

THE UNIVERSITY OF CALGARY

PSYCHOLOGICAL SELF PERCEPTION IN
TRANSSEXUAL PATIENTS

by

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ABSTRACT

A review of the literature on transsexualism reveals a lack of systematic research on self perception. The present study was directed toward ascertaining whether selected gender and evaluative aspects of self perception could be established as correlates of particular gender 'identity/role' constellations. A self concept system model for understanding gender identity in terms of relationships with specific referents was proposed.

Gender-related aspects of self perception were examined for 48 male and female subjects, representing transsexual, homosexual, and heterosexual psychosexual orientations. Measuring instruments consisted of MacKenzie's Diagnostic Criteria Scales, the Bem Sex Role Inventory, the Maferr Inventories of Masculine and Feminine Values, the Derogatis Sexual Functioning Inventory, the Rosenberg Self-Esteem Scale, and the Repertory Grid Technique. Stepwise multiple discriminant analyses were conducted on the 30 construct variables and on the 7 behaviour variables derived from these instruments. Results were examined with respect to the obtained discrimination of subject groups on the basis of selected variables.

Findings indicated that reasonable discrimination between transsexual, nontranssexual male, and nontranssexual female groupings of subjects could be achieved on the basis

of ten discriminating construct variables, and to a lesser extent on the basis of four discriminating behaviour variables. The nature of construct discriminations suggested that transsexuals conceive maleness and femaleness differently than do nontranssexual males and females.

The implications of these results were discussed with particular focus on conceptualizations of gender identity. Consideration was directed toward seeking clarity and consensus of gender identity referents.

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I. IDENTIFICATION, COMPLEMENTATION, AND THE
TRANSSEXUAL DILEMMA

Relatively early in life, children develop the cognitive capacity to acquire the concept that biological sex is a constant entity. They learn to assign themselves and others to the "appropriate" category: male or female (Kohlberg, 1966). As well as acquiring knowledge about their biological sex, children develop a fundamental sense of maleness or femaleness. According to Stoller (1968) this basic conviction, core gender identity, is established by three years of age. The young child derives psychological constructs, or schemas, from experiencing himself/herself and from observing others. One such conceptualization involves what it means to be male and what it means to be female. Gender identity is that sense of self as male or female. Gender role describes that which a person says or does to indicate that he/she is either male, female, or ambivalent. Generally speaking, an individual psychologically identifies with one gender, and behaves in a complementary fashion with members of the other sex.

The schemas which define gender identity are the product of continuous interaction between processes of identification and complementation. Erikson (1950) viewed identification as the affirmation of what one is and the

rejection of what one is not. The latter component is implicit in the notion of complementarity. Complementation, as it is used in the context of this thesis, refers to gender role behaviours elicited by interaction with members of the sex of one's sex object choice. That is, gender-specific behaviours are coded in terms of a set of beliefs about this sex which suggest appropriate complementary behaviour.

To a large extent, sociopsychological and psychoanalytical literature on gender identification has tended to neglect the complementation component (Money & Tucker, 1975). This is deemed a serious deficiency in light of the additional information that gender role behaviour may convey about an individual. A variety of gender identity/role constellations is possible across different individuals. Identification and complementation are concurrent processes. Knowing one's gender identity is not sufficient to presume that person's gender role orientation. In this sense, sexual arousal elicited by a member of one's sex or by the other sex, is not set by one's gender identity. More to the point, a particular constellation, say for example male heterosexual, has the potential to convey more about that person than does his male gender identity alone. Furthermore, it can be reasonably assumed that complementarity influences how one sees himself/herself; that is, self perception. Certainly, behaviour impacts on self perception. Accordingly, sexual complementation must impact on gender-related (and evaluative)

aspects of self perception, such as gender identity. A theoretical framework by which such interrelationships may be understood, is elucidated in section II.

Before proceeding further, it is imperative that the primary terms of this research be defined. This is particularly true given the voluminous literature on gender-related topics; a literature in which central terms often lack adequate definition, or are not defined at all. At the outset, it should be made clear that sex and gender will be taken to mean two different things. Sex is an ascribed status related to the sex assigned at birth. It will, therefore, refer to anatomical conceptualizations of what is alleged to be male or female. Gender, on the other hand, represents an achieved status referring to psychological, social, and cultural affiliations. It seems particularly appropriate to cite Virginia Prince in her assertion that "gender identity is between the ears and not between the legs" (1973, p.21). Money & Ehrhardt present gender identity as "the sameness, unity, and persistence of one's individuality as male, female, or ambivalent, in greater or lesser degree, especially as it is experienced in self-awareness and behaviour" (1972, p.4). The present study has adopted this definition. As such, sex is understood to be one gender identity referent. Behavioural expressions of gender identity are subsumed under gender role.

It is assumed that individuals who are clear about their gender identification are responding to an organized system of beliefs as to the psychosexual meaning of being a man or a woman. That is, being a man or a woman implies a set of beliefs about appropriate gender roles, including sexual preference, about psychological makeup, and physical appearance. As a developmental process, individuals assume a position along these prescribed dimensions, and then incorporate the resultant composite into their sense of self. Evaluative processes accompany this integration.

A most interesting phenomenon exists whereby an individual psychologically identifies with the gender opposite to the sex which was assigned at birth. It is behaviourally manifested when the individual seeks out hormonal 'correction' and sex reassignment surgery. Such individuals have been termed transsexual. According to Benjamin (1966), transsexualism, in the classical sense, has three characteristic features:

- 1) a lifelong feeling of being a member of the gender opposite to that suggested by one's anatomy;
- 2) early and persistent cross-dressing, coupled with a firm emphasis on lack of erotic association; and
- 3) disdain for homosexual behaviour.

The transsexual individual wishes a sexual resolution of the

incongruity between his/her gender identity and the apparent anatomical reality. In other words, the sex of the transsexual conflicts with his/her gender identity/role constitution. For example, a male transsexual has the body of a male, but a female gender identity and female gender role orientation: clearly a state of dilemma.

The critical issue for the transsexual appears to stem from a core gender identity that is incompatible with his/her sex. The presenting problem therefore relates to a subjective sense of identification. Since Benjamin's early work implicating certain behaviours as characteristic of the transsexual, more has been written about transsexuals who do not fit the classical pattern. Reports from reputable Gender Identity Clinics submit that behavioural 'symptoms', such as cross-dressing, are not always present from early childhood (Mehl, 1973). Further, disdain for homosexual behaviour is not unique to transsexuals. It may be felt by heterosexuals, and even by homosexuals themselves. Thus, these behavioural characteristics do not seem to be necessary or sufficient to distinguish transsexuals from nontranssexuals. What does remain a distinctive feature, is the report of, for example, "being a man trapped in a woman's body". Such subjective assertions are not easily translated into data for scientific inquiry. This may explain the impetus given to etiologic research; that is, "Why is an individual transsexual?" Can specific genetic/hormonal fac-

tors be implicated? (Angus et al., 1977).

Is transsexualism a function of social learning within a particular developmental environment? (Money & Ehrhardt, 1972). Certainly such questions are both interesting and intriguing - and warrant research energy. However, it would seem that an important question is being neglected in the process: At the level of psychological self perception, where the problem is recognized, how do transsexuals differ from nontranssexuals?

Work by Kando (1973) has sought to establish social-psychological characteristics of (male) transsexuals which distinguish them from nontranssexuals. He examined masculinity/femininity, attitudes toward definitions of masculinity and femininity, role strain, definitions of sex and gender, and attitudes towards transsexualism. Although these data were not systematically interrelated in a statistical fashion, they were interpreted in terms of implications for self-image. Other research has examined gender identity/role variables in transsexuals. However, studies have generally not considered them jointly as specific self perception referents. The present work attempts to remedy this apparent deficiency. Further, since transsexuals see themselves as belonging to a gender which is at odds with their sex, it is important to understand their conceptualization of gender identification. More specifically, can sets of gender identity referents be identified which dis-

tinguish transsexual from nontranssexual individuals?
Therein lies the basic question addressed by this study.

II. A THEORETICAL FRAMEWORK

In this section a theoretical framework is presented, focussing on what might otherwise only be appreciated as a set of diffusely interrelated concepts. In fact, it is felt that a particularly meaningful feature of this research lies in its attention to the hypothesized complexity of interrelationships between relevant variables. The study was designed to explore gender identity/role constitution in terms of its relationship to specific gender and evaluative referents. The subject matter falls within the domain of self concept.

As literature on the self has grown, self concept has become a pejorative term (Wylie, 1974). It is a hypothetical construct which has eluded consensual definition. This makes it essential to clarify the theoretical orientation assumed by this investigation. Epstein considers self-concept in terms of "internally consistent, hierarchically organized concepts contained within a broader conceptual system" (1973, p.407). This hierarchical arrangement may be taken to reflect the notion of psychological centrality (Kelly, 1955); that is, that particular concepts are more salient to an individual than are others. This study views self concept as such a composite of interacting subsystems.

Figure 1 depicts the operational scheme of this research: a self concept system. Two primary cores are pre-

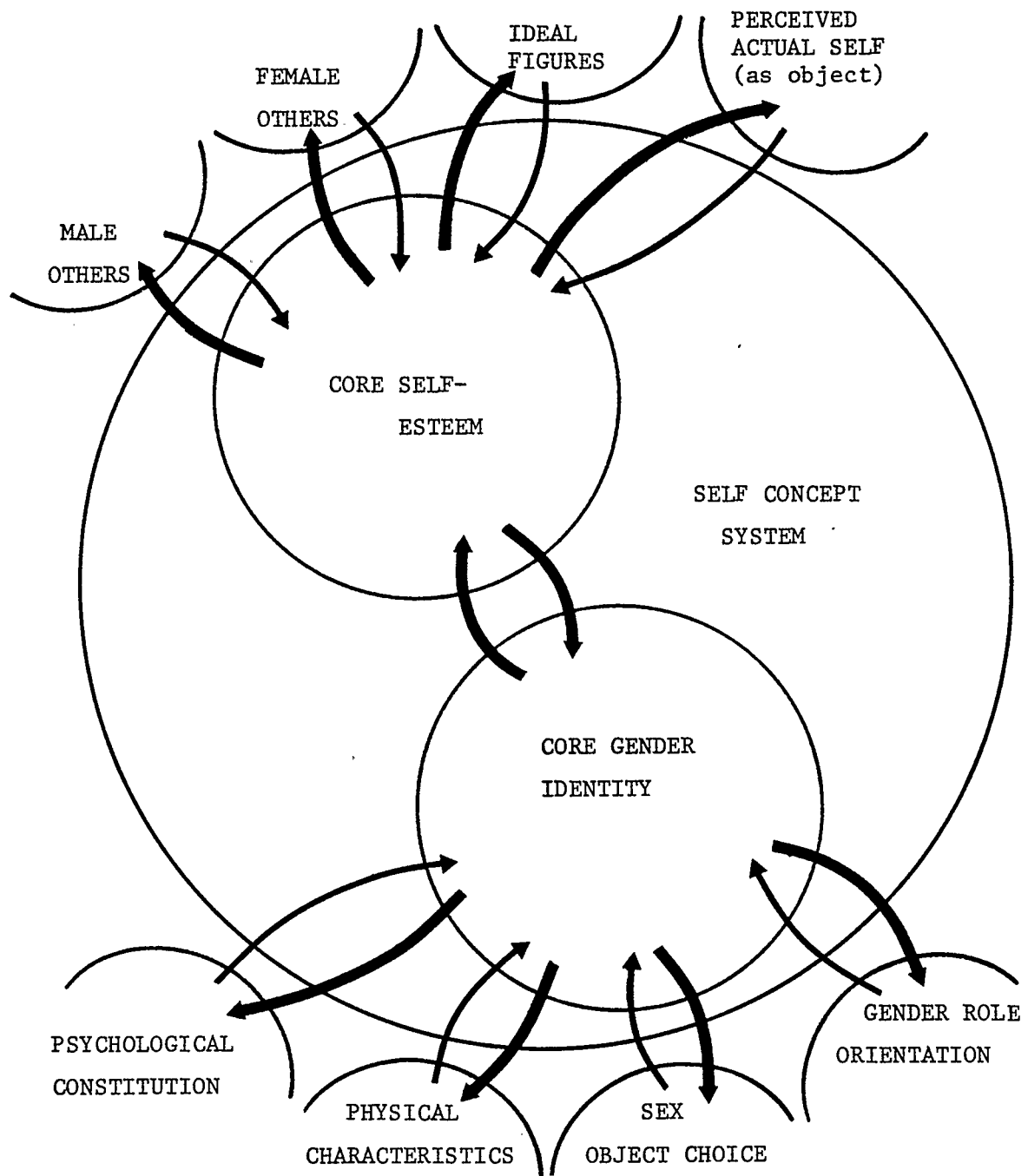
sented which are considered integral to self identity; namely, core self-esteem and core gender identity. Each serves as the focus of a major subsystem. Core self-esteem refers to a basic sense of self evaluation. It both affects and is affected by interaction of the self with others in various contexts. The outcome of such interaction, which is manifested as behaviour, will depend upon the particular situation. However, with cognitive dissonance effectively overriding the interaction, core self-esteem assumes a preemptory status. Thus, a person's self-esteem is more likely to shape his/her behaviour in a given situation, than his/her behaviours would affect self-esteem.

