = .15$)

RESULTS

Table XIII.-

Unrotated Factor Matrix of Items on Six Factors
(N=178).

Item Content	Factors					
	I	II	III	IV	V	VI
I. Psychodynamic						
1. Basic Fear	-.374	-.236	.185	.577	-.324	-.070
2. Childhood Complexes	-.362	-.280	-.121	.372	.577	.021
3. Distorted Parent-Child	-.419	-.430	-.013	.224	.435	.173
4. Neurotic Conflict	-.010	.395	-.078	.463	.461	-.031
II. Physical-Constitutional						
5. Physical Cause	.004	.390	.622	-.031	.101	-.127
6. Hormone Imbalance	-.045	.262	.839	.054	.152	-.005
7. External Characteristics	-.503	.131	.100	-.323	-.011	.291
8. Sex Chromosome	.094	.055	.794	-.030	.132	.054
III. Situational-Interpersonal						
9. Seduction	-.597	-.041	-.098	-.024	.190	-.095
10. Unhappy Experience	-.406	-.387	.100	.328	-.377	.108
11. Treatment by Homosexuals	-.549	.160	.014	-.108	.012	.512
12. Early Learned Beliefs	-.409	-.359	.209	.270	-.351	-.361
IV. Moral-Characterological						
13. Will Power	-.205	.661	-.240	.131	.057	.082
14. Religious Convictions	.021	.697	-.077	.309	-.262	-.053
15. Moral Stamina	-.033	.707	-.174	.409	-.135	.022
16. Loose Living	-.442	.218	-.108	-.127	-.017	.078
V. Social-Legal						
17. Social Pressure	-.561	.133	-.001	-.264	.164	-.362
18. Labelled Homosexual	-.642	.152	.055	-.204	-.301	.314
19. Outdated Laws	-.512	.115	.050	-.127	-.012	-.323
20. Sex Roles	-.359	.177	-.179	-.267	.044	-.563
Percentage of total variance explained	15.3	12.9	9.9	7.6	7.0	6.1

interpretation.² To enhance interpretability, these factors were rotated to a varimax criterion of orthogonal simple structure. Table XIV contains the factor loadings for the five rotated factors. Only those loadings with a value equal to or greater than plus or minus 0.35 were considered for interpretation. Figures 5, 6 and 7 depict graphically the positions of the statements having high loadings on the five major factors.

Factor I:

15. Moral Stamina	.84
14. Religious Convictions	.77
13. Will Power	.66
4. Neurotic Conflict	.54

The first factor is best described as representing a Moral-Characterological belief regarding the etiology of homosexuality. The heaviest loading is item number 15, Moral Stamina. This item together with item 14, Religious Convictions, and item 13, Will Power, clearly define the nature of this factor. Item 4, Neurotic Conflict, also loads on this factor, but not strongly. This loading may convey a popular belief that a neurotic conflict predisposing homosexuality may be implied in a strict moral position, but this lower loading should be interpreted cautiously.

2 Douglas N. Jackson, in a personal communication.

Table XIV.-

Projections of Each Item on Five Rotated Factors (First
Unrotated Factor Removed) (N=178).

Item Content	Factors				
	I	II	III	IV	V
I. Psychodynamic					
1. Basic Fear	.088	.059	<u>.675*</u>	.006	-.256
2. Childhood Complexes	-.062	-.053	.051	<u>.730</u>	-.151
3. Distorted Parent-Child	-.277	-.025	.037	<u>.544</u>	-.281
4. Neurotic Conflict	<u>.544</u>	.137	-.076	<u>.520</u>	-.015
II. Physical-Constitutional					
5. Physical Cause	.164	<u>.708</u>	-.047	-.087	.169
6. Hormone Imbalance	.048	<u>.892</u>	.023	-.025	-.010
7. External Characteristics	-.084	<u>.115</u>	<u>-.361</u>	-.230	-.116
8. Sex Chromosome	-.156	<u>.790</u>	.026	-.034	-.072
III. Situational-Interpersonal					
9. Seduction	-.038	-.062	-.063	.187	.113
10. Unhappy Experience	-.144	-.077	<u>.507</u>	-.121	<u>-.359</u>
11. Treatment by Homosexuals	.060	.050	<u>-.360</u>	-.138	<u>-.380</u>
12. Early Learned Beliefs	-.166	.039	<u>.674</u>	-.087	.090
IV. Moral-Characterological					
13. Will Power	<u>.660</u>	-.041	-.289	-.018	.036
14. Religious Convictions	<u>.774</u>	.057	.045	-.228	.050
15. Moral Stamina	<u>.843</u>	-.001	-.004	-.074	-.033
16. Loose Living	<u>.138</u>	-.053	-.215	-.113	.030
V. Social-Legal					
17. Social Pressure	-.030	.063	-.137	.042	<u>.469</u>
18. Labelled Homosexual	.026	.019	-.179	<u>-.426</u>	<u>-.205</u>
19. Outdated Laws	-.027	.073	.030	<u>-.057</u>	<u>.355</u>
20. Sex Roles	.057	-.116	-.049	-.020	<u>.659</u>
Percentage of common variance	25.9	22.9	18.6	17.1	15.2

*Only underlined item loadings were used for interpretation (values greater than $\pm .35$).

