A STUDY OF EFFEMINATE BEHAVIOUR IN BOYS

UMA SREENIVASAN

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A STUDY OF EFFEMINATE BEHAVIOUR IN BOYS

by

Uma Sreenivasan, M.B.B.S., D.C.H., FRCP(C), FRCPsych.

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ABSTRACT

Effeminacy is an attribute of gender, meaning thereby, that certain characteristics are present in boys or men which are considered to be appropriate for girls or women. The existence of such an entity in this context has been recorded in myth and legend; ancient and modern history.

In this research, an attempt was made to assess the prevalence of effeminacy in a consecutive series of boys aged 6-12 years who were routine referrals to a child psychiatry clinic. Effeminacy was not the reason for referral in any of the boys.

Effeminacy was measured as a quantitative variable by assigning weighted scores to a number of items obtained from the literature and from discussions with established researchers in this field. Of one hundred boys assessed, 15 per cent scored high, 39 per cent moderate and 46 per cent low on Effeminacy.

A number of factors were shown to be related significantly to the presence of high scores on Effeminacy. Other factors, also suggested in the literature to be important, were looked for, but did not relate significantly.

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Physical differences between male and female are incontrovertible. They may vary qualitatively and quantitatively depending upon racial differences and sociocultural practices, but physical dimorphism is universal in the human race. What we generally think of as masculine or feminine behaviour, on the other hand does vary considerably, according to the cultural institutions of the time in each society. The code of behaviour laid down by one society for the male in respect to occupation may be reserved for the female in another. In spite of this, cross-gender behaviour in its milder forms is widespread. Sometimes this may only involve mannerisms reminiscent of the opposite sex; in others the choice of hobbies, sports or career may be out of tune with the social code and attract disapproval. These discrepancies can become a problem causing social difficulties and attracting clinical attention. Infrequently, a constellation of cross-gender attitudes and behaviour becomes the core of clinical syndrome.

Although seemingly unequivocal, the concepts of "masculinity" and "femininity" as well as other related terminology are subject to great confusion in the literature. Freud drew attention to this in his book, "three contributions to the theory of sex" (1924). In Freud's own interpretation, the concept of "masculinity" and "femininity" can be carved into three paths. The first is the use of the two terms in the sense of "activity" and "passivity". For Freud, activity and libido are masculine in nature, biologically rooted and associated with the leading erogenous zone in each sex. The second meaning, also biological conceives of masculinity and femininity as indicated by the production of sperms and ova respectively. Related manifestations

such as stronger muscles, aggression and greater intensity of libido are said to be "soldered to the biological masculinity" as a rule, but not necessarily connected with it, as in some animal species these qualities are attributed to the female. The third, the sociological meaning, receives its content through the observation of "actual existing male and female individuals". The result, according to Freud is that biologically and psychologically there is no pure masculinity and femininity. He predicted that future research would show that the gonads are hermaphroditic in higher animals. Freud disregarded the other aspects of masculinity and femininity restricting himself to the first path because, for him, the biological meaning in the sense of activity and passivity was the essence.

Contrary to Freud's prediction, research has shown that male and female genotypes are distinct from the time of fertilization, and under normal circumstances, prevent the development of bisexual gonads. The present study is concerned with effeminacy, a concept which is obviously related to the field of masculinity and femininity. In order to clarify the subsequent discussion therefore, operational definitions will be given of words such as sex, gender and related terms as well as a number of relevant clinical syndromes.

Structure of Chapter I

Section A will consist of operational definitions of words such as sex, gender and related terms as well as a number of relevant clinical syndromes. Section B titled "Preamble" will survey the literature taking in both animal and human studies as they relate to the topic of this thesis.

SECTION A: DEFINITIONS

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1. Sex

The word sex is an umbrella term signifying many things:

a. It can be used to mean the division of species into male and female.

b. The word sex may be used in connection with everything in an organism that subserves the function of reproduction.

c. It may signify all behaviours leading up to and including sexual intercourse.

d. The phenomena of sexual instincts and their manifestations come under the same rubric.

e. Finally the word is attached to a variety of related themes, often innovative such as sexuality, sex appeal, sexism, etc. (Webster's International Dictionary, 1966).

To be more specific and avoid ambiguities, the word sex is reserved here to indicate only those features directly connected with reproduction. It will not include eroticism and gender behaviour.