In a similar manner, core gender identity is deemed the focal point of another primary subsystem. Although studies by Stoller (1968) indicate that this basic sense of maleness or femaleness is established by the third year of life, Green (1973) and Money & Ehrhardt (1972) among others, suggest that gender identification is not absolutely fixed at this point. As such, core gender identity, like core self-esteem, may be associated with a specific set of referents. Gender-related behaviours are a product of boundary resolutions between core and referent components. This would include the seeking of sex reassignment surgery by transsexual individuals, who perceive their anatomy to be incongruent with their gender identity.

With this introduction, one is in a better position to understand the dynamics of the self concept system model as they were conceived. In Figure 1, core self-esteem is shown to relate to each of the other components of the system either directly, or indirectly through core gender identity. To a great extent, how we see ourselves relative to others invokes evaluative processes. This is particularly the case when the self is compared to figures which represent ideals. It is also true when the self is compared with male versus female others. Further, when the self interacts with others, the performance of that self may be assessed on the basis of elicited feedback. That is, the self may be evaluated as the object of others' perceptions. Conversely, how one feels about himself/herself, may serve to bias such comparative perceptions. Figure 1 also presents core self-esteem and core gender identity as interrelated components. One can feel good or bad about his/her maleness or femaleness. Moreover, that person's global self evaluation can affect how he/she sees himself/herself as a male/female. For example, a man who has a very negative self image may perceive himself as 'less of a male' because of it. Maleness is associated with many socially desirable characteristics in our society. Therefore, to have a male identity may confer a significant increment to self-esteem.

A SELF CONCEPT SYSTEM: THE BASIC MODEL

FIGURE 1



SELF CONCEPT AS A COMPOSITE
OF INTERACTING SUBSYSTEMS

In the proposed self concept system, core gender identity is shown with four elemental referents: gender role orientation, sex object choice, physical characteristics, and psychological constitution. A broad sampling of the literature on gender-related issues implicated these four areas as most salient in terms of gender identity. Associated with each of the areas are particular constructs which provide psychological frames of reference. For example, there are certain schemas which suggest appropriate gender role orientation. These schemas generally imply certain behaviours. Traditionally, masculine behaviours have been prescribed for males and feminine behaviours for females (Constantinople, 1973). Sex object choice speaks rather directly to complementary gender role postures. The psychological constitution of the individual may also relate to gender identity, particularly if aspects of psychosexual functioning are assumed to play a role in its development. For example, a man who loses interest in sexual relations may interpret this as a threat to his male identity. The link between physical characteristics/sex and gender identity would be a "given" were it not for the existence of the transsexual. As such, it must be considered as a variable rather than as implicit in gender identity.

Finally, it is assumed that these referents are conceptually translated into self concept system components according to an individual's personal construct system (Kelly,

1955). That is, the concepts underlying the referents are understood by an individual in terms of personal constructs which represent the way he/she construes the world. Thus, when a man compares himself to female others, he uses particular constructs, ones which are salient to him, as the basis for comparison. Thus, he may draw upon terms such as aggressiveness and muscularity to make the comparison.

Although gender identity represents the focus of interest, one cannot ignore the intimacy of its interface with complementation. As such, rather than simply studying self-identified males versus females, it was more appropriate to examine males and females of varying psychosexual orientations. Using this rationale, six groups of individuals were investigated; the groups being distinguished by a particular 'identity/sex object choice' constitution as follows:

GENDER IDENTITY/SEX OBJECT CHOICE

PSYCHOSEXUAL ORIENTATION	ANATOMICAL MALE*	ANATOMICAL FEMALE
Transsexual (TS)	F/M = MTS	M/F = FTS
Homosexual (HO)	M/M = MHO	F/F = FHO
Heterosexual (HE)	M/F = MHE	F/M = FHE

The investigator had to rely upon the self report of individuals as to their gender identity and sex object choice.

*refers to male (M) or female (F) birth status.

Although the criteria for accepting individuals as subjects are outlined in section III, it should be stressed that where individuals reported any ambivalence, they were not considered further. That is, they had to be clear about their gender identity and claim a definite sexual preference.

Given that the nature of this study was to explore interrelationships between the components of a proposed system, a multivariate approach was indicated in order to obtain the most meaningful results. A set of 30 construct variables was selected which appeared to reasonably sample the domain of schemas associated with the gender identity and self-esteem components of the system. Additionally, seven behaviour variables were included which were specific to gender role. As previously mentioned, it was assumed that the schemas imply certain gender behaviours. Thus, both abstract constructs and (self report of) actual behaviours served as self concept referents. The 'measures' of these variables are discussed in section III.

The major null hypothesis being tested was such that the six groups, whose members defined themselves in a characterizing manner (i.e. as male or female TS, HO, or HE), could not be discriminated on the basis of selected self perception variables. Expectations were based partly on results of other studies which, however, have tended to use a univariate approach without appropriate comparison groups, and partly on clinical impression.

Kando (1973) reported a number of significant differences between male transsexuals and nontranssexual males and females. Transsexuals scored as more feminine than the other two groups on a masculinity-femininity scale constructed by Kando. Further, they were more conservative in their endorsement of traditional definitions of womanhood. As such, they were assumed to experience less role strain in terms of gender role, than were nontranssexual women. The male transsexuals also used definitions of sex and gender which differed from those used by most of the nontranssexual respondents. Transsexuals emphasized social-psychological criteria, while nontranssexuals tended to use biological referents. Kando argued that this enables the male transsexuals to define themselves as women. These results do indicate that transsexuals see themselves differently than do nontranssexuals.

Transsexualism, like homosexuality, may best be understood as a complex matter involving the identity, behaviour, and lifestyle of individuals who are stigmatized by a majority segment of society; namely, heterosexuals. Like other minority groups, they develop ways of adapting to their stigma, including denial, secrecy, and activism. The nature of the adaptation, in turn, profoundly influences the lifestyle and psychosexual integrity of the transsexual or homosexual individual. In the case of transsexualism and homosexuality, stigmatization is rooted in gender-related

issues. Thus it would seem reasonable to expect transsexuals and homosexuals to differ from heterosexuals in terms of important gender-related elements of self perception. Moreover, since for the transsexual identification is more an issue than is complementation (and gender identity is more integral to self identity than is sex object choice), it was expected that transsexuals would be distinguished from homosexuals.

Another element which should be considered is self evaluation relative to gender issues. Stoppard and Kalin (1978) have reported on differences in the social desirability of masculine versus feminine characteristics; masculinity generally being more highly valued. Babl (1979) has furthered this concept through his compensatory masculinity hypothesis. He submits that anxiety arises from comparison of the self to rigidly polarized gender role standards. Males are alleged to respond to gender role threat by exaggerating their masculinity. Thus, female transsexuals and male homosexuals might be expected to assume more decidedly masculine postures than subjects from the other four groups.

Probably the most important point to be made by this research is that the complexity of gender-related aspects of self perception must be respected. It was difficult to predict what aspects of self perception would be most discriminating, given the paucity of relevant literature. In particular, relationships between variables have tended to be

neglected in transsexual studies. As such, where a certain variable is found to significantly distinguish between groups in a study, this may be misleading if information is lacking relative to other variables that actually contribute more to the observed variance between the groups. Furthermore, where two variables have independently been found to discriminate between groups, it may be that each of the two measures is, in fact, tapping the same thing. A multivariate approach would therefore seem appropriate in the study of so complex an area as self perception.

To recall, the primary research question addressed was: "Could specific sets of self perception variables be identified as correlates of particular 'identity/role' constellations?" If so, what was their nature, and how might they be understood in terms of the group they represent?

III. METHOD

Subjects

A total of 48 individuals served as subjects for this research. Six groups of eight subjects each were distinguished by particular 'identity/complementation' constitutions, as outlined in the previous section.

All anatomically-born males who were active in the Gender Dysphoria Clinic program of the University of Calgary, and who resided in Alberta at the time of this study, were considered potential subjects for the MTS group. Histories and assessment summaries of these 22 individuals were reviewed in order to rule out clear indications of psychopathology. Structured and unstructured psychiatric interview reports included social and psychiatric historical information. Any reasonable suggestion of psychopathology was taken as sufficient to exclude an individual from study. M.M.P.I. results complemented this evaluation to the extent that seven individuals who had scale scores in excess of two standard deviations from the mean, were not considered further. The Masculinity-Femininity Scale was exempted from this criterion because of its association with gender role, one of the variables under investigation. Eight of the MTS group candidates selected in this manner were available for participation. As the same information was available for FTS individuals, the same criteria were employed in choosing 8 from the

14 then active in the Gender Dysphoria Clinic.

Each of the 16 transsexual subjects psychologically identified himself/herself with the gender opposite to that suggested by his/her anatomy at birth. In all cases, this 'cross-gender' identity had been recognized from early childhood. Third party confirmation of this was sought where possible. The investigator was present during interviews with relatives for 4 of the 16 transsexuals. Additionally, interview summaries of meetings with relatives for four other transsexuals were reviewed. Information obtained from the relatives was consistent with descriptions of classical early onset. It is important to note that three of the MTS subjects were post-operative (i.e. had been surgically re-assigned to female) as were three of the FTS subjects (who had been surgically altered to anatomical males).

Eight volunteer homosexual and eight volunteer heterosexual males matched for age and socioeconomic background with the male transsexuals were studied. Eight volunteer homosexual and eight volunteer heterosexual females matched for age and socioeconomic background with the female transsexuals also served as subjects. Volunteers were selected from a large pool of names of potential subjects. This list was compiled by contacting several different homosexual and heterosexual individuals of low profile in the Calgary area. That is, none of the subjects gave a history of involvement with organizations that might be expected to

render a major selection bias to this investigation; for example, homophile organizations or feminist activist groups. All appeared to be responsible members of the community, maintaining stable employment, without attracting political or personal notoriety. None of the 48 subjects claimed a bisexual orientation. Sample characteristics are summarized in Table 1.

It should be noted that data were collected on one female homosexual who disclosed a history of bipolar affective illness. During the course of the first session, she complained of racing thoughts and difficulty in concentrating. She was offered, and accepted, a referral to a local agency for professional consultation. Although she wished to continue in the study, her data were excluded from analyses. Another female homosexual of her age and socioeconomic background was subsequently obtained from the original pool of names.