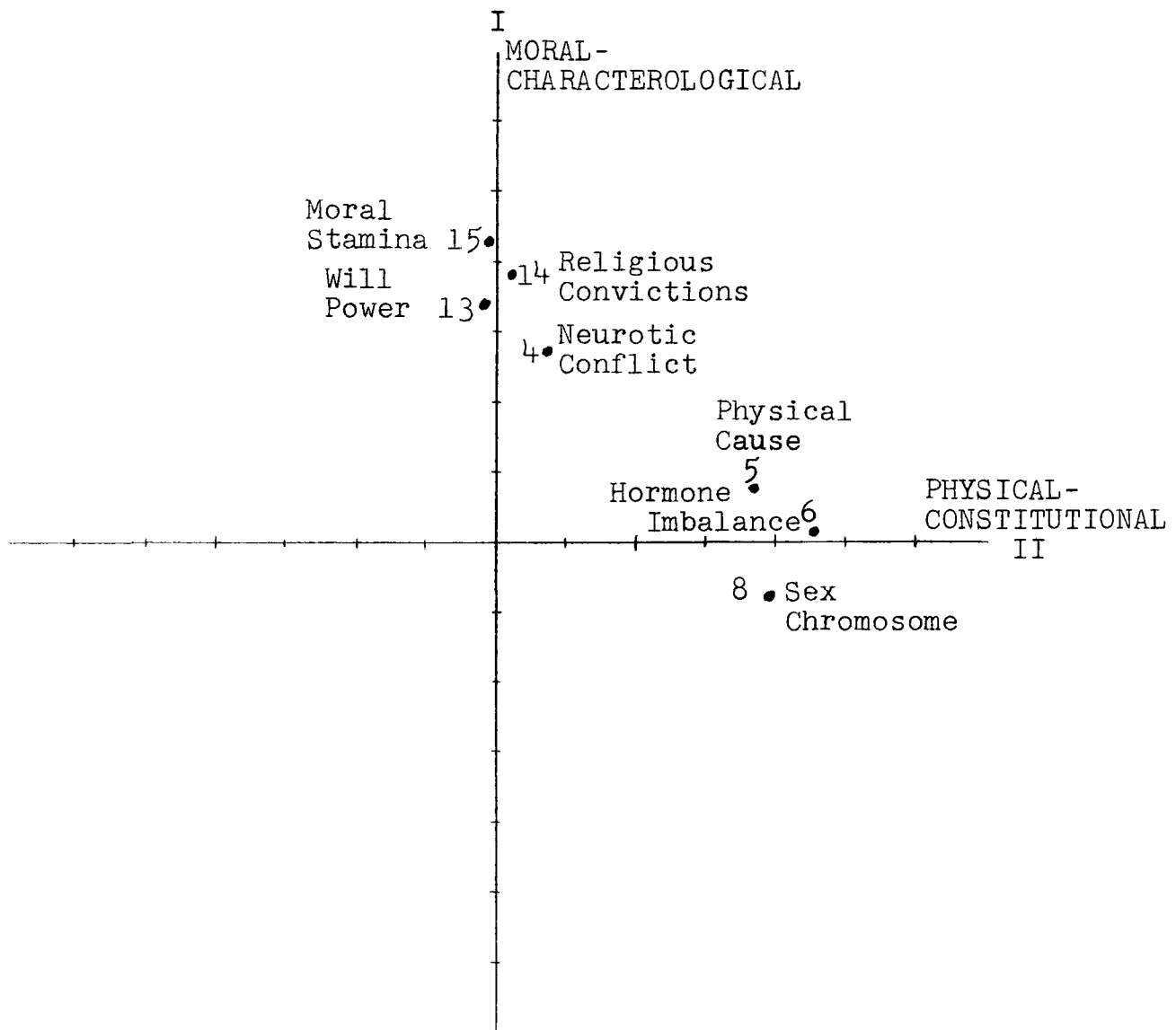


Figure 5.- Projections of Items on Factors I and II (values greater than $\pm .35$ only).

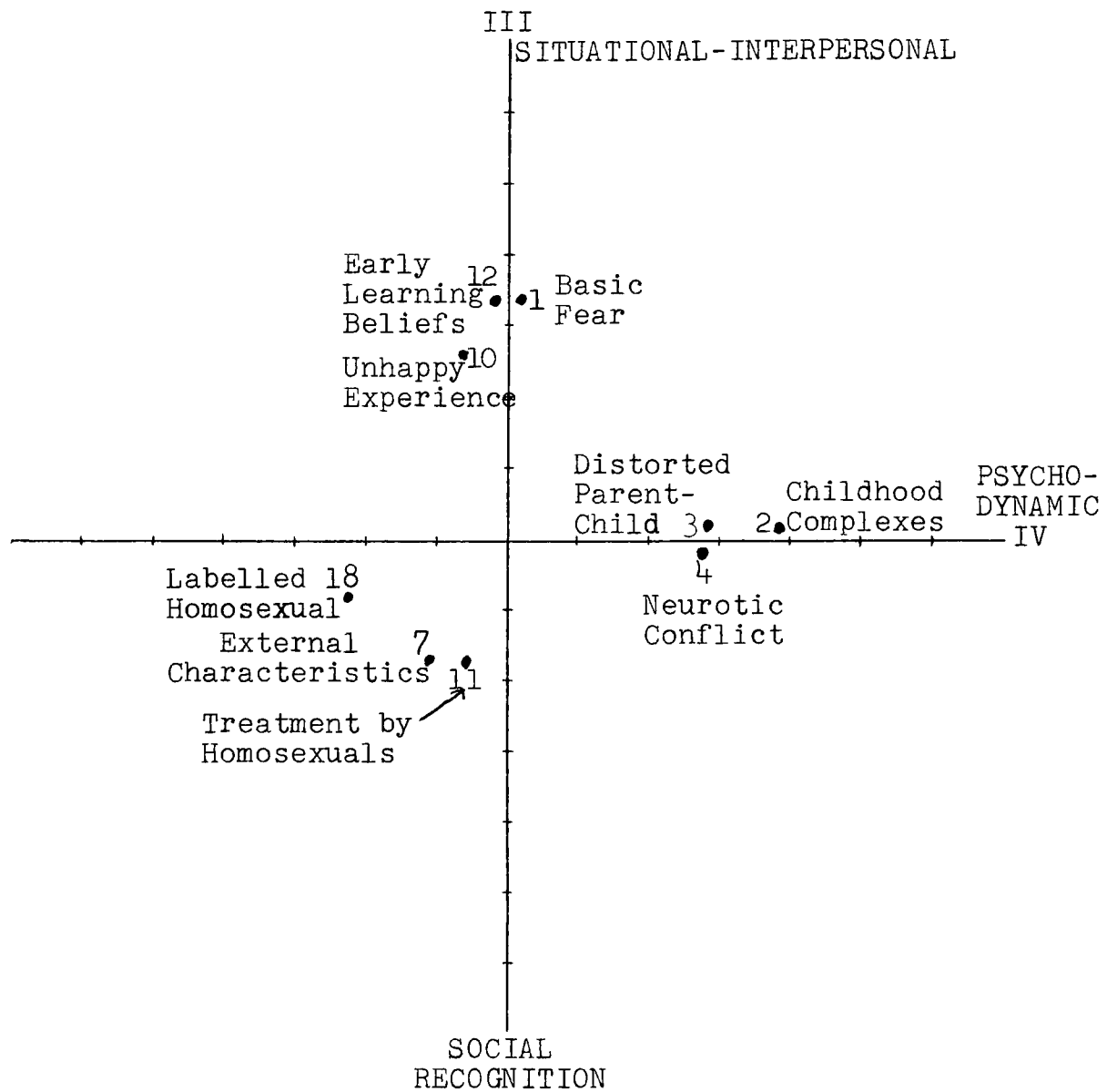


Figure 6.- Projections of Items on Factors III and IV (values greater than $\pm .35$ only).