2. Gender

This word is often used interchangeably with "sex". In Webster's International Dictionary (1966), gender is defined as referring to the division of the species into masculine, feminine, mixed and neuter. In this study the word gender refers to the social attitudes, behaviours and roles pertaining to either sex and includes subjective identification with that sex. Gender, therefore, carries both behavioural and phenomenological aspects. The phenomenological aspect carries greater clinical significance as it involves cross-gender identity which in its most extreme and lasting form is known as transsexualism. As defined here,

(attitudes, behaviours, roles and identity), the word gender has to be differentiated from erotic orientation as well. The behavioural and phenomenological aspects of gender and eroticism have not been treated separately by many workers including Benjamin (The Transsexual Phenomenon, 1966). An attempt to clarify these issues in relation to the clinical syndromes which are associated with disturbances in each of these areas has been made by Stoller (Sex and Gender, 1968, 1975).

3. Effeminacy

Effeminacy is an attribute of gender. One understands by it that certain characteristics are present in boys or men which are considered to be appropriate for girls or women. To quote Webster (1966) again, "an effeminate man shows weakness, tenderness, delicacy, emotionality, and practices affectations and extravagances". For the purposes of this study, a number of attitudes and behaviours considered typical for girls and atypical for boys are included. These are, a dislike of rough and tumble play, excessive dependence on and closeness to mother, preference for the toys, games, roles and company of girls, and in extreme cases such outright deviant behaviour as persistent cross dressing and assertions of a desire to be a girl. The focus of this study however is on effeminate attitudes and behaviour short of those last extreme, deviant states. The latter, while having some attitudes and behaviours in common, cannot simply be categorised with boys showing some characteristics usually associated with girls.

Of course, beliefs about appropriate behaviour for boys and girls have varied in different cultures and in different times. Thus today's liberated woman behaves very differently from her Victorian grandmother. Even so, each epoch and culture has preserved and sustained "gender"

differences, and the deviation from contemporary standards in this regard constitutes the basis for this work.

4. Eroticism

The words "erotic" and "eroticism" pertain to sexual arousal, attraction, passion, etc. and do not refer to the attitudes, roles, behaviours and identity subsumed under the word gender. Under normal circumstances eroticism implies sexual arousal by the opposite sex. When there are deviations in this category, often referred to as sexual perversions, one understands that the object which arouses sexual desire is unusual as in homosexuality, fetishism, pedophilia, sadism, etc. Deviant eroticism such as homosexuality must be distinguished from effeminacy as the latter can to a large extent vary independently of arousal by a person of the same sex. While the classification of male homosexuals into "masculine" and "effeminate" is well known, it is usually not appreciated that only a small minority of homosexual men are effeminate, although almost half claim to have been effeminate in childhood.

RELATED SYNDROMES

Certain terms which are relevant to this investigation have been defined. Within the sphere of meaning of each term abnormalities and deviations can and do occur. When these deviations are the source of great distress to the individual or others in the environment, they constitute disorders, in which case they may assume clinical importance. In particular, there are four syndromes which may be related to the abnormalities under the terms of definition. They will now be defined and differentiated from effeminacy.

1. Homosexuality

This word refers to erotic relations between members of the same sex. A person is said to be homosexual if he or she is erotically aroused by someone of the same sex, either in addition to heterosexual arousal, or exclusively so. Although Hirschfeld (1913) and Ellis (1936) had attempted to provide estimates of its incidence, the first systematic study was by Kinsey et al (1948). Kinsey's operational definition "physical contact to the point of orgasm over a period of three years" was behavioural ignoring the essence which is phenomenological. In that study, 37 per cent of the white male population had been homosexual between the onset of adolescence and old age. Only 4 per cent were exclusively homosexual lifelong, while 50 per cent were exclusively heterosexual in the same way.