Subjects were paid at a rate approximating \$2.00 per hour for their participation. All sessions were conducted at the University of Calgary, with the exception of four which had to be completed in the private homes of subjects because of transportation problems; two such meetings took place in the city of Edmonton.

At the outset of the first session, the investigator offered to make results available to each subject after the study was completed. The majority of subjects clearly

TABLE 1
CHARACTERISTICS OF SUBJECT GROUPS

	<u>GROUP</u>					
	MTS	MHO	MHE	FTS	FHO	FHE
AGE RANGE	22-32	25-35	21-39	18-34	16-31	19-31
MEAN AGE	26.8	29.6	23.6	26.4	26.4	25.4
SOCIAL CLASS*						
FREQUENCIES: I	1	1	2	0	0	1
II	0	1	0	0	1	0
III	3	3	1	3	2	2
IV	2	2	4	3	4	3
V	2	1	1	2	1	2

*From Hollingshead's Two Factor Index of Social Position (Hollingshead, 1957); a brief class description is as follows: I. high social prestige (wealth); II. high managerial positions ("well-to-do"); III. white-collar status; IV. semi-skilled positions; and V. unskilled labour (poor).

voiced a desire to see their own results, as well as overall findings of the study.

Instruments and Techniques

Thirty-seven predictor variables were derived from a set of six instruments/techniques. These measures will now be described.

1. Diagnostic Criteria Scales (MacKenzie, 1978)

This instrument seeks to quantify specific gender-related behaviours. The aspects of sexual history sampled include: 1) Childhood Cross-Gender Behaviour; 2) Adult Cross-Gender Behaviour; 3) Homophile Association; 4) Heterophile Association; 5) Genital Erotic Focus; and 6) Transvestite Behaviour. Information relative to these six scales is obtained by means of a structured interview, and is numerically weighted. A sample item from each scale is presented in Appendix A.

Although psychometric properties of the instrument have not yet been detailed in the literature, there is evidence that ratings on the scales correlate with clinical outcome in a gender dysphoria program¹ (MacKenzie, et al., 1977).

2. The Bem Sex Role Inventory (Bem, 1974)

This self-description inventory consists of three 20-item scales: Femininity, Masculinity, and Social Desirability. It purports to measure an individual's affinity for various constellations of gender role attributes. Mas-

culinity and femininity are treated as independent dimensions. This permits characterization of individuals as either masculine- or feminine-gender-typed; androgynous, representing coexistence of masculine and feminine attributes; or undifferentiated, implying gender role postures low in both masculinity and femininity. The inventory was administered to determine subjects' self perceptions according to gender role stereotypes.

Very good internal consistency and test-retest reliability have been reported for the instrument (Bem, 1974; Gaudreau, 1977). Scoring of responses made use of the original t-ratio scoring procedure. In this method, an Androgyny score was calculated by subtracting each subject's Masculinity score from his/her Femininity score, and then multiplying this difference by a conversion factor. It should be noted that data were also partitioned according to the more recently recommended median-split procedure (Bem, 1977). However, the continuous nature of t-ratio scores made them more appropriate for the analyses chosen, and thus it was this form of the data that was actually used. Table 2 presents reference points for interpreting t-ratio score values.

3a. Maferr Inventory of Masculine Values (Steinmann, Fox, & Farkas, 1968)

This questionnaire was administered to MTS, MHO, and MHE subjects as a means of quantifying attitudes towards male

TABLE 2

CLASSIFICATION SCHEME* FOR BEM SEX ROLE INVENTORY
t-RATIO SCORES

	Masculine	Near Masculine	Androgynous	Near Feminine	Feminine
t-ratio					
cutoff:	-2.025	-1.0	+1.0	+2.025	

*After Bem & Watson, 1976.

roles. Subjects described self and ideal man perceptions according to family- versus self-oriented values. A family-oriented man deems his own satisfactions as less important than those of spouse and family; family matters take precedence over personal activities. A self-oriented man, on the other hand, considers his own satisfactions as more important than those of family, and wishes family responsibilities not to interfere with the realization of his ambition and ability.

Three 34-item forms were given to each of the subjects. On one of these forms subjects responded according to their own personal value systems (Maferri Role Values). On another, they were asked to respond as they thought their ideal man would respond (Maferri Ideal Role Values). The third form had subjects respond as they believed a woman's ideal man would (Maferri Opposite Sex Ideal Role Values). Sample items appear in Appendix B.

The family- versus self-orientation distinction parallels an instrumental-expressive dimension. Such discriminations are generally taken to distinguish gender role stereotypes (Parsons & Bales, 1955; Bem & Martyna, 1976). Scores from 0 to +68 reflect degrees of self-orientation, while scores between 0 and -68 represent extent of family-orientation.

Split-half reliability, after Spearman-Brown application, is reported to be 0.86. Items reflect generally

accepted role connotations and, as such, have face validity. Further validity was conferred by seven judges who agreed upon item categorization as family- or self-oriented (Steinmann, Fox, & Farkas, 1968).

3b. Maferr Inventory of Feminine Values (Steinmann & Fox, 1966)

This instrument purports to tap attitudes towards female roles. Subjects in the FTS, FHO, and FHE groups received three 34-item forms, asking them to describe self and ideal woman perceptions according to family- versus self-oriented values. That is, subjects indicated how they themselves felt (Maferr Role Values), how they thought their ideal woman would feel (Maferr Ideal Role Values), and how they thought men would want women to respond, i.e. man's ideal woman (Maferr Opposite Sex Ideal Role Values). Sample items are presented in Appendix C.

Scoring for this inventory is essentially the same as for its masculine values counterpart. Reliability has been estimated by the split-half method, and when corrected through the Spearman-Brown procedure, is 0.81. Individual items have face validity as they are generally accepted role connotations. A seven-judge panel verified classification of each item as family- (traditional) or self- (liberated) oriented (Steinmann & Fox, 1966). Concurrent validity has been demonstrated by the significant correlations obtained between this Maferr inventory and other recognized role value

instruments (Blumhagen, 1974).

4. The Rosenberg Self-Esteem Scale (Rosenberg, 1965)

This is a 10-item Guttman scale which purports to measure self evaluation in global terms. The nature of this index is such that it should reflect valence and degree of core self-esteem (Global Self-Esteem).

In a comparative exercise by Wylie (1974), psychometric properties of the Rosenberg Self-Esteem Scale were pitted against those of other extant self-esteem measures. The Rosenberg scale compared very favourably with those selected by Wylie.

5. The Derogatis Sexual Functioning Inventory (Derogatis, 1976)

This instrument provides a composite psychological profile with particular relevance for sexual behaviour.

Specific subscales are as follows:

(1) Sexual Information: This 26-item subscale purports to measure the individual's general fund of information about sexual functioning. Consistent evidence suggests that poor understanding or appreciation of fundamental facts regarding sexual functioning can be detrimental to a fulfilling sexual experience (Derogatis, 1975).

(2) Experience: This 24-item subscale seeks to assess the spectrum of sexual behaviours experienced by the individual. A restricted variety of sexual behaviours is often associated with sexual dysfunction.

(3) Drive: Five items, reflecting frequency of intercourse, masturbation, kissing and petting, sexual fantasies, and the ideal frequency of intercourse, comprise this subscale.

Many sexual problems are associated with the level of interest or investment in sexual matters.

(4) Attitude: Thirty statements are presented which represent varying degrees of liberalism and conservatism regarding sexual behaviour. Persons espousing a more liberal, accepting attitude about sexual matters tend to have more satisfying personal sexual experiences.

(5) Psychological Symptoms: This subscale is actually a distinct instrument known as the Brief Symptom Inventory (Derogatis, 1975). It is a symptom inventory which measures psychopathology in terms of nine primary symptom dimensions: Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism. Neurotic manifestations are assumed to have a disruptive influence on sexual functioning.

(6) Affect Balance: This subscale is also a distinct psychometric instrument and is termed the Affects Balance Scale. It represents the following affect dimensions: Anxiety, Depression, Guilt, Hostility, Joy, Contentment, Vigor, and Affection. The balance between positive and negative emotions is taken to have implications for sexual functioning.

(7) Gender Role Definition: This subscale consists of 30 ad-

jectives which reflect masculine or feminine traits as defined by traditional standards. Gender role polarization, as opposed to integration, is often implicated in sexual dysfunction.

(8) Body Image: This subscale consists of 15 items; 10 of which are applicable to both sexes, and 5 which are specific to each of the sexes.

(9) Sexual Fantasy: Twenty fantasy themes are presented in this subscale. To a certain extent, individuals with sexual dysfunction tend to entertain a narrow range of sexual themes.

(10) Satisfaction: Ten items addressing sexual satisfaction make up this subscale.

(11) General Sexual Satisfaction Index: This measure is a direct, overall subjective evaluation of the individual's sexual satisfaction.

The Derogatis Sexual Functioning Inventory is relatively new and so has not seen much in the way of rigorous psychometric testing. Nonetheless, it was selected for use in this study because of the recognition given to a comparatively broad range of areas which have relevance for psychosexual functioning.

6. Repertory Grid Technique (Kelly, 1955)

This technique offers an intriguing approach to the operationalization of gender identity as an aspect of self identity. It was derived from George Kelly's elaborate

theory of personal constructs. Specifically, it provides a means of qualitatively and quantitatively sorting out an individual's personal construct system. That is, in what systematized way has he/she made sense of his/her world? There is evidence that these constructs form the basis of self description, identifying dimensional determinants of behaviour (Bender, 1976). The procedure allows the individual to indicate how he/she feels about himself/herself by comparing himself/herself to significant others and to an ideal self. Thus, there is leverage for reasonable speculation as to self evaluation. Furthermore, the repertory grid has been taken to provide an indirect measure of gender identity by seeing how closely an individual positions himself/herself relative to male versus female others, in terms of the constructs which that individual deems important (Giles & Rychlak, 1965; Ryle, 1975).

In this study, these aspects of personal construct systems were explored and compared across the 48 subjects. All were asked for the names of important people in their lives, past and present. They were asked to include both males and females for whom they had either a generally positive or negative association. This list represented potential elements for the repertory grid. Of the 24 elements finally included in each individual's grid, 10 were structured by the investigator. These included the subject's actual self (Self), the person he/she would like to be (Ideal

Self), and ideal versus poor examples of men and women in the subject's own view (Ideal/Bad Example of a Woman/Man). Further, to extract information regarding perceptions of gender identity, subjects were asked to imagine themselves as both a man and a woman, as seen by both other men and other women (Females'/Males' perception of Subject as Female/Male). The remaining 14 elements were not structured by the investigator, but rather were selected from the potential element list. Elements were included that represented certain relationships to the subject, such as mother or mother figure. A summary of the element components used appears in Table 3.

During the following session, subjects were presented with a series of 25 triads of elements. For each triad, the subject was required to state in what important way, two of three preselected elements, were more alike than the third one. In this manner, 25 distinguishing terms, the constructs, were elicited. Additionally, subjects anchored each of these constructs to a particular dimension by defining what, to them, was the opposite term. All 24 elements were rated on a five-point scale, according to the 25 construct dimensions. Responses were recorded in a grid format. A sample grid appears in Appendix D.

Repertory grids for each subject were analyzed using Slater's INGRID '72 program (Slater, 1977). The output includes distances between elements in terms of their simila-

TABLE 3

ELEMENT COMPONENT OF THE REPERTORY GRIDS

<u>Element Number</u>	<u>Nature of Element</u>
1	Partner
2	Relative
3	Best Friend
4	Mother
5	Father
6	Brother
7	(Ex-)Boss
8	Sister
9	(Ex-)Teacher
10	Represents particular values to subject
11	Ex-partner
12	Represents particular values to subject
13	(Un)Ethical Figure
14	Attracts subject physically
15	Ideal Example of a Woman
16	Bad Example of a Woman
17	Ideal Example of a Man
18	Bad Example of a Man
19	Actual Self
20	Ideal Self
21	Females' Perception of Subject as Female
22	Males' Perception of Subject as Female
23	Males' Perception of Subject as Male
24	Females' Perception of Subject as Male

rity or dissimilarity to each other, according to the elicited constructs. Results are in the form of standardized element-element distances. Distances are calculated in such a way that two elements drawn at random from a grid of the same size would be separated by a distance of 1.0. Element-element distances of greater than 1.0 imply that the subject sees the two elements as relatively dissimilar, while distances less than 1.0 indicate that they are relatively similar.