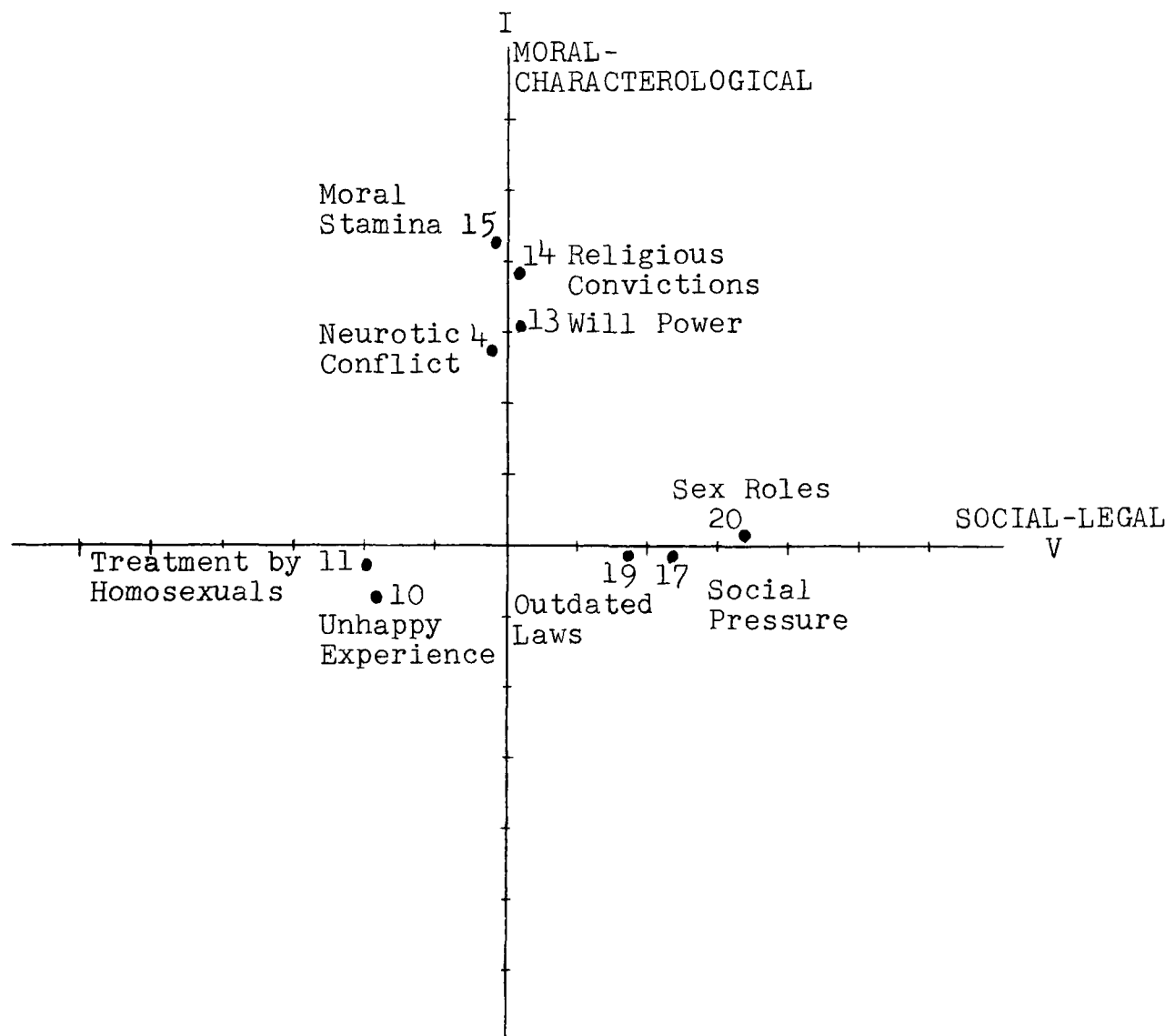


Figure 7.- Projections of Items on Factors I and V (values greater than + .35 only).

Factor II:

6. Hormone Imbalance	.89
8. Sex Chromosome	.79
5. Physical Cause	.70

This second factor is best described as reflecting the Physical-Constitutional attitude or belief regarding the cause of homosexuality. The heaviest loading is item number 6, Hormone Imbalance. This item, together with item 8, Sex Chromosome, and item 5, Physical Cause, complete the definition of this factor.

Factor III:

1. Basic Fear	.67
12. Early Learned Beliefs	.67
10. Unhappy Experience	.50
7. External Characteristics	-.36
11. Treatment by Homosexuals	-.36

Factor III is bipolar with the positive pole being defined by items from both the postulated Psychodynamic and Situational-Interpersonal domains. Item number 1, Basic Fear, from the Psychodynamic domain, and item number 12, Early Learned Beliefs, and item 10, Unhappy Experience, from the postulated Situational-Interpersonal domain defined the positive pole of this factor. The popular beliefs and attitudes conveyed by this positive pole seem to reflect relationships and experiences particularly concerning the opposite sex as instrumental in the etiology of homosexuality. The negative pole is defined by item 7, External Characteristics,

and item 11, Treatment by Homosexuals. Both these items tend to reflect the Social Recognition conception of homosexuality which was also identified in the judgment space. This pole of the factor should be interpreted cautiously due to the low loadings.

Factor IV:

2. Childhood Complexes	.73
3. Distorted Parent-Child	.54
4. Neurotic Conflict	.52
18. Labelled Homosexual	-.42

The positive pole of Factor IV is defined entirely by items reflecting the postulated Psychodynamic domain. Item number 2, Childhood Complexes, obtains the heaviest loading with item 3, Distorted Parent-Child, and item 4, Neurotic Conflict, completing the definition of the positive pole. All three items defining this pole reflect dynamic influences arising from early family interaction as contributing to homosexuality. The negative pole is defined by item 18, Labelled Homosexual. This item had been postulated to define a Social-Legal etiology of homosexuality but did not do so in either judgment or response analysis. On this pole of the factor Labelled Homosexual seems to imply a visible social labelling cause of homosexuality as distinct from a covert psychodynamic cause.

Factor V:

20. Sex Roles	.65
17. Social Pressure	.46
19. Outdated Laws	.35
10. Unhappy Experience	-.35
11. Treatment by Homosexuals	-.38

The positive pole of this factor reflects the postulated Social-Legal domain. The most substantial loading is item number 20, Sex Roles. This item, together with item number 17, Social Pressure, and item number 19, Outdated Laws, define the positive pole of this factor, indicating the respondents' attitudes to reflect a Social-Legal interpretation of homosexuality. The weaker factor loadings suggest that this interpretation is not pronounced. The negative pole is defined by item number 11, Treatment by Homosexuals, and item number 10, Unhappy Experience, both of which reflect a Situational-Interpersonal attitude toward the etiology of homosexuality.

One further point of caution is required regarding the use of items to elicit reliably responses to a content dimension. Items which clearly define a content dimension in a multidimensional scaling analysis do not necessarily provide reliable responses when used as a response measure of that content dimension.³ Response factors other than acquiescence, which was purposely removed statistically from this

3 Boyd and Jackson, op. cit., p. 718.

study to increase response space reliability, elicit effects which detract from reliability of responses to items. It is plausible that artifacts such as social desirability ratings of items, endorsement proportion values, etc., had some derogatory influence on the response space which cannot be determined by these data. In order to determine the influence of the extraneous sources or error, an analysis of items would be necessary. Despite these possible shortcomings, substantial evidence of similar item clustering was present in both domains and definitional departures between dimensions and factors isolated in their respective domains were interpretable.