The relationship of this abnormal erotic disposition to effeminacy is complex. Some overlap between effeminacy and homosexuality does exist which is the basis of the popular stereotype of the homosexual man. The relative frequency with which this occurs is not well established and some workers deem it a myth (Hoffman, 1977). Kinsey also uses the gradation between exclusive heterosexuality and exclusive homosexuality to debunk the stereotype. By way of contrast, those workers who have followed up extremely "feminine" boys, view effeminate behaviour in childhood as a precursor, in the main to homosexuality, but also to other atypical outcomes in adolescence and later, in about half the cases. Green (1976) has reported on 27 of 55 effeminate boys who had reached adulthood. Fifteen were homosexual, transvestic or transsexual. Bakin (1968) traced ten of fourteen effeminate boys and two of three masculine girls seen in childhood. Only the boys showed a high

risk (four certain and two questionable homosexuals), while both girls appeared to be well adjusted wives and mothers. This also supports the view that tomboyism is not so great a distortion in development and is usually quelled by the outward signs of puberty. Zuger (1978, 1980) goes so far as to say that the majority of male homosexuals have been effeminate in childhood, but have given up the effeminate mannerisms in adolescence. Lebovitz (1972) selected 36 boys for having been seen chiefly for effeminate behaviour between 1952-1967 in a child psychiatry clinic. Sixteen were traced, now in their twenties, of whom six were homosexual, transvestic or transsexual. Whitam (1977, 1980) in an investigation of adult male homosexuals and heterosexuals in the United States, Guatemala and Brazil, reported that the tetrad of (i) doll play, (ii) preference for the company of girls or women, (iii) being labelled a sissy and (iv) homosexual play in childhood was significantly more common for the homosexuals.

While the prognosis for markedly deviant boys may be correctly gauged by these studies it seems unjustified to extrapolate that most male homosexuals have been effeminate boys. A scientific population study would most probably refute that theory. The relationship between male homosexuality and effeminacy may be further clarified by considering the definitions of "gender" and "eroticism". In male homosexuality erotic susceptibility is reversed but gender (attitudes and behaviour) is masculine except in a small minority as cross-sectional studies show (Hoffman, 1968, 1976). Effeminacy, on the other hand, refers to some attitudinal and behavioural characteristics properly associated with the opposite sex, but is perfectly compatible with heterosexual erotic orientation.

2. Fetishism

This is a disorder of eroticism, in that the object of sexual desire (the fetish) may be an inanimate object meant for a woman such as a shoe, coat, etc. or it may be a non-genital part of a woman's body such the foot, hair, etc. Fetishists appear to be almost exclusively male. In 1887, Binet not only differentiated normal and morbid aspects of fetishism but also brought out the role of association learning as a cause of fetishism (Hoenig, 1977). The wearing of the odd female garment or article in this context must be differentiated from effeminacy as it has nothing to do with gender attitudes and behaviour.

3. Transvestism

This word refers to the wearing of clothes appropriate to the opposite sex, for the purposes of sexual arousal and gratification. The incidence and prevalence of this syndrome is unknown, but it is believed to be relatively common. The act of cross dressing is accompanied by sexual excitement, and as such seems to be present only in men. Stoller (1975) among others, describes these men as not being effeminate, and heterosexually oriented. Effeminacy in boys therefore is not to be confused with transvestism.

Transvestism may be a transient phase for some transsexuals who later lose the erotic aspects of cross dressing (Hoenig et al, 1974). Before transsexualism was sifted out of the heterogeneous group of cross dressing syndromes, case descriptions of "transvestites" contained many individuals who would now be called transsexual. This also applies to many of the individuals described by Hirschfeld (1910) who first used the term transvestism. Hirschfeld's main concern was to separate these

cross dressers from homosexuals. Some transvestites like to appear in public in female attire, the exhibition usually, but not invariably adding to the erotic gratification. This syndrome, especially in the absence of erotic associations, which comes close to Ellis' "Eonism" is perhaps the least understood of all the cross-dressing abnormalities. The Chevalier d'Eon de Beaumont, an eighteenth century French nobleman and diplomat, alternately dressed and lived as a woman or as a man for many years while continuing to perform his duties in France and abroad (Ellis, 1936). There are many such historical as well as contemporary figures. In most cases, however, the effeminate behaviour is not sustained, and there is no conviction of possessing a feminine identity. Outside the episodes of effeminate behaviour consisting of cross dressing which is mostly sporadic and usually associated with eroticism, gender behaviour is masculine and erotic interest is usually heterosexual. When cross dressing occurs over extended periods of time as in the case of Chevalier d'Eon, with erotic aspects absent or very much in the background, differentiation from transsexualism can be extremely difficult.

There is no doubt that effeminacy is an essential ingredient in transvestism, but often more as an aim than an achievement. In reality, patients in their cross gender clothing and make-up often appear grotesque, precisely because they are lacking effeminacy.