Studies cited by Bonarius (1965) reported satisfactory test-retest correlations for repertory grid testing. It might be noted, however, that measures of consistency have attracted more attention. These are based upon the similarity of construct relationships between two grids where two different sets of elements are rated against the same set of constructs. Bannister & Fransella (1966) found high levels of test-retest consistency among normal as opposed to schizophrenic individuals. The matter of validation requires independent criteria for measuring the function assessed. Although there exists a wide range of data derived from repertory grid technique, interpretation is not a closed issue. Moreover, the purposes for which the technique have been extended are numerous. As such, there is no general validation available for the repertory grid approach.

A list of the 37 variables derived from the measures described above, is included in Table 7. Figure 2 outlines

FIGURE 2

Relationship of Variables and Instruments to Theorized
Self Concept System Components

<u>Primary Component</u>	<u>Elemental Referent</u>	<u>Measure/Instrument*</u>
Core Self-Esteem		Global Self-Esteem/RSES
	Male Other Comparisons	Self-Male Other distance/RGT Self-Father distance/RGT Ideal Self-Male Other distance/RGT Self-Bad Man distance/RGT
	Female Other Comparisons	Self-Female Other distance/RGT Self-Mother distance/RGT Ideal Self-Female Other distance/RGT Self-Bad Woman distance/RGT
	Ideal Figure Comparisons	Self-Ideal Self distance/RGT Self-Ideal Man distance/RGT Self-Ideal Woman distance/RGT Ideal Role Values/Maferr Opposite Sex Ideal Role Values/Maferr
	Self as Object of Others' Perceptions	Self-Females' Perception of Subject as Female distance/RGT Self-Males' Perception of Subject as Female distance/RGT Self-Males' Perception of Subject as Male distance/RGT Self-Females' Perception of Subject as Male distance/RGT
Core Gender Identity	Gender Role Orientation	Androgyny/BSRI Gender Role Definition/DSFI Role Values/Maferr ‡Childhood Cross-Gender Behaviour/DCS ‡Adult Cross-Gender Behaviour/DCS *Transvestite Behaviour/DCS
	Sex Object Choice	‡Homophile Index/DCS ‡Heterophile Index/DCS
	Physical Characteristics	Body Image/DSFI

Continued

FIGURE 2 continued

<u>Primary Component</u>	<u>Elemental Referent</u>	<u>Measure/Instrument*</u>
	Psychological Constitution	‡Genital Erotic Focus/DCS Information/DSFI ‡Experience/DSFI Drive/DSFI Attitudes/DSFI General Symptoms Index/DSFI Affect Balance/DSFI Fantasy/DSFI Satisfaction/DSFI General Sexual Satisfaction Index/DSFI

*
 RSES: Rosenberg Self-Esteem Scale
 RGT: Repertory Grid Technique
 Maferr: Inventories of Masculine & Finine Values
 BSRI: Bem Sex Role Inventory
 DSFI: Derogatis Sexual Functioning Inventory
 DCS: Diagnostic Criteria Scales

‡These measures relate to behaviour (as opposed to construct) variables.

the relationship of the variables, and their parent instruments, to particular components of the proposed self concept system.

Procedure

The length of individual sessions necessitated carrying out this research at two different times. During July and August of 1978, subjects for the MTS, MHO , and MHE groups were selected and subsequently studied. Eight months later the FTS, FHO, and FHE groups were established and investigated.

All 48 subjects were seen individually on two occasions separated by approximately three weeks. They were told at the outset that the purpose of the study was to explore various aspects of sexuality and how these might be incorporated into a perception of self. Confidentiality of information was stressed. Further, it was made clear to members of both transsexual groups that results would in no way influence gender program decisions.

Except for administration of the repertory grid which necessarily occupied both sessions, the order in which instruments were presented across the two sessions, was randomly determined for each subject.

IV. RESULTS

Means and standard deviations for the six subject groups on the 37 variables appear in Tables 4a and 4b, respectively.

Separate results of Diagnostic Criteria Scale Ratings are presented in Table 5. Pairwise t-test comparisons revealed statistically significant differences across subject groups. The ordering of groups relative to Childhood Cross-Gender Behaviour was FTS>MTS>FHO>MHO>FHE>MHE. In terms of Adult Cross-Gender Behaviour, FTS>MTS>FHO>MHO>MHE>FHE. For Homophile Index ratings, the ordering was FTS>MHO>FHO>MTS>MHE = FHE, while for Heterophile Index, FHE>MHE>FHO>MHO>FTS>MTS. Ordering of groups in terms of Genital Erotic Focus was such that MHO>FHE>MHE>FTS = FHO>MTS. Although there were no significant differences between any of the groups on Transvestite Behaviour, a slight difference distinguished transsexual subjects; that is, MTS>FTS>MHE = MHO = FHE = FHO.

Preliminary univariate F tests revealed significant between-group differences for 18 of the 37 variables. The variables are listed in Table 6 with their respective F values.

The within-groups correlation matrix revealed considerable common variance between different variables representing the same self concept system component, as well as

TABLE 4a

GROUP MEANS ON ALL VARIABLES

VARIABLE	MTS	MHO	MHE	FTS	FHO	FHE
V1 Androgyny	.58250	-1.53875	-.65125	-.26125	-.65375	.10125
V2 Gender Role Definition	2.62500	-8.12500	-7.75000	-5.12500	-11.37500	-.87500
V3 Global Self-Esteem	1.37500	.75000	1.12500	2.12500	.75000	2.00000
V4 Body Image	28.62500	20.37500	18.12500	35.62500	20.50000	21.87500
V5 Childhood Cross-Gender Behaviour	6.46875	2.56250	.84375	8.43750	3.78125	1.56250
V6 Adult Cross-Gender Behaviour	8.12500	1.34375	.71875	9.50000	2.78125	.25000
V7 Homophile Index	4.50000	7.50000	0	7.75000	7.12500	0
V8 Heterophile Index	.93750	2.00000	5.00000	1.50000	3.12500	6.62500
V9 Genital Erotic Focus	4.93750	9.37500	7.00000	6.25000	6.25000	7.75000
V10 Transvestite Behaviour	1.37500	0	0	.93750	.37500	0
V11 Maferr Role Values	.12500	9.50000	5.25000	11.50000	21.91375	25.50000
V12 Maferr Ideal Role Values	-.62500	7.87500	1.37500	3.75000	23.25000	30.87500
V13 Maferr Opposite Sex Ideal Role Values	-7.00000	-9.87500	1.25000	9.12500	27.62500	27.87500
V14 Information	20.62500	20.37500	19.62500	19.12500	21.12500	22.87500
V15 Experience	17.62500	20.62500	17.50000	15.62500	20.50000	20.12500
V16 Drive	16.50000	23.37500	18.00000	18.12500	17.62500	16.00000
V17 Attitudes	10.50000	30.87500	24.87500	19.87500	31.62500	28.00000
V18 General Symptoms Index	.60375	.84125	.99750	.61625	.50125	.78125
V19 Affect Balance	1.58750	.97500	1.50000	1.56250	1.77500	1.34375
V20 Fantasy	5.00000	10.12500	8.00000	5.62500	7.12500	9.25000
V21 Satisfaction	6.62500	7.87500	7.00000	7.87500	7.87500	5.37500
V22 General Sexual Satisfaction Index	3.00000	4.37500	5.12500	5.12500	5.87500	4.12500
V23 Self-Ideal Self distance	.70413	.77688	.59313	.70925	.57550	.77337
V24 Self-Female Other distance	.85200	.92350	.85225	.87562	.78812	.83713
V25 Self-Male Other distance	.99288	.85012	.80238	.85800	.83338	.91613
V26 Ideal Self-Female Other distance	.93800	1.03762	.92812	.95325	.86925	.94837
V27 Ideal Self-Male Other distance	1.04462	.91750	.90288	.93588	.94450	.99312
V28 Self-Females' Perception of Subject as Female distance	.58200	.62312	.49362	.58938	.49900	.50062
V29 Self-Males' Perception of Subject as Female distance	.59225	.61900	.50538	.62138	.60612	.63087
V30 Self-Males' Perception of Subject as Male distance	.77962	.45225	.43887	.51025	.55300	.67700
V31 Self-Females' Perception of Subject as Male distance	.69787	.59275	.41163	.43463	.54087	.64787
V32 Self-Mother distance	.92550	1.06300	.96800	.77962	.84113	1.01612
V33 Self-Father distance	1.05612	.93025	.83425	.81025	1.11150	1.03413
V34 Self-Ideal Woman distance	.70825	.88213	.66400	.79475	.70188	.73025
V35 Self-Bad Woman distance	1.18388	1.16188	1.24275	1.14787	1.14200	1.17225
V36 Self-Ideal Man distance	.81625	.81062	.66187	.80038	.60762	.79650
V37 Self-Bad Man distance	1.37900	1.17138	1.19912	1.24325	1.13612	1.12975

TABLE 4b
STANDARD DEVIATIONS

	MTS	MHO	MHE	FTS	FHO	FHE
	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6
V1	Androgyny	1.18365	3.53952	2.07835	1.80535	2.27995
V2	Gender Role Definition	7.78162	14.51539	9.99643	7.16016	9.67231
V3	Global Self-Esteem	1.06066	.70711	1.72689	1.88509	1.41421
V4	Body Image	10.33631	5.23552	5.02671	4.06861	10.37080
V5	Childhood Cross-Gender Behaviour	3.71396	1.69427	1.52326	1.72041	1.31441
V6	Adult Cross-Gender Behaviour	1.48204	1.15679	.61872	.75593	.37796
V7	Homophile Index	4.07080	2.67261	0	1.98206	0
V8	Heterophile Index	1.20823	2.36348	3.25137	3.50510	2.92465
V9	Genital Erotic Focus	1.82125	.51755	2.00000	2.31455	1.28174
V10	Transvestite Behaviour	2.06588	0	0	1.42522	0
V11	Maferri Role Values	11.86155	6.52468	6.40870	9.75412	14.03058
V12	Maferri Ideal Role Values	14.94693	9.23406	4.43807	6.29626	15.47752
V13	Maferri Opposite Sex Ideal Role Values	13.13664	14.59391	10.52548	13.84320	12.36860
V14	Information	1.40789	3.06769	4.30739	4.70372	1.35620
V15	Experience	5.78020	3.15945	7.21110	5.06916	4.85320
V16	Drive	5.04268	3.58319	5.45108	7.14018	5.73212
V17	Attitudes	15.05229	5.08324	12.01710	18.41147	9.92831
V18	General Symptoms Index	.27651	.60869	1.05637	.50339	.53935
V19	Affect Balance	.68855	1.02470	1.24986	1.25264	.83983
V20	Fantasy	1.85164	3.04432	3.89138	2.50357	3.37004
V21	Satisfaction	3.42000	2.47487	1.77281	2.69590	3.11391
V22	General Sexual Satisfaction Index	2.97610	2.50357	2.03101	2.10017	2.53194
V23	Self-Ideal Self distance	.25077	.19011	.15808	.21180	.16743
V24	Self-Female Other distance	.07146	.06891	.07510	.07690	.07344
V25	Self-Male Other distance	.04019	.09509	.07611	.07305	.05284
V26	Ideal Self-Female Other distance	.10896	.08683	.03441	.10215	.05905
V27	Ideal Self-Male Other distance	.07315	.12781	.09472	.09119	.08880
V28	Self-Females' Perception of Subject as Female distance	.11396	.15458	.21298	.21523	.15967
V29	Self-Males' Perception of Subject as Female distance	.19688	.15276	.15866	.19942	.20222
V30	Self-Males' Perception of Subject as Male distance	.09576	.12155	.17665	.15143	.13951
V31	Self-Females' Perception of Subject as Male distance	.13219	.18604	.15931	.20331	.09804
V32	Self-Mother distance	.18828	.20865	.16794	.16415	.25574
V33	Self-Father distance	.11825	.04913	.31993	.17304	.22852
V34	Self-Ideal Woman distance	.21647	.22549	.18705	.25534	.21705
V35	Self-Bad Woman distance	.22668	.18989	.20629	.18178	.15527
V36	Self-Ideal Man distance	.21428	.18795	.16056	.29376	.19369
V37	Self-Bad Man distance	.18868	.18013	.24519	.20541	.25597