Comparison of the results of the judgment and response analyses indicated that the lay subjects entertain both complex conceptions and attitudes regarding the etiology of homosexuality. Although the judgment space and response space did not contain the same number of dimensions, many statements postulated to define particular etiological domains were found to form similar clusters in defining both dimensions and factors in their respective spaces. The multidimensional scaling results are clearly superior to response results regarding the definition and organization of the items reflecting homosexual etiologic content. The response results are less clear for a number of reasons already enumerated but the comparison between both spaces is instructive. The

identification of a Moral-Characterological and Physical-Constitutional factor in the response space defined by heavy loadings supports the clear definition of these domains on Dimension II of the judgment space as well as their use as referent points on the other dimensions in the judgment space. These results definitely point to Moral-Characterological and Physical-Constitutional etiological sources as basic to not only the subjects' conceptual understanding of homosexuality but also to their beliefs and attitudes toward it as well.

The Psychodynamic and Situational-Interpersonal items are organized differently in judgment and response space. Conceptually the subjects make no fundamental differentiation between these items possibly grouping them on the basis of interpersonal relationships. The response space, however, divides these into separate clusters as originally postulated. The Psychodynamic items define one pole of Factor IV and the Situational-Interpersonal items define the positive pole of Factor III and weakly define the negative pole of Factor V. Clearly, the Psychodynamic and Situational-Interpersonal etiological domains of homosexuality are perceived as distinct in the context of personal beliefs and attitudes.

The Social-Legal items which defined the positive pole of Dimension III in the judgment space were found to

define the positive pole of Factor V in the response space. This indicates that the Social-Legal domain of homosexuality is also manifest in the respondents' attitudes and conceptions.

The identification of a new Social Recognition conception of the cause of homosexuality in the judgment space is not found to be reflected as clearly in the respondents' beliefs and attitudes. This attitude regarding the cause of homosexuality is evident in the definition of the negative pole of Factor III but the loadings are not substantial. Item number 18, Labelled Homosexual, which also defined the Social Recognition pole of Dimension IV, loads on the negative pole of Factor IV rather than on Factor III with the other items defining the Social Recognition domain. It is plausible that poorer definition of this domain in the response space is due to characteristics of the items extraneous to their perceived content.



CHAPTER IV

DISCUSSION

This chapter presents some explanatory observations and interpretations of the results in light of the stated problems of the study. First, the general findings which emerge from the analysis of the judgment and response domains are discussed and interpreted. This is followed by a discussion of these findings with regard to current professional views of the etiology of homosexuality and then a discussion of their relevance to a social deviance theory of homosexuality. Next, some implications of the findings for attitude measurement are suggested. Finally, some directions for future research to further explicate the meaning of homosexuality are presented.

The first noteworthy finding was the reduction of the postulated conceptual domain from five to four underlying dimensions. This indicates that within the conceptual space the respondents identified four meaningful interpretations of the origins of homosexuality. These results do not imply that the subjects necessarily maintain these views themselves but that they can isolate them on a conceptual basis. These multidimensional scaling results indicate that lay conceptions of this domain can be as distinct and as diversified as those advanced by professionals. In fact, the lay subjects advanced

a new Social Recognition explanation which is a plausible social source of homosexual adaptation.

These findings provide substantial support for the efficacy of multidimensional scaling to reliably isolate the fundamental dimensions underlying the popular conceptions of the etiology of homosexuality. The structuring of this domain by the lay subjects departs in some areas from the postulated domains, thus underlining the limitations of scaling models requiring the investigator to make a priori assumptions regarding the dimensionality of such an unknown domain.

Item definition of these four empirically derived dimensions demonstrated the predominance of a moral and a physical interpretation of the etiology of homosexuality. The lay subjects were also able to conceptualize other views of homosexual origins but the moral and physical interpretation was clearly the reference point in their thinking.

Although the respondents conceptualized a variety of views with regard to the origin of homosexuality, these concepts do not necessarily determine their personal beliefs and attitudes. The factor analytic analyses of their responses to the same items identified five factors of which the first, a moral factor, and the second, a physical factor, were the best defined. This suggested that their predominant moral and physical conceptions of the origins of homosexuality are also reflected in their attitudes and beliefs. Psychodynamic,

Situational-Interpersonal and Social-Legal conceptions also were reflected in attitudes and beliefs but the Social Recognition domain played a very weak role in the definition of the attitudes and beliefs of the respondents regarding the origins of homosexuality.

The empirical findings in the study provide evidence that both popular conceptions and attitudes toward the etiology of homosexuality are quite complex. The conceptual domain, however, is more precise and more clearly defined than the response space even with acquiescence response bias removed. While the conceptual and response domains were organized differently, similarity between item clusters on dimensions and factors indicated that popular conceptions of the etiology of homosexuality also appear in the respondents' beliefs and attitudes. Although the subjects maintain complex conceptions and attitudes, emphasis is given to the moral and physical domains of homosexual etiology in both analyses.

1. Comparison of Professional and Popular Views.

A review of the literature assessing professional views of the sources of homosexuality reflected the current controversy regarding a disease or adjustment conception of this behavior. Recently the literature has indicated a substantial trend to the adjustment concept of homosexuality,

the behavior being described as simply a deviation from normative expectations. Professional conceptions of behavior such as homosexuality, if it can be studied on a continuum, has typically moved from conceptions cloaked in moral opprobrium, to conceptions of physical disease and later mental disease when somatic malfunction could not be isolated and, finally, to social conceptions based upon deviant role learning. While certain theological thinking maintains a strong moral position, most scientific study has discarded this position and focused attention on the other conceptions. In view of the empirical data derived in the present study, it would be necessary to conclude that non-professional conceptions of homosexuality have not kept pace with professional ideas. The non-professional (college student) emphasis on moral and physical etiology represents a considerably divergent position from recently proposed social conceptions. These data do not imply that the non-professionals have not recognized these recent positions but they do not stress these formulations within their conceptual thinking or their expression of personal beliefs. The emphasized physical conceptions of homosexuality are not even those implying a mental disturbance but rather those causes which would imply a somatic maladjustment. In terms of the above continuum of changing conceptions, the lay subjects in the sample adopt a position toward the moral-physical end of the continuum although a

mental disease conception and attitude must be included within their notions of physical cause. These results are different from expected considering the educational and socio-economic background of the sample. It is conceivable that a sample drawn from a more general population would maintain a narrower and more traditional view.