4. Transsexualism

In this very unusual condition individuals believe firmly that they belong to the opposite sex, their physical status being as it were an error of nature. The physical attributes proclaiming their sex are repugnant to them, and they seek sex-change surgery. The

growth of gender identity clinics is a result of the large number of such patients seeking help after Christine Jorgensen popularised the idea that men could become women. Prevalence rates have been calculated by Walinder in Sweden (1965) at 1:37,000 for men and 1:103,000 for women, and by Hoenig and Kenna (1973) for England and Wales at 1:40,000 for men and 1:154,000 for women. The majority of transsexuals claim to have felt that they belonged to the opposite sex from early childhood, claims which are sometimes difficult to substantiate as the patients are often alienated from their families. Transsexualism cannot be classed with sexual deviations, as erotic gratification, which could be homo- or hetero-erotic, is not the motive for seeking help and castration is accepted readily (Hoenig et al, 1974). The word transsexualism was first used by Cauldwell in 1949 (Psychopathia Transsexualis), and given currency by Benjamin (1966). Although the claims of transsexuals that the disorder began at the earliest age has prompted the study of cross gender behaviour in childhood, the syndromes of transsexualism and boyhood effeminacy are quite distinct. Transsexualism is an extremely rare condition with a delusion like belief or overvalued idea that one is held prisoner in the body of the wrong sex, while effeminacy is a matter of the degree of nonconformity in attitudes and behaviour with culturally established norms.

There is a tendency in the literature to blur and obscure the differences between transsexualism and other entities such as effeminacy, homosexuality and transvestism by mixing up the behavioural and phenomenological aspects (Randell, 1959). The introduction of terms such as "gender dysphoria" and "gender spectrum disorder" is symptomatic for as

well as serving to sustain the confusion. There is of course a relationship between effeminacy and transsexualism in gender behaviour, in that transsexuals aspire to learn effeminate behaviour with varying degrees of success, but phenomenologically they are quite distinct as effeminacy hardly ever indicates that a boy believes himself to be a girl.

The four related syndromes reveal a qualitative difference from established norms - gender identity in the case of transsexualism and eroticism in the case of the others. Effeminacy per se is a quantitative difference, requiring an accumulation of items to justify the term.

In summary, it would appear that effeminacy can at times be associated with these syndromes. In the case of transsexualism the patient aspires to acquire effeminacy; in the case of transvestites there can occur a transient, playful identification with females and an equally transient, playful, erotically tinged imitation of feminine ways; sometimes though by no means regularly the same can happen in the case of fetishists, and a proportion of homosexuals - a minority display effeminate behaviour. None of these is identical with effeminacy, but the latter is merely peripheral to these syndromes. Effeminacy occurs by itself in persons who do not show any of the above syndromes. In fact, the vast majority of effeminate males fall into this category.

SECTION B: PREAMBLE

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I. Biological Studies of Sexual Dimorphism

It is usually taken for granted that one can recognise which sex a person belongs to at a glance. The arrival of unisex clothes and hairstyles in the second half of this century aroused much foreboding precisely because this confidence was shaken.

Physical sexual dimorphism is by no means universal. Among birds many species lack dimorphism to such an extent as to cause problems of breeding in captivity. Even among mammals some, like the hyena, show this deficiency. The human animal in fact, is a case of extreme sexual dimorphism in spite of minimal cytogenetic differences (Ohno, 1979). Aside from the primary and secondary sexual characteristics, the larger size and greater strength of the male have been aided by the division of labour. Modern technological advances may have reduced the importance of muscular strength, but only to a limited extent. Marked sexual dimorphism in animals as well as man is traditionally linked to polygynous social structures. Such organizations reap the evolutionary benefits of increasing the number of progeny sired by the strongest males. For the evolution of human intelligence on the other hand, prolonged childhood and education linked to the non-aggressivity of the female has been important. At the same time progression to monogamy has occurred without man losing his greater aggression and strength, which may be related to the problem of male chauvinism.

Much more uncertain and controversial is the topic of psychological dimorphism, and whether there are differences between the "male brain" and "female brain". Reference is made in a later section to a nucleus in the male rat brain which required testosterone for its full

development, and is smaller in female rats. From early adolescence girls have greater verbal abilities and boys mathematical and visuo-spatial abilities. Stafford (1961) suggests an X linked recessive mechanism in the inheritance of visuospatial abilities, such a gene being more likely to be manifested in boys. Thus there are hints of differences in male and female brains, but at this time these are reasonable deductions rather than established findings.