TABLE 5

COMPARISON OF DIAGNOSTIC CRITERIA SCALE RATINGS

ACROSS GROUPS: SIGNIFICANCE PROBABILITIES*

<u>Comparison</u>	<u>SCALES**</u>					
	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>
MTS v MHO	.017	.000	.103	.307	.000	.081
MTS v MHE	.001	.000	.007	.005	.049	.081
MTS v FTS	.195	.035	.062	.674	.228	.630
MTS v FHO	.112	.000	.127	.083	.328	.215
MTS v FHE	.003	.000	.007	.000	.003	.081
MHO v MHE	.051	.199	.000	.060	.006	1.000
MHO v FTS	.000	.000	.835	.749	.002	.084
MHO v FHO	.274	.017	.760	.441	.016	.142
MHO v FHE	.208	.023	.000	.005	.005	1.000
MHE v FTS	.000	.000	.000	.057	.499	.084
MHE v FHO	.013	.000	.000	.257	.581	.142
MHE v FHE	.329	.089	1.000	.311	.387	1.000
FTS v FHO	.001	.000	.550	.342	1.000	.331
FTS v FHE	.000	.000	.000	.007	.131	.084
FHO v FHE	.044	.000	.000	.036	.236	.142

*two-tailed, for 14 d.f.

**I: Childhood Cross-Gender Behaviour

II: Adult Cross-Gender Behaviour

III: Homophile Index

IV: Heterophile Index

V: Genital Erotic Focus

VI: Transvestite Behaviour

TABLE 6

PRELIMINARY UNIVARIATE F-RATIO RESULTS

<u>Instrument*</u>	<u>Variable</u>	<u>F**</u>	<u>Significance</u>
BSRI	Androgyny	0.8840	N.S.
DSFI	Gender Role Definition	2.1293	N.S.
RSES	Global Self-Esteem	1.5335	N.S.
DSFI	Body Image	6.6241	0.01
DCS	Childhood Cross-Gender Behaviour	14.0187	0.01
DCS	Adult Cross-Gender Behaviour	138.9992	0.01
DCS	Homophile Index	20.0516	0.01
DCS	Heterophile Index	4.7858	0.01
DCS	Genital Erotic Focus	4.4971	0.01
DCS	Transvestite Behaviour	2.4220	N.S.
Maferr	Maferr Role Values	6.3080	0.01
Maferr	Maferr Ideal Role Values	8.9330	0.01
Maferr	Maferr Opposite Sex Ideal Role Values	10.9446	0.01
DSFI	Information	1.3924	N.S.
DSFI	Experience	1.3122	N.S.
DSFI	Drive	1.8149	N.S.
DSFI	Attitudes	3.3187	0.05
DSFI	General Symptoms Index	0.7115	N.S.
DSFI	Affect Balance	0.5632	N.S.
DSFI	Fantasy	3.4546	0.05
DSFI	Satisfaction	1.2015	N.S.
DSFI	General Sexual Satisfaction Index	1.4073	N.S.
RGT	Self-Ideal Self distance	1.6882	N.S.
RGT	Self-Female Other distance	3.0427	0.05
RGT	Self-Male Other distance	7.7875	0.01
RGT	Ideal Self-Female Other distance	3.3849	0.05

Continued

TABLE 6 (continued)

<u>Instrument*</u>	<u>Variable</u>	<u>F**</u>	<u>Significance</u>
RGT	Ideal Self-Male Other distance	2.4792	0.05
RGT	Self-Females' Perception of Subject as Female distance	0.9020	N.S.
RGT	Self-Males' Perception of Subject as Female distance	0.5310	N.S.
RGT	Self-Males' Perception of Subject as Male distance	6.2887	0.01
RGT	Self-Females' Perception of Subject as Male distance	4.4167	0.01
RGT	Self-Mother distance	2.1029	N.S.
RGT	Self-Father distance	3.0197	0.05
RGT	Self-Ideal Woman distance	1.0963	N.S.
RGT	Self-Bad Woman distance	0.3097	N.S.
RGT	Self-Ideal Man distance	1.4894	N.S.
RGT	Self-Bad Man distance	1.4479	N.S.

*BSRI: Bem Sex Role Inventory
 DSFI: Derogatis Sexual Functioning Inventory
 RSES: Rosenberg Self-Esteem Scale
 DCS: Diagnostic Criteria Scales
 Maferr: Maferr Inventories
 RGT: Repertory Grid Technique

**d.f.=(5,42)

between different variables representing different components. The pairwise comparisons are reproduced in Appendix E.

Stepwise multiple discriminant analyses were applied to the 37 variables for the purposes of (a) finding the linear combinations which would optimally discriminate the six groups, and (b) determining the accuracy with which the optimal set of variables could reclassify subjects with known group membership. A multiple discriminant analysis program from the Statistical Package for the Social Sciences was used (Nie et al., 1975). The stepwise procedure was such that an initial variable was selected which, by itself, had the greatest amount of discriminatory power. A second variable was then selected which, in combination with the first, yielded the best criterion value. This process was repeated until additional variable entries failed to produce a significant increment. The minimization of Wilks' lambda with partial multivariate F-to-enter greater than 2.0 at each step, was the criterion that determined variable selection. To explain, the criterion employed was the overall multivariate F ratio for the test of differences among group centroids; centroid being the mean of discriminant scores for each group on each discriminant function, and hence, a composite value across all variables included in the stepwise procedure. The variable which serves to maximize the multivariate F ratio, also serves to minimize Wilks' lambda. As such, Wilks' lambda may be considered a measure of group dis-

crimination.

Two multiple discriminant analyses were conducted.

A. Multiple Discriminant Analysis of Construct Variables

The first was applied to the 30 construct variables. Results were such that 10 of the 30 construct variables were included in the stepwise procedure. That is, additional entries failed to produce a significant increment in discriminating power. The order of entry of these 10 variables is shown in Table 7.

Five discriminant functions were derived from the data. Associated chi-square values reflected significance for the first four functions. Eigenvalues revealed that the first function accounted for 59.9% of the total discriminatory power of the 10 variables; whereas the second, third, and fourth functions accounted for 20.8%, 11.5% and 5.2% respectively. Information relative to the significance of the five discriminant functions is summarized in Table 8. The value of the canonical correlation reflects the degree of relationship between the set of discriminating variables and the groups variable for a particular function. When squared, this value represents the proportion of variance in the discriminant function that is explained by the groups. As such, 87.7% of the variance in the first function is explained by the groups. This compares with 71.3% of the variance for the second function, 57.9% for the third, 38.2% for the fourth, and 24.1% for the fifth. Given the above information, three

TABLE 7

MULTIPLE DISCRIMINANT ANALYSIS OF CONSTRUCT VARIABLE

DATA: ORDER OF ENTRY

<u>STEP NUMBER</u>	<u>VARIABLE</u>
1	Gender Role Definition
2	Body Image
3	Maferri Ideal Role Values
4	Maferri Opposite Sex Ideal Role Values
5	Satisfaction
6	Self-Female Other distance
7	Self-Male Other distance
8	Self-Males' Perception of Subject as Male distance
9	Self-Females' Perception of Subject as Male distance
10	Self-Father distance

TABLE 8
SIGNIFICANCE REFERENTS OF DISCRIMINANT FUNCTIONS
FOR CONSTRUCT VARIABLES

<u>DISCRIMINANT FUNCTION</u>	<u>EIGENVALUE</u>	<u>CANONICAL CORRELATION</u>	<u>WILKS' LAMBDA</u>	<u>CHI- SQUARE</u>	<u>df</u>	<u>SIG.</u>
1	7.161	0.937	0.007	193.800	50	0.000
2	2.482	0.844	0.057	111.923	36	0.000
3	1.377	0.761	0.197	63.263	24	0.000
4	0.617	0.618	0.469	29.490	14	0.009
5	0.317	0.491	0.759	10.752	6	0.096

of the five derived discriminant functions were considered to be significant by the investigator. The total variability in discriminant space attributable to group differences was 99.2%, as determined by Tatsuoka's formula (Tatsuoka, 1970, p.48).

The standardized discriminant function coefficients reflect the relative contributions of the discriminating variables to a particular function. Table 9 presents this information. For the first function, Maferr Opposite Sex Ideal Role Values loaded highly in a negative direction; Self-Females' Perception of Subject as Male distance and Maferr Ideal Role Values weighted in the same direction. Self-Male Other distance loaded in the opposite direction. Each of these four variables reached significance on preliminary univariate F tests.

On the second function, Self-Males' Perception of Subject as Male distance defined one end of the function. Self-Female Other distance entered in the opposite direction. Both of these variables significantly discriminated the six groups on univariate F tests.

Body image weighted heavily on the third function. Gender Role Definition and Self-Male Other distance entered in the other direction with comparatively less discriminatory magnitude. Of these three variables, only Gender Role Definition was, by itself, not sufficient to discriminate among the six groups on univariate F tests.

TABLE 9
STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS FOR
CONSTRUCT VARIABLES

<u>VARIABLE</u>	<u>FUNCTION</u>		
	1	2	3
Gender Role Definition	.41	-.49	.80
Body Image	.51	-.35	-1.41
Maferr Ideal Role Values	-.84	-.48	.37
Maferr Opposite Sex Ideal Role Values	-1.60	.40	-.61
Satisfaction	.59	-.52	-.44
Self-Female Other distance	.61	.92	.08
Self-Male Other distance	.87	-.69	.71
Self-Males' Perception of Subject as Male distance	.39	-1.25	-.64
Self-Females' Perception of Subject as Male distance	-1.07	.07	.37
Self-Father distance	-.61	.25	-.37

The arrangement of groups relative to each other on the first four functions is graphically displayed in Figure 3, in terms of group centroids. Results suggested that nontranssexual females differed markedly from the other four groups on the first function. Furthermore, transsexuals were quite distinct from nontranssexual males. Similar such patterns relating to the discrimination of the groups on the basis of their 'identity/role' constitution, were not readily apparent for the other two (significant) functions. However, it is noteworthy that anatomical males whose gender identity was male, were distinguished from the other four groups on the second function.

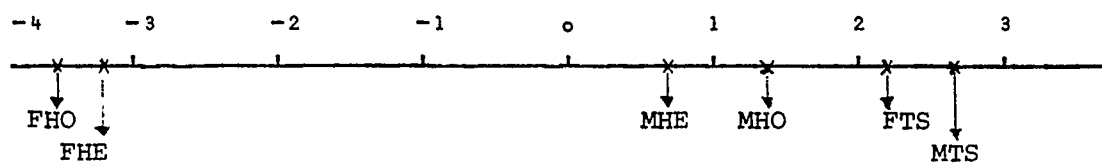
To assess the utility potential of the discriminant analysis, classification functions based upon the optimal set of 10 variables were used to reclassify the 48 known cases. Table 10 presents the results of this exercise. Of the 48 subjects, 2 would likely be misclassified given information relative to the set of 10 discriminating variables. In all but three cases, the probability of assigning a member of one group to another exceeds 0.0005. Nonetheless, 95.8% of the known cases were correctly reclassified in this exercise, and where errors were made, the group of second highest probability was the actual group of membership.