The current non-professional views tend to suggest the homosexuals' plight to be a difficult one. The moral view strongly espoused by the sample places the culpability for the homosexual's behavior clearly on the homosexual himself and, in addition, implies serious moral failing. The physical view citing a somatic basis, characteristically places no responsibility on anybody. The physical view reflecting a mental health problem emphasizes a breakdown in basic relationships not departing substantially from the homosexual's family. The views which would clearly place emphasis upon factors within the society are given the least emphasis.

2. Implications for a Social Interaction Deviance Theory of Homosexuality.

The social deviance theory ascribed to in this study conceives of deviance as produced by society. This theory reflects the basic recognition that deviant behavior, like other forms of social behavior, is learned through social

interaction. The aspect of social interaction of concern in this study was the interaction between the deviant and his judges. This investigation demonstrated one possible technique, restricted to etiology, of measuring popular conceptions and attitudes of what it is to be a homosexual. The empirical data obtained in the study demonstrated that among the varying views held by the lay subjects regarding the etiology of homosexuality, a moral and physical conception predominated. These data have theoretical relevance to the above social deviance interpretation of homosexuality in that they imply that society primarily perceives homosexuals as persons who are sick and morally inept. Considering the primacy of these latter two popular conceptions and attitudes implying homosexuality, it can be readily hypothesized, in accord with Lemert's concept of secondary deviation, that homosexuals would organize and extend their deviant behavior to adjust to or defend against the sickness and moral condemnation conceptions and beliefs held toward them by others. Thus, the interaction between the popular definitions of homosexuality and the person who engaged in casual experimentation could transform a minor primary deviation into a secondary deviation whereby the individual makes of his homosexuality a way of life organizing his whole identity around a pattern of homosexual behavior.

Despite the tendency for the popular view of this sample to endorse a moral and physical etiology, other domains were represented to a lesser extent in the total description of the respective spaces. Thus, from the complexity of the popular domain it is highly conceivable that homosexuals would also present an equally complex patterning and organization of deviant reactions to the variety of popular conceptions of their behavior.

A final area to which the results have implications is that of attitude scaling. In attitude scaling the investigator faces the problem of sampling relevant content from the domain he is trying to measure. In the case of unknown response domains time is often wasted in developing items with irrelevant content to the attitude in question. The multidimensional successive intervals scaling procedure utilized in this study provided a rigorous empirical definition of the boundaries of the conceptual space implying the etiology of homosexuality. The scaling of similarity judgments of the items provided information regarding the implications of item content free from response sets such as acquiescence. Similarity between item content was represented by means of the distance between items, those items close to each other sharing similar content. Items which are scaled close together could form an item pool from which a scale of known dimensionality could be constructed. The

multidimensional scaling also permits assessment of items pertaining to positive and negative aspects of a conception. Items defining opposite poles of the same dimension can be understood as psychologically opposite to each other, thus representing opposite social conceptions.

Although the multidimensional scaling of the items indicated the relevance of the item content within the domain, these same items were shown to be inadequate to sample the same content in a response domain due to the presence of extensive acquiescence response variance. Should unidimensional response scales be developed to reflect attitudes regarding homosexuality isolated in the conceptual domain, careful analysis of items would be necessary to elicit reliable content responding.

Certainly, response scales designed to elicit popular attitudes toward homosexuality should emphasize content related to the Moral-Characterological and the Physical-Constitutional postulated domains. Although other postulated domains were also isolated in the analysis, it is noteworthy that a new Social Recognition conception apparently provides an additional source of item content having a legitimate place within this etiological space.

3. Future Research.

The present study has undertaken to investigate the meaning of homosexuality in the popular mind only with

regard to etiological considerations. Other aspects of homosexuality could also be beneficially studied in light of popular views. For example, a structuring of the popular conceptions regarding the implications of homosexual behavior on the general social structure, particularly heterosexual role definition, would be valuable. Also, the popular conceptions of the homosexual milieu, in terms of homosexual life styles, subgrouping, and interpersonal relationships could add considerable meaning to what homosexuality implies to the popular mind. These additional investigations would permit a broader conceptualization of this behavioral domain by adding further marker variables.

Another beneficial line of investigation would be to assess the homosexual's own self-evaluations and compare and contrast these results with those manifest toward homosexuals by society in general.

Clearly, the present findings indicate the potential fruitfulness of explicating the popular conceptions and attitudes of a complex behavior like homosexuality to add clarity and understanding to its meaning and its treatment by society.

SUMMARY AND CONCLUSIONS

In order to explicate the popular conceptions and attitudes toward the etiology of homosexuality, a multi-variate judgment and response analysis of a postulated etiological domain of homosexuality was undertaken. Items were constructed reflecting various causes of homosexuality identified in the professional literature and organized into five postulated etiological domains, namely, a Psychodynamic, a Physical-Constitutional, a Situational-Interpersonal, a Moral-Characterological and a Social-Legal.

A multidimensional successive intervals judgment scaling procedure was used to assess the popular conceptions of this postulated domain. Four empirical dimensions were identified. Dimensions I, II, and III clearly accounted for the Physical-Constitutional, Moral-Characterological and Social-Legal postulated dimensions and collapsed the Psychodynamic and Situational-Interpersonal domains into a unitary conception. Dimension IV was a new dimension composed of a composite of items originally postulated to define other domains, and was labelled a Social-Recognition domain. The pervasive influence of the Moral-Characterological and Physical-Constitutional conceptions was noted.

A principal components factor analysis of responses to the items was undertaken to assess the extent to which

popular conceptions of the etiology of homosexuality appeared in actual beliefs and attitudes. Identified acquiescence response variance was removed from the response data and five factors were identified. The first two factors were the best defined and reflected a Moral-Characterological and Physical-Constitutional belief, respectively. Factor III was primarily defined by Situational-Interpersonal items but included one item from the Psychodynamic domain. This factor reflected relationships and experiences with the opposite sex as instrumental in the etiology of homosexuality. The opposite pole of this factor weakly defined the Social Recognition domain. Factor IV reflected the Psychodynamic domain and Factor V defined the Social-Legal domain. Although the response space differed from the judgment space in terms of dimensions, a similar clustering of postulated items was noted. The first two factors were seen as indicating the predominance of the Moral-Characterological and Physical-Constitutional factors in the attitudes as well as the conceptions of the subjects.

The results were then discussed in terms of contrasting popular and professional views of homosexuality, the relevance of the findings to a social deviance theory of homosexuality and the implications of the findings for attitude scaling.

The findings were seen as providing evidence for the value of explicating popular conceptions and attitudes toward a postulated domain such as homosexuality to obtain an understanding of its meaning and treatment by non-professionals. Further areas of explication of lay views toward this complex behavior were suggested.

BIBLIOGRAPHY

Becker, Howard S., Outsiders: Studies in the Sociology of Deviance, New York, The Free Press of Glencoe, 1963, 176 p.