II. Cultural and Historical Studies in the Area of Cross Gender Behaviour

We turn to students of society, culture and history for some answers to the question of whether there have always been differences in gender types, and how they have varied. It is hoped that the disciplines of history, anthropology and sociology can throw some light on how gender differences come about.

a. It is clear that gender differences have always been present, whether one takes the historical view or the cross-sectional view of anthropologists who report on myriad societies ranging from the extremely primitive to the highly sophisticated (Mead, 1950). Even within primitive societies gender attitudes and behaviour can vary greatly or very little. In Sex and Temperament (1935), Mead describes three New Guinea tribes. Among the Arapesh, sex differences are minimal, with a subdued sex drive. In the Tchambuli tribe women are dominant, managing and cold while the men are less responsible and emotionally dependent. The Mundugumor men and women are equally ruthless and violent with strong sex drives and minimal nurturant behaviour. Mead draws the conclusion that human behaviour is unbelievably malleable. Murdock (1949), another

well known anthropologist states that it is unnecessary to evoke innate psychological differences between the sexes. "The indisputable difference of reproductive function lays out the broad line of cleavage for the division of work. Early childhood sex-typing and habituation in adulthood to certain occupations lead to sex differences in temperament and not vice versa." However within anthropology there is considerable disagreement about explanations (D'andrade, 1966). In a cross cultural study of child rearing in six societies, boys were more aggressive and girls more affectionate and responsible, in all six (J. Whiting, 1963). The fact that the largest sex difference occurred in the younger age group (3-6 years) rather than the older (7-10 years) suggests that the reasons for the differences are innate sex-linked behavioural tendencies rather than child training practices.

b. The vast majority of human societies organize their socio-cultural institutions around the men. An example of this is that rules of residence and property descent result in kin-related males grouping together (patrilineal and patrilocal). There is an intricate relationship between the division of labour by sex, subsistence activities and the types of social organizations. Those subsistence activities that involve mostly male effort - agriculture with cattle and animal husbandry occur with the patrilineal and patrilocal societies. Agriculture without cattle depends on a greater proportion of female labour and is likely to occur with matrilineal descent and matrilocal or avunculocal residence. Tied into the patriarchal system is sexual restrictiveness for the women. Of 565 societies studies only four are polyandrous, 427 polygynous and 134 monogamous (Murdock, 1957).

c. Modern societies have usually attempted to correct inequities and unfair discrimination against women. However, where there have been attempts to institutionalise the abolition of division of labour these have failed. In the kibbutz the greatest problem is the failure to achieve this ideal (M.E. Spiro, 1956). Endeavouring to "free" the woman from her household drudgery has resulted in her spending eight hours a day either child-minding or laundering or cooking for the collective instead of doing a variety of these things with greater satisfaction for her own family. Furthermore boys and girls in the kibbutz show the same differences as in the six-culture study although sex differences are deliberately played down.

d. While gender differences seem to have been immemorial, each age and soceity has had its own deviants. The existence of individuals who did not conform to their assigned sex has been recorded from earliest history. In Hinduism the God Shiva is sometimes depicted in statues as a hermaphrodite; the God Vishnu assumed female form to vanquish a demon (Bhavatha Purana 9-10), and the great epic Mahabharatha mentions a woman, Shikandi, who attempted to change her sex and fought as a soldier (Narayan, 1978).

It was necessary to warn the early Hebrews against wearing the clothes of the opposite sex, "for all that do are abomination unto the Lord thy God (Deut. 22.5). The early Germans considered transvestites a liability for military service and drowned them (Ellis and Abarbanel, 1973). The literature on this is vast and has been described though never entirely summarised (Hirschfeld, 1910; Bloch, 1902).

In early and later history, social and religious taboos appear not to have inhibited the aristocracy and royalty in the same way as lesser mortals, and eminent men and women were transvestites. Well known examples are the Roman Emperor Elagabalus (A.D. 205-222); Prince Philippe, Duke of Orleans and brother of Louis XIV; the Abbe de Choisy and King Henri III of France (Ellis and Abarbanel, 1973; D.G. Brown, 1977). The Chevalier d'Eon caused Havelock Ellis to name the condition Eonism (1936). Well known among female transvestites is the case of James Barry who as a young female Scottish aristocrat joined the army in male attire and rose to become Inspector General of the English Army Medical Department. He served in Canada where he also died. His true sex was established post mortem (Ellis, 1936).