This discriminant function analysis overall, served to reveal a primary dimension separating nontranssexual female, nontranssexual male, and transsexual subject groups from

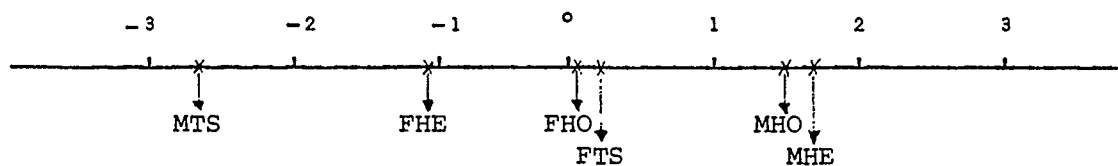
FIGURE 3

GROUP CENTROIDS FOR DISCRIMINATING CONSTRUCT
VARIABLES

Function 1:



Function 2:



Function 3:

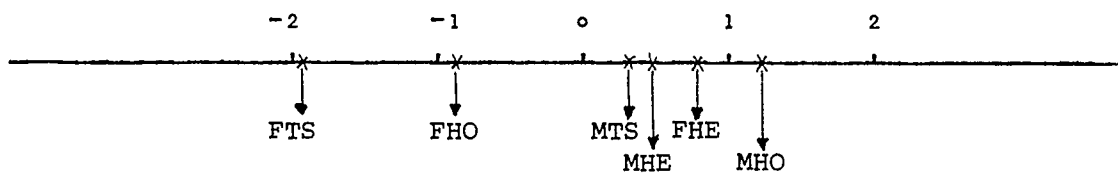


TABLE 10

RECLASSIFICATION OF INDIVIDUAL SUBJECTS ACCORDING TO
HIGHEST PROBABILITY GROUP FOR CONSTRUCT VARIABLES

<u>Actual Group</u>	<u>Subject Number</u>	<u>Best Discriminant Analysis Assignment</u>	<u>P*</u>	<u>Second-Best Discriminant Analysis Assignment</u>	<u>P**</u>
MTS	1	MTS	.973	FTS	.027
MTS	2	MTS	.995	FTS	.003
MTS	3	MTS	.848	FTS	.150
MTS	4	MTS	.944	FTS	.056
MTS	5	MTS	.999	MHO	.001
MTS	6	MTS	1.000		
MTS	7	MTS	1.000		
MTS	8	MTS	.996	MHE	.002
MHO	9	MHO	.782	FHE	.111
MHO	10	MHO	.987	FTS	.011
MHO	11	MHO	.946	MHE	.047
MHO	12	MHO	.991	MHE	.009
MHO	13	MHO	.980	MHE	.019
MHO	14	MHO	.473	MHE	.439
MHO	15	MHO	.765	MHE	.235
MHO	16	MHO	.992	MHE	.008
MHE	17	MHE	.873	MHO	.124
MHE	18	MHE	.948	MHO	.051
MHE	19	MHE	.971	FTS	.022
MHE	20	MHE	.843	FTS	.152
MHE	21	MHE	.815	MHO	.185
MHE	22	MHE	.960	MHO	.040
MHE	23	MHO	.390	MHE	.376
MHE	24	MHE	.998	MHO	.002
FTS	25	FTS	.960	MHE	.022
FTS	26	FTS	.795	MHO	.175
FTS	27	FTS	.999	MHE	.001
FTS	28	FTS	.999	MHE	.001
FTS	29	FTS	.686	MHO	.240
FTS	30	FTS	.952	MTS	.047
FTS	31	FTS	.997	MHO	.002
FTS	32	FTS	.992	MHO	.007

Continued ...

TABLE 10 continued

<u>Actual Group</u>	<u>Subject Number</u>	<u>Best Discriminant Analysis Assignment</u>	<u>P*</u>	<u>Second-Best Discriminant Analysis Assignment</u>	<u>P**</u>
FHO	33	FHO	.831	FHE	.168
FHO	34	FHO	.972	FHE	.028
FHO	35	FHO	.999	FHE	.001
FHO	36	FHO	.997	FHE	.003
FHO	37	FHO	.821	FHE	.179
FHO	38	FHO	1.000		
FHO	39	FHO	.635	FHE	.365
FHO	40	FHO	.869	FHE	.129
FHE	41	FHE	.975	FHO	.025
FHE	42	FHE	.998	FHO	.002
FHE	43	FHE	.998	FHO	.001
FHE	44	FHE	.946	FHO	.054
FHE	45	FHE	.980	FHO	.011
FHE	<u>46</u>	FHO	.581	FHE	.419
FHE	<u>47</u>	FHE	.998	FHO	.002
FHE	48	FHE	.590	FHO	.410

* The probability of the case being considered belonging to this highest probability group.

** The probability of the case being considered belonging to a second-highest probability group, where this probability exceeds 0.0005.

Note: Circled TS subjects are post-operative.
Underlined Subjects are those who were misclassified in this reclassification exercise.

each other on the basis of a set of four variables. Examination of the other two functions shows their predominant variables to overlap somewhat with those from the first function. The most important discriminating variables were related to gender role orientation and values, comparison of self to male and, to a lesser extent female others, and body image.

B. Multiple Discriminant Analysis of Behaviour Variables

Of the seven self-report behaviour variables, four were discriminating and therefore carried into further analyses. Table 11 presents their order of entry into the discriminant functions. Four functions were derived; however, only two were considered significant according to chi-square values. Eigenvalues indicated that the first function accounted for 85.5% of the total discriminatory power of the selected variables, while the second function accounted for only 13%. Significance referents for the four obtained functions appear in Table 12. The proportion of variance in the first discriminant function that was explained by the groups was 94.6%. For the second function this value dropped to 72.6%, and continued to diminish to 18.8% for the third, and 7.0% for the fourth function. Group differences accounted for 98.7% of the total variability in discriminant space.

A listing of standardized discriminant coefficients for the four discriminating variables is given in Table 13.

TABLE 11

ORDER OF ENTRY OF BEHAVIOUR VARIABLES

<u>STEP NUMBER</u>	<u>VARIABLE</u>
1	Adult Cross-Gender Behaviour
2	Homophile Index
3	Heterophile Index
4	Genital Erotic Focus

TABLE 12

SIGNIFICANCE REFERENTS OF DISCRIMINANT FUNCTIONS FOR
BEHAVIOUR VARIABLES

DISCRIMINANT FUNCTION	EIGENVALUE	CANONICAL CORRELATION	WILKS' LAMBDA	CHI- SQUARE	df	SIG.
1	17.375	0.972	0.011	188.455	20	0.000
2	2.651	0.852	0.207	66.195	12	0.000
3	0.232	0.434	0.755	11.809	6	0.066
4	0.075	0.264	0.930	3.043	2	0.218

TABLE 13
STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS FOR
BEHAVIOUR VARIABLES

<u>VARIABLE</u>	<u>FUNCTION</u>	
	1	2
Adult Cross-Gender Behaviour	-3.99	.95
Homophile Index	.11	-1.73
Heterophile Index	.08	.73
Genital Erotic Focus	.20	-.32

The first function is clearly defined by a high negative loading for Adult Cross-Gender Behaviour. This variable also served to discriminate the six groups on preliminary univariate F tests.

For the second function, Homophile Index weighted heavily in one direction, with Adult Cross-Gender Behaviour and Heterophile Index entering in the opposite direction. Each of these three variables reached significance on univariate F tests.

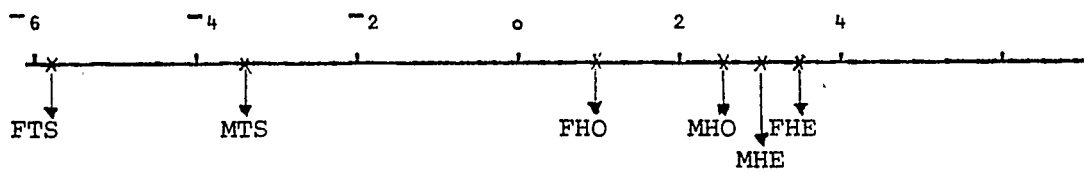
Group centroids are graphically depicted in Figure 4. Considerable separation of transsexual from nontranssexual groups was achieved by the first function. In particular, FTS and MTS groups differed markedly from the other four groups in terms of the transsexuals reporting more in the way of adult cross-gender behaviours.

The second function produced what would appear to be three pairings of groups. Both homosexual groups were distinguished by members being high in homophile and low in heterophile association, in contrast to both heterosexual groups whose members reported very little homophile association but considerable heterophile association. Transsexual subjects were positioned comparatively neutrally in terms of these measures.

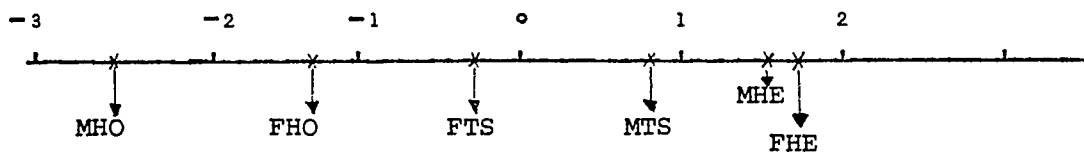
To highlight the extent to which results of the two discriminant analyses differed, the reclassification exercise was repeated using classification functions based on the

FIGURE 4
GROUP CENTROIDS FOR DISCRIMINATING BEHAVIOUR
VARIABLES

Function 1:



Function 2:



optimal set of four behaviour variables. Results appear in Table 14. It is apparent that the accuracy potential of prediction is less for the selected behaviour variables than it was for the construct variables. Of the 48 subjects, 9 were misclassified in the second analysis, rendering a "hit rate" of 81.2%. However, it should be noted once again that in each instance of error, a group of second highest probability was declared which was the actual group of membership.

TABLE 14

RECLASSIFICATION OF INDIVIDUAL SUBJECTS ACCORDING TO
HIGHEST PROBABILITY GROUP FOR BEHAVIOUR VARIABLES

<u>Actual Group</u>	<u>Subject Number</u>	<u>Best Discriminant Analysis Assignment</u>	<u>P*</u>	<u>Second- Best Discriminant Analysis Assignment</u>	<u>P**</u>
MTS	<u>1</u>	FTS	.674	MRS	.326
MTS	<u>2</u>	MTS	.859	FTS	.141
MTS	3	MTS	.990	FHO	.008
MTS	4	MTS	.820	FTS	.180
MTS	5	MTS	.718	FTS	.282
MTS	<u>6</u>	FTS	.918	MTS	.082
MTS	<u>7</u>	MTS	.993	FTS	.007
MTS	<u>8</u>	FTS	.529	MTS	.471
MHO	9	MHO	.983	FHO	.017
MHO	10	MHO	.804	MHE	.132
MHO	11	MHO	.882	FHO	.117
MHO	12	MHO	.993	FHO	.007
MHO	<u>13</u>	FHO	.793	MHO	.207
MHO	<u>14</u>	MHO	.925	FHO	.064
MHO	15	MHO	.998	FHO	.002
MHO	16	MHO	.981	FHO	.019
MHE	17	MHE	.658	FHE	.338
MHE	18	MHE	.819	FHE	.140
MHE	<u>19</u>	FHE	.592	MHE	.408
MHE	<u>20</u>	FHE	.502	MHE	.497
MHE	<u>21</u>	FHE	.528	MHE	.472
MHE	<u>22</u>	MHE	.696	FHE	.296
MHE	<u>23</u>	FHE	.671	MHE	.329
MHE	<u>24</u>	MHE	.584	FHE	.415
FTS	25	FTS	.959	MTS	.041
FTS	26	FTS	.664	MTS	.336
FTS	27	FTS	.519	MTS	.481
FTS	28	FTS	.957	MTS	.043
FTS	29	FTS	.958	MTS	.042
FTS	30	FTS	.645	MTS	.355
FTS	31	FTS	.789	MTS	.211
FTS	32	FTS	.775	MTS	.225

Continued ...