This book presents a detailed description of the various definitions of deviance and particularly discusses deviance in terms of the societal reaction toward it. The results of this study were important for this latter social interaction theory of deviance.

Bieber, Irving, et al., Homosexuality, A Psycho-analytic Study, New York, Basic Books, 1962, 319 p.

This study is a comprehensive analysis of homosexuals in psychoanalysis. It was particularly helpful in this investigation in presenting an overview of the psycho-analytic basis for the development of homosexual behavior, as well as presenting specific empirical findings arising from the results of the authors' extensive study of psycho-analytic case materials.

Boyd, J. Edwin and Douglas N. Jackson, "An Empirical Evaluation of Judgment and Response Methods in Multivariate Attitude Scaling," London, Canada, University of Western Ontario Research Bulletin, No. 26, 1966, American Psychologist, 1966, p. 718 (Abstract).

This research evaluated judgment and response data by multidimensional scaling and factor analysis, respectively. This investigation was particularly important to the present study because it demonstrated the potential confounding of responses to items by acquiescence bias while judgments of the same items remained insensitive to such response bias.

Diederick, G. W., S. J. Messick, and L. R. Tucker, "A General Least Squares Solution for Successive Intervals," Psychometrika, Vol. 22, No. 2, 1957, p. 157-173.

This paper presented the statistical procedures used in this investigation to obtain the scale values representing the judged similarity between all possible pairs of statements.

Marmor, Judd (ed.), Sexual Inversion, The Multiple Roots of Homosexuality, New York, Basic Books, 1965, 342 p.

This text contains a collection of original papers by experts relating to the multiple causes of homosexuality. This book clearly demonstrated the complex and multivariate nature of homosexual etiology raising the possibility of a popular explication of their similarities and differences.

Messick, Samuel J., "Some Recent Theoretical Developments in Multidimensional Scaling," Educational and Psychological Measurement, Vol. 16, 1956, p. 82-100.

This paper presents a description of the multidimensional scaling procedures used in this investigation, as well as stresses the theoretical importance of utilizing multidimensional scaling procedures instead of traditional unidimensional approaches in exploration of areas of unknown dimensionality.

Messick, S.J., and R. P. Abelson, "The Additive Constant Problem in Multidimensional Scaling," Psychometrika, Vol. 21, No. 1, 1956, p. 1-15.

This paper presents the statistical model used in the multidimensional scaling computer program used in this investigation. The paper particularly demonstrates the effect of varying the size of the additive constant on the dimensionality of the space.

Verden, P., D. N. Jackson, and G. A. King, "Popular Conceptions of the Etiology of Alcoholism: A Multidimensional Investigation," Quarterly Journal of Studies on Alcohol, Vol. 30, 1969, p. 78-92.

This research conducted a multidimensional scaling investigation of items dealing with the etiology of alcoholism. The results demonstrated that it was possible to postulate several related sub-universes of content, and to distinguish items which uniquely reflected each.

West, D. J., Homosexuality, London, Pelican Books, 1968, 286 p.

This work presents a comprehensive treatment of the nature of homosexual behavior. It adhered to a multiple causal basis of homosexuality and provides an extensive overview of the various research findings supporting these different etiological sources of homosexuality.

APPENDIX 1

COPY OF QUESTIONNAIRE C USED TO OBTAIN DESCRIPTIVE
DATA ABOUT SUBJECT SAMPLE

APPENDIX 1

COPY OF QUESTIONNAIRE C USED TO OBTAIN DESCRIPTIVE
DATA ABOUT SUBJECT SAMPLE

Please check or indicate the items most appropriate to you
and your family members.

1. Your age _____ 2. Your sex: Male _____ Female _____
3. Educational level your father attained (check one):
Grade school _____
High school _____
Community college _____
University _____
University graduate school _____
4. Educational level your mother attained (check one):
Grade school _____
High school _____
Community college _____
University _____
University graduate school _____
5. Father's occupation (if retired, etc., occupation when employed):

-

APPENDIX 2

CUMULATIVE PROPORTIONS OF ENDORSEMENT IN EACH
SCALE CATEGORY FOR THE 190 ITEM PAIRS

APPENDIX 2

CUMULATIVE PROPORTIONS OF ENDORSEMENT IN EACH
SCALE CATEGORY FOR THE 190 ITEM PAIRS

Item Pair	Scale Category								
	1	2	3	4	5	6	7	8	9
1	.034	.287	.511	.736	.792	.865	.921	.978	1.000
2	.056	.275	.522	.770	.826	.888	.933	.966	1.000
3	.096	.376	.567	.758	.826	.876	.910	.966	1.000
4	.022	.129	.219	.404	.472	.607	.764	.949	1.000
5	.011	.045	.118	.225	.264	.461	.657	.944	1.000
6	.028	.112	.303	.534	.590	.730	.843	.949	1.000
7	.017	.045	.157	.287	.326	.500	.657	.888	1.000
8	.124	.393	.624	.815	.865	.921	.955	.978	1.000
9	.404	.713	.843	.910	.927	.949	.972	.983	1.000
10	.124	.315	.539	.753	.837	.921	.944	.983	1.000
11	.163	.494	.702	.893	.933	.949	.978	.994	1.000
12	.039	.112	.242	.489	.567	.708	.820	.961	1.000
13	.011	.056	.146	.225	.326	.517	.674	.949	1.000
14	.000	.062	.185	.343	.449	.629	.826	.972	1.000
15	.006	.090	.230	.348	.438	.584	.725	.933	1.000
16	.028	.124	.264	.472	.545	.697	.843	.961	1.000
17	.006	.124	.287	.562	.652	.781	.910	.978	1.000
18	.006	.034	.169	.326	.416	.612	.775	.978	1.000
19	.000	.118	.236	.478	.607	.702	.882	.955	1.000
20	.129	.539	.747	.871	.904	.927	.972	.994	1.000
21	.084	.376	.562	.742	.809	.871	.927	.989	1.000
22	.045	.124	.275	.393	.472	.579	.775	.910	1.000
23	.011	.051	.124	.236	.281	.444	.601	.893	1.000
24	.039	.174	.331	.494	.567	.719	.815	.944	1.000
25	.011	.084	.146	.253	.348	.489	.680	.876	1.000
26	.208	.601	.770	.882	.921	.944	.983	.994	1.000
27	.118	.478	.747	.904	.938	.966	.983	.989	1.000
28	.022	.208	.399	.652	.770	.871	.938	.989	1.000
29	.140	.472	.663	.837	.893	.933	.955	.989	1.000
30	.017	.090	.230	.472	.556	.663	.831	.972	1.000