TABLE 14 continued

<u>Actual Group</u>	<u>Subject Number</u>	<u>Best Discriminant Analysis Assignment</u>	<u>p*</u>	<u>Second-Best Discriminant Analysis Assignment</u>	<u>p**</u>
FHO	33	FHO	1.000		
FHO	34	FHO	.996	MHE	.003
FHO	35	FHO	.585	MHO	.207
FHO	36	FHO	.666	MHO	.333
FHO	37	FHO	.992	MHO	.008
FHO	38	FHO	.596	MHO	.401
FHO	39	FHO	.876	MHO	.092
FHO	40	FHO	.611	MHO	.389
FHE	41	FHE	.502	MHE	.497
FHE	42	FHE	.576	MHE	.424
FHE	43	FHE	.618	MHE	.382
FHE	44	FHE	.528	MHE	.469
FHE	45	FHE	.704	MHE	.296
FHE	46	FHE	.672	MHE	.328
FHE	<u>47</u>	MHE	.665	FHE	.329
FHE	48	FHE	.652	MHE	.348

* The probability of the case being considered belonging to this highest probability group.

** The probability of the case being considered belonging to a second-highest probability group, where this probability exceeds 0.0005.

Note: Circled TS subjects are post-operative.
Underlined Subjects are those who were misclassified in this reclassification exercise.

V. DISCUSSION

The results of this study revealed that a degree of effective discrimination of six different gender identity/role groups could be achieved on the basis of selected self perception variables.

Separate univariate analyses of Diagnostic Criteria Scale ratings conferred predictive validity upon at least five of the six scales. That is, Diagnostic Criteria Scale profiles were generally consistent with psychosexual orientations of the six groups. In particular, scale scores for the transsexual groups were compatible with classical transsexual history. It is noteworthy in this regard, that the Genital Erotic Focus index of transsexual subjects was not as low as literature on classic transsexualism submits (Burchard, 1963; Pearson, 1973). A negative attitude towards genitalia is assumed to inhibit their use in sexual behaviour. However, in this sample of 16 transsexuals, the mean Genital Erotic Focus score was 5.59 out of a possible 10. This indicates reasonably active genital involvement in sexual behaviour. Since each of these individuals scored highly on the Childhood Cross-Gender Behaviour scale, reflecting classical early onset, one is led to question the inclusion of low genital erotic focus with criteria for transsexual diagnosis. The fact that the transsexual subjects in this study reported a fair degree of erotic genital activity, which con-

flicts with the literature, may be taken to imply that there exists more individual variability than has heretofore been acknowledged.

As to the results for each subject group on the other five scales, ratings were compatible with group membership. For example, FHO subjects tended to engage in some cross-gender behaviour as children, but less so as adults. Homophile index was understandably high, while heterophile index was comparatively lower. Transvestite behaviour was virtually nonexistent. To summarize Diagnostic Criteria Scale results, transsexual, homosexual, and heterosexual groups appeared to be relatively uncontaminated with each other, as evidenced by the contrasting profiles associated with the first four scales. This may be taken to reflect predictable association between such gender-related behaviours and psychosexual orientation.

A shortcoming of this study is apparent in the absence of a transvestite group of subjects. Transvestite individuals represent an interesting juxtaposition of gender identity and sexual preference. As a group, they would serve to provide useful comparative information. Unfortunately, the investigator did not have access to any transvestite individuals at the time the study was undertaken.

Results from the Derogatis Sexual Functioning Inventory also warrant individual attention. Derogatis et al. (1978) presented subscale profiles for 31 male transsexuals

and 57 male heterosexuals. Overall, Derogatis Sexual Functioning Inventory results obtained for transsexual and heterosexual males in this study are notably consistent with those reported by Derogatis et al. Present findings thus lend further confidence to the potential of the inventory to yield profiles of discriminating utility. Specific mention of results on the Psychological Symptoms subscale (i.e. the Brief Symptom Inventory) should be made. It is to be recalled that during subject selection, nontranssexual candidates were not investigated for psychopathology. It is therefore important to consider Psychological Symptoms subscales scores across subject groups, and seek to verify comparability of the groups in this regard. In fact, not one of the possible independent t-test comparisons reaches statistical significance. However, it should be noted that the overall level of reported symptomatology for each of the six groups was slightly higher than that found by Derogatis et al. In that study, transsexual and heterosexual males tended to score near two standard deviations from the mean. In the present study, each of the six groups scored nearer to three standard deviations from the mean. As such, even though the six groups were indeed comparable to each other in terms of psychological symptoms, one must question how representative the six groups were of their respective populations. Generalizability of results is attenuated by such a finding.

Results from the multiple discriminant analysis of construct variables were such that gender role values and orientation, comparison of self with male and female figures, and body image weighted heavily on the discriminant functions. It was these variables which determined the nature of the functions since they entered early in the stepwise procedure. As such, subsequently introduced variables were only conditionally added according to their incremental contribution relative to the construct variables already entered. Whether or not an additional variable was considered as discriminating, was therefore dependent on how well it combined with the already-entered variables to enhance discriminatory power. Were it not for this multivariate approach, the importance of Gender Role Definition as a discriminator would not be appreciated. That is, the preliminary univariate F test was insignificant for this variable. However, when considered in combination with certain other variables, Gender Role Definition assumed discriminatory power.

In terms of the construct variables, transsexual subjects were distinguished from nontranssexual female and nontranssexual male subjects. When standardized discriminant coefficients were interpreted in consideration with group means, transsexuals tended to see themselves neither particularly like or unlike male others. Ideally, these subjects did not value a particular gender role prescription for members of their own sex; nor did they assert that members of

the opposite sex valued a particular gender orientation for members of their own (i.e. the subjects') sex. Nontranssexual females, on the other hand, saw themselves as quite similar to male others. They strongly endorsed self-orientation as the ideal gender role posture for women, and believed that men also valued self-orientation in women. Nontranssexual males fell in between these two groupings of subjects, relative to these construct variables.

From the second function comes the suggestion that homosexual and heterosexual males differed greatly from male transsexuals and female heterosexuals by seeing themselves as the most unlike female others, and the most like the perception they believe other men have of them as men. On the third function, poor body image was distinguishing for transsexual subjects. There is the suggestion from the above information that the nature of salient self perception referents for transsexuals differs from that of nontranssexuals. It appears that transsexual gender identity largely relates to particular ideas about physical characteristics, and to a perceived dissimilarity to others, rather than to, for example, culturally-based role referents.

The working hypothesis that the six groups would be effectively discriminated was corroborated, but results implied better discrimination of groups at a different level of complexity. That is, female homosexual and heterosexual groups were clearly discriminated from male homosexual and

heterosexual groups who, in turn, were reasonably distinct from both transsexual groups. In other words, subjects tended to fall into one of three groupings. The basis for these discriminations is not immediately clear. Female-born, female-identified individuals saw themselves differently than did male-born, male-identified individuals. Moreover transsexuals saw themselves differently than both of these groupings of subjects. These results show sex object choice, reflecting complementation, to have no discriminatory impact where construct variables are concerned.

In terms of behaviour variables, transsexual subjects were again distinguished from nontranssexual subjects. However, on the first function where Adult Cross-Gender Behaviour defined the dimension, nontranssexual males and females were not distinct from each other. The second function seems to have represented a sexual preference dimension with homosexuals far removed from heterosexuals, and transsexuals assuming a comparatively neutral position. Understandably, sex object choice contributes to group discrimination in this instance since different sexual preferences imply different behaviours.

In both multiple discriminant analyses, transsexual subjects were distinguished from nontranssexual subjects. This may be taken to confer validity upon the underlying self concept system model. It is perplexing that self perceptions of MTS subjects were not more like those of other fe-

male-identified subjects; or that self perceptions of FTS subjects were not more like those of other male-identified subjects. Perhaps more curious is the finding that transsexuals tended to see themselves differently than both other males and females saw themselves. It cannot be simply a matter of anatomy, or else two groupings of subjects would have emerged from analyses. Similarly, for core gender identity to have been the primary determinant, two groupings would have been expected. It would seem instead, that transsexual individuals have a different conceptualization of gender identity; that possibly they emphasize different referents in their gender-related self perceptions, which distinguish them from nontranssexual males and females.

It may be informative to cite Kando's (1973) study in which 17 MTS subjects were compared to 17 MHE and 17 FHE subjects. One of the tasks given to subjects was to define womanhood. Each group used terms which were best suited to its own purposes; terms which enabled subjects most unequivocally to classify themselves in their own desired gender group. The majority of the MHE subjects stressed biological criteria for womanhood. Most FHE subjects addressed sociopsychological referents (for example: behaving like a woman), although four specified reproductive organs. The MTS subjects failed to use biological criteria and instead chose sociopsychological referents. Thus, the male transsexual's criterion of real womanhood was one by which 'she, herself'

qualified.

In the present study, transsexual self perceptions differed from those of nontranssexual males and females. Transsexual subjects appeared to be responding to an abstract sense of gender. They may have rejected certain prescribed referents of gender identity because they could not conceivably meet those criteria. They could not be male or female in all respects which may be traditionally important, such as procreativity. Consequently, they may have rejected such referents as integral to their gender identity as male or female. According to DeLora & Warren (1977), biological factors impose limits on what can be learned by social interaction. This raises the question, then, of what conceptualizations transsexual individuals do have regarding gender identity. Future research might be well-advised to seek to clarify conceptualizations of gender identity across groups with different psychosexual orientation; namely, transsexual, homosexual, heterosexual, bisexual, and transvestite.

One is reminded of the limited generalizability of obtained results of this study given the small sample size. Nonetheless, significant discriminations were revealed using a robust statistical technique. Additionally, subjects were reasonably well-matched in terms of age and socioeconomic background. If one accepts that gender identification represents a developmental process, then variables such as

length of life experience, or level of education could present serious confounds. This investigation attempted to control for these. Overall level of psychopathological symptomatology remains a concern, however, as does the heavy reliance on self-report to derive the information for study.

Self concept may be understood as a theory that an individual has constructed about him/herself. Where reality may invalidate a significant concept of one's self theory, considerable anxiety is aroused. In fact, Epstein (1973) submits that there would exist a strong motivation within the individual to insulate that concept from the test of reality. Such propositions are in line with cognitive dissonance theory, whereby people are allegedly driven toward maintaining consistent schemas (Heider, 1958; Festinger, 1957). For the transsexual individual, gender identity represents a significant concept of his/her self theory. The reality of an anatomy which threatens to disconfirm this gender identity, must be perceived as a major threat to the transsexual's self identity. Given the circumstances, a 'push for surgery', the transsexual imperative, can be appreciated as a coping strategy. In particular, sex reassignment surgery may be considered as a means of enhancing the consistency of the gender component of the self concept system. With gender identification so integral to self identification, as compared to anatomical sex which represents a single gender identity referent, the need to preserve

gender identity at the expense of one's sex may be understood.

Results would imply that transsexuals are responding to a self perception that they believe to be gender-differentiated. However, the bases of this differentiation remain unclear and appear to differ from those of nontranssexual males and females. The fact that their ideas of maleness and femaleness may not concur with those of nontranssexuals, has intriguing implications for understanding psychosexual integrity. However, it would be premature to speculate about such matters until such time as conceptualizations of gender identity are more clearly elucidated, in terms of their nature and processes of development.