Item Pair	Scale Category								
	1	2	3	4	5	6	7	8	9
31	.011	.067	.146	.298	.376	.506	.719	.938	1.000
32	.006	.124	.270	.421	.506	.652	.837	.983	1.000
33	.006	.101	.242	.489	.596	.730	.854	.978	1.000
34	.034	.174	.337	.579	.657	.787	.882	.978	1.000
35	.006	.124	.309	.551	.635	.753	.910	.983	1.000
36	.006	.056	.185	.371	.455	.618	.792	.966	1.000
37	.000	.090	.303	.528	.590	.742	.860	.972	1.000
38	.079	.365	.618	.820	.854	.899	.938	.989	1.000
39	.034	.101	.191	.326	.438	.556	.697	.904	1.000
40	.006	.045	.090	.135	.185	.320	.534	.820	1.000
41	.022	.129	.258	.410	.472	.624	.753	.921	1.000
42	.011	.051	.124	.169	.219	.348	.573	.882	1.000
43	.096	.337	.590	.803	.876	.916	.949	.989	1.000
44	.084	.365	.629	.854	.899	.921	.983	1.000	1.000
45	.073	.230	.444	.713	.820	.893	.927	.966	1.000
46	.129	.438	.640	.815	.876	.910	.944	.978	1.000
47	.000	.039	.174	.337	.466	.590	.787	.949	1.000
48	.022	.112	.275	.404	.478	.612	.770	.944	1.000
49	.022	.084	.202	.410	.539	.657	.860	.978	1.000
50	.006	.112	.281	.511	.607	.725	.854	.966	1.000
51	.011	.140	.331	.573	.680	.792	.916	.994	1.000
52	.011	.152	.337	.579	.713	.837	.921	.978	1.000
53	.017	.118	.225	.511	.601	.702	.826	.955	1.000
54	.017	.090	.202	.472	.629	.753	.893	.944	1.000
55	.034	.124	.298	.404	.472	.596	.725	.904	1.000
56	.028	.096	.208	.404	.661	.584	.697	.921	1.000
57	.000	.045	.146	.315	.446	.612	.809	.966	1.000
58	.006	.084	.124	.185	.247	.376	.500	.775	1.000
59	.011	.096	.236	.427	.483	.646	.815	.849	1.000
60	.062	.258	.410	.612	.691	.803	.888	.972	1.000
61	.034	.197	.438	.691	.781	.820	.893	.949	1.000
62	.096	.275	.455	.674	.758	.848	.927	.966	1.000
63	.056	.163	.331	.528	.584	.725	.815	.972	1.000
64	.034	.208	.343	.511	.596	.719	.854	.961	1.000
65	.124	.376	.534	.618	.674	.730	.826	.921	1.000

Item Pair	Scale Category								
	1	2	3	4	5	6	7	8	9
66	.034	.140	.315	.545	.612	.764	.888	.961	1.000
67	.034	.169	.315	.573	.663	.770	.865	.983	1.000
68	.045	.112	.281	.494	.601	.702	.882	.972	1.000
69	.011	.056	.202	.444	.534	.702	.854	.966	1.000
70	.006	.084	.202	.388	.472	.607	.798	.964	1.000
71	.287	.534	.657	.742	.798	.848	.921	.978	1.000
72	.096	.270	.433	.545	.624	.725	.860	.961	1.000
73	.287	.528	.657	.770	.820	.865	.938	.989	1.000
74	.017	.067	.146	.292	.382	.500	.691	.893	1.000
75	.017	.090	.197	.388	.478	.567	.725	.893	1.000
76	.028	.062	.174	.326	.433	.545	.691	.910	1.000
77	.006	.051	.129	.253	.371	.466	.618	.865	1.000
78	.022	.090	.129	.197	.281	.404	.551	.770	1.000
79	.045	.118	.185	.281	.343	.433	.612	.798	1.000
80	.039	.146	.287	.404	.483	.539	.685	.876	1.000
81	.051	.118	.236	.365	.466	.618	.736	.904	1.000
82	.028	.152	.287	.433	.556	.646	.815	.910	1.000
83	.011	.101	.208	.365	.455	.607	.770	.938	1.000
84	.011	.090	.146	.348	.466	.584	.753	.910	1.000
85	.017	.067	.191	.360	.483	.607	.781	.933	1.000
86	.067	.225	.399	.567	.640	.747	.843	.927	1.000
87	.483	.758	.837	.876	.910	.938	.961	.978	1.000
88	.017	.051	.096	.208	.236	.388	.640	.910	1.000
89	.000	.045	.129	.253	.287	.455	.685	.921	1.000
90	.017	.084	.152	.320	.399	.584	.725	.933	1.000
91	.006	.062	.101	.180	.236	.354	.584	.893	1.000
92	.000	.011	.034	.112	.152	.225	.410	.736	1.000
93	.011	.067	.140	.213	.275	.371	.539	.775	1.000
94	.006	.051	.112	.152	.213	.287	.534	.843	1.000
95	.011	.028	.079	.174	.242	.343	.539	.876	1.000
96	.028	.056	.101	.185	.258	.404	.563	.826	1.000
97	.017	.051	.084	.135	.197	.360	.573	.860	1.000
98	.011	.022	.079	.152	.197	.365	.584	.848	1.000
99	.000	.045	.090	.197	.275	.427	.618	.876	1.000
100	.073	.202	.388	.562	.612	.680	.798	.944	1.000

Item Pair	Scale Category								
	1	2	3	4	5	6	7	8	9
101	.034	.169	.281	.534	.663	.758	.876	.961	1.000
102	.034	.202	.489	.669	.758	.820	.910	.989	1.000
103	.073	.275	.511	.725	.809	.882	.955	.994	1.000
104	.011	.045	.140	.365	.466	.629	.820	.966	1.000
105	.022	.084	.174	.298	.416	.534	.725	.921	1.000
106	.006	.011	.062	.118	.225	.371	.584	.848	1.000
107	.006	.039	.084	.174	.258	.410	.663	.904	1.000
108	.011	.112	.219	.472	.573	.691	.815	.927	1.000
109	.022	.051	.163	.309	.449	.618	.815	.938	1.000
110	.213	.416	.618	.792	.871	.910	.949	.989	1.000
111	.011	.056	.146	.253	.326	.506	.730	.921	1.000
112	.022	.096	.202	.416	.551	.652	.803	.949	1.000
113	.006	.034	.107	.213	.298	.433	.607	.848	1.000
114	.006	.062	.124	.225	.298	.444	.590	.843	1.000
115	.028	.062	.146	.197	.242	.382	.562	.837	1.000
116	.017	.056	.073	.152	.219	.404	.579	.843	1.000
117	.017	.056	.090	.118	.152	.247	.393	.702	1.000
118	.000	.034	.067	.107	.118	.213	.416	.697	1.000
119	.006	.039	.073	.152	.191	.298	.472	.803	1.000
120	.039	.101	.169	.292	.433	.562	.708	.927	1.000
121	.022	.084	.174	.309	.382	.483	.702	.916	1.000
122	.022	.079	.157	.303	.365	.551	.747	.938	1.000
123	.000	.062	.135	.230	.292	.399	.674	.882	1.000
124	.011	.034	.096	.202	.253	.399	.618	.837	1.000
125	.208	.567	.775	.916	.938	.966	.983	.994	1.000
126	.039	.253	.500	.657	.747	.865	.933	.983	1.000
127	.101	.382	.556	.798	.848	.876	.955	.989	1.000
128	.028	.079	.197	.354	.455	.545	.719	.921	1.000
129	.006	.045	.129	.219	.315	.444	.646	.888	1.000
130	.011	.051	.169	.292	.399	.539	.719	.955	1.000
131	.022	.163	.382	.601	.674	.787	.893	.966	1.000
132	.017	.169	.320	.522	.629	.770	.893	.966	1.000
133	.011	.079	.219	.511	.646	.730	.871	.961	1.000
134	.011	.045	.118	.275	.393	.517	.691	.888	1.000
135	.034	.124	.242	.461	.573	.680	.803	.933	1.000

Item Pair	Scale Category								
	1	2	3	4	5	6	7	8	9
136	.191	.404	.624	.798	.860	.899	.944	.983	1.000
137	.331	.601	.770	.882	.921	.949	.978	.989	1.000
138	.022	.079	.225	.416	.528	.663	.787	.916	1.000
139	.017	.056	.129	.287	.360	.494	.702	.910	1.000
140	.022	.079	.157	.360	.455	.573	.758	.938	1.000
141	.017	.180	.360	.596	.702	.854	.916	.978	1.000
142	.045	.174	.388	.596	.713	.831	.893	.972	1.000
143	.039	.191	.399	.640	.742	.848	.944	.994	1.000
144	.017	.096	.225	.410	.500	.680	.848	.978	1.000
145	.011	.157	.382	.618	.730	.837	.904	.972	1.000
146	.062	.242	.517	.725	.798	.865	.961	.983	1.000
147	.084	.202	.421	.663	.725	.809	.893	.961	1.000
148	.000	.034	.079	.163	.258	.410	.652	.860	1.000
149	.028	.112	.208	.331	.433	.573	.725	.916	1.000
150	.056	.197	.444	.629	.725	.826	.910	.978	1.000
151	.062	.169	.404	.590	.736	.820	.893	.972	1.000
152	.191	.511	.713	.871	.921	.938	.978	.994	1.000
153	.028	.129	.219	.365	.478	.624	.736	.904	1.000
154	.073	.253	.461	.646	.747	.865	.933	.978	1.000
155	.006	.073	.163	.320	.427	.646	.764	.816	1.000
156	.051	.174	.264	.365	.494	.584	.742	.888	1.000
157	.039	.118	.219	.382	.466	.567	.770	.893	1.000
158	.090	.247	.382	.517	.640	.787	.843	.938	1.000
159	.129	.337	.567	.713	.770	.871	.938	.983	1.000
160	.022	.090	.191	.466	.601	.770	.893	.983	1.000
161	.015	.208	.348	.579	.680	.764	.871	.866	1.000
162	.011	.112	.320	.472	.618	.736	.865	.949	1.000
163	.281	.489	.618	.747	.781	.843	.860	.927	1.000
164	.500	.685	.781	.837	.848	.860	.899	.944	1.000
165	.174	.545	.719	.820	.876	.933	.978	.978	1.000
166	.067	.174	.360	.511	.579	.646	.798	.927	1.000
167	.045	.180	.348	.534	.601	.713	.820	.955	1.000
168	.022	.056	.185	.343	.410	.539	.736	.944	1.000
169	.011	.051	.157	.360	.489	.618	.815	.944	1.000
170	.534	.742	.837	.882	.904	.927	.944	.978	1.000

Item Pair	Scale Category								
	1	2	3	4	5	6	7	8	9
171	.242	.461	.573	.663	.730	.798	.848	.933	1.000
172	.028	.107	.163	.281	.326	.421	.551	.798	1.000
173	.045	.096	.185	.270	.371	.483	.646	.865	1.000
174	.045	.174	.253	.382	.433	.551	.702	.854	1.000
175	.006	.084	.185	.376	.534	.663	.781	.933	1.000
176	.343	.663	.719	.792	.815	.876	.904	.933	1.000
177	.062	.174	.365	.449	.517	.624	.758	.944	1.000
178	.028	.107	.225	.337	.404	.528	.702	.893	1.000
179	.006	.084	.157	.298	.393	.494	.685	.938	1.000
180	.017	.073	.180	.320	.449	.629	.758	.933	1.000
181	.039	.197	.376	.556	.624	.708	.848	.972	1.000
182	.056	.146	.320	.500	.669	.792	.899	.955	1.000
183	.028	.107	.320	.500	.596	.742	.831	.949	1.000
184	.079	.315	.522	.691	.775	.837	.910	.966	1.000
185	.011	.112	.230	.534	.640	.758	.876	.961	1.000
186	.219	.528	.713	.848	.893	.933	.944	.994	1.000
187	.056	.213	.371	.590	.685	.815	.893	.966	1.000
188	.017	.129	.320	.528	.657	.798	.916	.961	1.000
189	.017	.197	.438	.607	.719	.803	.927	.978	1.000
190	.084	.230	.433	.607	.730	.843	.916	.966	1.000

APPENDIX 3

ABSTRACT OF

A Multivariate Analysis of Popular Conceptions
and Attitudes Regarding the Etiology
of Male Homosexuality

APPENDIX 3

ABSTRACT OF

A Multivariate Analysis of Popular Conceptions and Attitudes Regarding the Etiology of Male Homosexuality¹

The study was designed to empirically explicate dimensions underlying conceptions and attitudes with respect to the etiology of homosexuality. A sample of 178 subjects judged the similarity between all possible pairs of twenty statements designed to reflect five postulated domains of homosexual etiology. These inter-item similarity judgments were subjected to multidimensional successive intervals scaling to determine the conceptual structuring of this postulated domain. Responses to the statements by the same subjects were factor analyzed to assess the extent to which popular conceptual dimensions appeared in beliefs and attitudes. The multidimensional scaling of the judgment data identified four bipolar conceptual dimensions. Factor analysis of the response data identified five major factors after acquiescence response bias was removed. Although the conceptual and response domains contained different dimensions and factors, similarity between statement clustering was noted

¹ Ronald J. Skippon, doctoral thesis presented to the School of Graduate Studies of the University of Ottawa, Ontario, September 1973, xi-125 p.

in both analyses. The results were interpreted as indicating popular conceptions and attitudes regarding the etiology of homosexuality to be quite complex, although moral and physical conceptions and attitudes tended to predominate. The popular conceptions and attitudes were examined in light of current professional views of homosexual etiology, as well as seen to have theoretical relevance to a social deviance theory of homosexuality. Implications of the results for attitude scaling were noted and possibilities for further investigation were suggested.