VI. SUMMARY AND IMPLICATIONS

Results of this exploratory research have definite implications for further study. It would seem that transsexual individuals, as a group, perceive themselves differently than do nontranssexual males and females, at least as far as gender-related considerations are concerned. More specifically, they appear to conceptualize gender identity differently. Even though transsexual subjects claimed a particular gender identity, gender-related aspects of their self perceptions did not match those of other, nontranssexual subjects with the same gender identity. Transsexual males and females were more like each other than they were like nontranssexuals of either sex. This was true for all of the transsexual subjects, regardless of pre-operative or post-operative status. It is as if transsexual subjects represented a 'third' category of gender identity.

In view of the theoretical implications of this study, further research should be undertaken to focus upon the transsexual's conceptualization of gender identification, as compared to that of nontranssexuals. The nature and relative salience of implicated referents needs to be qualified. It may be that 'altered' conceptions of maleness and femaleness are largely responsible for the transsexual's perceived need for sex reassignment surgery. The request for surgical reassignment may be considered a means of enhancing cognitive

consistency. This is not to imply that surgery is contraindicated, but rather that a better understanding of how the transsexual sees him/herself may suggest other specific alternatives to surgery, by which a functional resolution of the presenting gender problem may be achieved.

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FOOTNOTES

1. In this study, test-retest reliability for the six scales was determined using Diagnostic Criteria Scale ratings made by another clinician for 9 of the 16 transsexual subjects. This information was available on patients' charts and dated back several months to a few years. Obtained reliability coefficients ranged from 0.95 to 1.00.

APPENDIX A

SAMPLE ITEMS FROM THE DIAGNOSTIC CRITERIA SCALES

1. Childhood Cross-Gender Behaviour
During the first four years of life:
"Repeated stated belief that one is of the other sex,
or of the desire to be of the other sex."
2. Adult Cross-Gender Behaviour
"Frequency of cross-dressing for role assumption; not
to be scored if primarily for erotic arousal."
3. Homophile Index
"Frequency of Sexual relationship with same sex partner(s)
after the age of 18."
4. Heterophile Index
"Frequency of sexual relationship with opposite sex
partner(s) before the age of 18."
5. Genital Erotic Focus
"Frequency of masturbation as an adult."
6. Transvestite Behaviour
"Ritualistic cross-dressing with erotic arousal with
an average frequency of at least once per month."

APPENDIX B

SAMPLE ITEMS FROM THE MAFERR INVENTORY
OF MASCULINE VALUES

A family-orientation item:

"The needs of a family come before a man's
personal ambitions."

A self-orientation item:

"The greatest satisfactions in life come from
what you do yourself."

APPENDIX C

SAMPLE ITEMS FROM THE MAFERR INVENTORY
OF FEMININE VALUES

A family-orientation item:

"A woman who works cannot possibly be as
good a mother as the one who stays home."

A self-orientation item:

"A woman should have interests outside the
home."

APPENDIX D

A SAMPLE REPERTORY GRID

The grid appearing on the following page is a skeleton of the repertory grids used in this study.

The 24 elements are shown along one axis. These, of course, are replaced with actual names of people from the subject's personal life. Constructs occupy the other axis. The emergent pole of the construct dimension represents the term that was used by the subject to make the original discrimination between the triad of elements. The term which was given by the subject as the opposite of the original discriminating term, is said to reflect the implicit pole.

The term "sort", is synonymous with triad in this case. The 25 triads are depicted by the sets of three circles in each column. Some of the triads were selected from comparisons suggested by Kelly (1955). For example, Sort No. 3 represents a Family Sort; Sort No. 13 represents an Intimacy Sort. Others were structured by the investigator so as to highlight gender-related comparisons. Role Model sorts serve this kind of purpose; examples include Sort Nos. 19 and 20.

Appendix A															no	element											
														<input type="radio"/>	1	Partner											
															2	Relative											
														<input type="radio"/>	3	Best Friend											
<input type="radio"/>	<input type="radio"/>													<input type="radio"/>	4	Mother											
<input type="radio"/>	<input type="radio"/>													<input type="radio"/>	5	Father											
														<input type="radio"/>	6	Brother											
			<input type="radio"/>											<input type="radio"/>	7	(EX-) Boss											
														<input type="radio"/>	8	Sister											
														<input type="radio"/>	9	(EX-) Teacher											
														<input type="radio"/>	10	Represents Values											
														<input type="radio"/>	11	Ex-partner											
														<input type="radio"/>	12	Represents Values											
		<input type="radio"/>												<input type="radio"/>	13	(Un) Ethical Figure											
														<input type="radio"/>	14	Attracts subject											
			<input type="radio"/>	<input type="radio"/>										<input type="radio"/>	15	Ideal Woman											
			<input type="radio"/>	<input type="radio"/>										<input type="radio"/>	16	Bad Woman											
				<input type="radio"/>	<input type="radio"/>									<input type="radio"/>	17	Ideal Man											
				<input type="radio"/>	<input type="radio"/>									<input type="radio"/>	18	Bad Man											
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>											<input type="radio"/>	19	Self											
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>												<input type="radio"/>	20	Ideal Self											
			<input type="radio"/>												21	F perc of S as F											
				<input type="radio"/>											22	M perc of S as F											
					<input type="radio"/>										23	M perc of S as M											
						<input type="radio"/>									24	F perc of S as M											
25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	no	sort	
																										implicit pole	construct
																										emergent pole	construct

APPENDIX E

WITHIN-GROUPS CORRELATION MATRIX

WITHIN GROUPS CORRELATION MATRIX

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	V1	V2	V3	V4	V5	V6	V7	V8	V9
V1	1.00000								
V2	.80900	1.00000							
V3	.42358	.55861	1.00000						
V4	.14043	.36463	.58418	1.00000					
V5	.07528	.10491	-.03308	.10994	1.00000				
V6	.02941	.03744	-.21429	-.06611	.21248	1.00000			
V7	.26720	.12684	-.09035	-.31072	-.11650	.29019	1.00000		
V8	.07522	-.06369	-.14958	-.18949	-.04607	.00677	.25639	1.00000	
V9	.01418	-.17391	.10462	-.02463	.02882	.07747	.17023	.39034	1.00000
V10	-.09714	-.01135	.18337	-.05931	-.18716	-.10274	-.13583	-.03090	-.00484
V11	-.34713	-.34241	-.35424	.03612	.01875	.11492	-.07808	.24094	.10294
V12	-.01783	-.11216	-.08110	.02753	-.02896	.06629	.11223	.16456	.34602
V13	.24960	.34032	-.04163	.05207	.11394	.11463	-.01664	.18478	-.20334
V14	.30096	.12527	-.05320	-.11303	.04684	.11967	.26873	.31181	.37472
V15	.16833	-.00870	.00430	-.14459	-.13918	.03255	.32912	.42245	.49865
V16	.15635	.02701	-.01452	-.21632	.20865	.08290	.29013	.32936	.32020
V17	.15408	.08027	-.05631	-.27967	-.01472	.13415	.35828	.29548	.42691
V18	.27129	.26812	.30337	.20403	.05227	.02135	-.14851	-.37319	-.06601
V19	-.39162	-.45013	-.71908	-.48371	.03721	.19094	.22915	.22040	-.01072
V20	.14990	.24021	.13044	.17123	.13819	.16123	-.13629	-.24129	.03705
V21	.05665	-.07015	-.50009	-.49629	.14016	-.02156	.15898	.30495	-.04574
V22	-.07325	-.21468	-.35535	-.54667	.06358	.02884	.26699	.12739	.15067
V23	-.02490	.05342	.25523	.29776	.22520	-.33256	-.34520	.09236	-.07485
V24	.06613	.06617	.04417	.01737	.17975	-.07268	-.16852	-.04299	-.03638
V25	-.11932	-.04828	.12397	.16535	.10718	.19445	-.02659	-.10469	-.13116
V26	-.20073	-.19799	.09164	.07817	.11549	-.30887	-.13201	.02925	.17637
V27	-.20165	-.25276	.12496	.15801	.08879	-.28006	-.12736	-.06468	-.02073
V28	-.07415	-.08165	-.13296	-.11970	.09946	.04719	-.11399	-.01031	.01293
V29	-.11611	-.09118	-.13569	-.03442	.23355	.14775	-.20386	-.11053	-.12020
V30	-.03974	-.00181	.16630	-.00383	.17629	.07193	-.10745	-.03448	-.17702
V31	.06417	.01698	.29838	.14980	.16736	-.00530	.04372	-.08761	-.03403
V32	.15759	.20464	.22636	.13592	-.04570	-.00467	.06285	-.07124	-.00631
V33	.14419	.19936	.12430	-.02439	-.02476	-.07468	.06796	-.05697	-.11586
V34	-.02985	.01802	.06010	.17157	.13750	-.12396	-.15802	.05540	-.00985
V35	-.13489	-.20671	-.06030	-.02075	-.19233	.20902	-.06154	-.03474	.01376
V36	.03828	.21194	.31601	.23989	.03948	-.08105	-.00597	.03843	-.00663
V37	.04238	.06448	-.20789	-.06139	-.12461	.21570	.03187	.14828	-.10646

	V10	V11	V12	V13	V14	V15	V16	V17	V18
V10	1.00000								
V11	-.04988	1.00000							
V12	-.32821	.69863	1.00000						
V13	-.23015	.23977	.06796	1.00000					
V14	-.26312	.09853	.24519	.19203	1.00000				
V15	-.16860	.23979	.34093	.09147	.35031	1.00000			
V16	-.22174	.09260	.28441	.20275	.37741	.50521	1.00000		
V17	-.21713	.28631	.44483	.15214	.46209	.61845	.49287	1.00000	
V18	-.03167	-.15567	-.01504	-.05427	.11501	.02711	.06423	.06388	1.00000
V19	-.04812	.36721	.10795	.13065	.05335	.07064	-.16331	.19320	-.38805
V20	-.13090	-.13888	.08317	-.18081	.17380	-.04546	.02727	.22589	.10772
V21	-.25659	.19853	.14947	.30931	.23381	.26075	.22380	.17030	-.13053
V22	-.30353	.03145	.09918	.10918	.19444	.29820	.20398	.29525	-.07357
V23	.04336	.08253	.02188	.12948	-.05301	-.17199	.04672	-.02501	-.01679
V24	.09753	.25328	.22360	.17871	.06110	-.01447	.31874	.25429	-.07808
V25	.13717	.09613	-.06495	.04604	-.11700	-.15690	-.09233	.05526	-.13438
V26	.02973	.15535	.27931	-.11496	.06439	.02873	.18237	.14177	-.07906
V27	-.15417	-.11663	-.00828	-.30179	-.13184	-.05989	-.13004	-.11831	-.09828
V28	.05338	.25536	.16863	.15188	-.04904	-.06995	.21061	.13190	-.21636
V29	.15478	.35603	.17718	.15557	-.20465	-.13998	.08583	.03033	-.16074
V30	.26780	.08109	-.09396	.10213	-.24123	-.12046	.06678	.03954	-.05907
V31	.17578	-.17982	-.20481	-.18732	-.15703	-.06703	.11412	.00273	-.03757
V32	-.01553	-.06285	.13186	-.01145	-.03819	.05593	.18933	.21065	.01529
V33	.12946	-.15217	-.06941	-.19841	-.07201	-.15386	-.01229	-.03207	.02566
V34	-.07201	.19202	.19631	.19630	.09885	-.02525	.17841	.27228	.03164
V35	-.00682	.01473	.12474	-.13235	-.18440	.15565	-.15002	-.13121	.17755
V36	.19897	.17253	.10710	.10581	.00296	-.01583	.11311	.30862	.03412
V37	.03088	.05599	-.13803	.21770	-.08069	.28600	-.11372	.01331	-.04533