Turning to studies of the present times, Mead (1950) in discussing variations in masculinity and femininity, states that in every society she had studied it was possible to distinguish those who deviated sharply from the expected physique and behaviour for their sex, and who make different sorts of adjustment to the cultural ideal, with some rebelling or committing suicide. Although Mead considers gender behaviour "unbelievably malleable", she describes the deviants as constitutionally determined types in maleness and femaleness.

Some societies institutionalise transvestites as in the case of the Hijiras of the Indian subcontinent (Shah, 1973). They form a community of men who are elaborately dressed as females admitting only male eunuchs and some hermaphrodites. They function as homosexual prostitutes, but may also be popular as singers and dancers. Among many North American Indian groups male transvestism is encouraged and various

sorts of initiation ceremonies are held to integrate the transvestite into the adopted gender. Such traditions appear to be related to their beliefs in shamanism. Shamans or priest-doctors are credited with sorcery and healing and come from the ranks of male transvestites trained to their vocation from childhood (Frazer, 1955; Brown, 1973). They exist also among the Inuit. Fewer in number, are females who insist on male dress and occupation from childhood and may become shamans.

In summary, gender differences seem to have always existed, though with great variation, and sometimes with role reversal. The variation is limited by the potential and restraints of biological inheritance and the need to organise social institutions around reproductive function and division of labour. No matter what the society's code in gender behaviour, each society has its own deviants.

III. Etiological Considerations

We come back again to the question, how do these differences come about? For physicians, the narrower question of how deviations from the norm come about is even more pertinent.

Controversy about the relative contribution of biological constitution on the one hand, and a variety of environmental factors on the other, to the final human "product" in terms of intellectual capacity and personality, as reflected in achievement, mood and behaviour is longstanding. From the perspective of some behavioural scientists the biological matrix of the infant is a virtual tabula rasa on which social, political and cultural forces operate. For those behavioural scientists who are rooted in learning theory it is enough for the child's caretakers to provide adequate stimulation to shape intelligence and

personality, including gender behaviour along desired lines. Contemporary psychoanalysts also emphasize mothers' behaviour towards their infants in producing deviant psychosexual development, but they also have elaborate hypotheses of psychic abnormalities in the mothers which fuel abnormal attitudes and behaviour in the infants. Other scientists take the view that physical and biological factors innate in the sexes play the dominant role, whereas sociocultural and political forces merely accommodate as well as modify the expression of these inherent tendencies. The identification of such biological factors has so far not reached any finality.

During the past century, elucidation of the role of endocrine secretions, neural control and biogenic amines, along with modern methods to study behaviour introduced by ethologists have led to fresh knowledge about sexual dimorphism in animals as well as humans. The development of dimorphic behaviour as regards sex and gender with conjectures about the etiology of deviation will be discussed for animals and humans separately.

A. Animals

Among animals, each sex has a characteristic pattern of behaviour centred around the reproductive function which is species specific. Behavioural differences in males and females in other respects are less clear cut, although there is a general belief that among mammals the female of the species is less aggressive and dangerous. The difficulty in animals of separating erotic behaviour differences from other behaviour differences in the two sexes makes comparison with humans hazardous.

Reproductive behaviour or mating includes courting behaviour and the sex-act proper. Courting might be considered as close to eroticism in humans. Equivalent to gender behaviour are treatment of the young, nest building, grooming, songs, sounds and cries, fighting, territorial behaviour, etc. It is generally accepted that all these behaviours in animals are under instinctual and hormonal control, but modifiable by circumstances.

1. Biological Determinants in Animals

a. A great deal of experimental work including the transplantation of ovaries and testicles had already gone on in the first four decades of this century, including the experiments of Steinach (1940). In the medical application of his findings he not only claimed to have remedies for sexual disabilities, but also against aging, which induced eminent men to try monkey gland transplants and vasectomy to achieve a regaining of sexual powers and rejuvenation. It was well known in the nineteen-twenties and thirties that androgens given to pregnant animals will masculinise the anatomy and behaviour of female offspring. Jost's demonstration (1947) that a secretion of the fetal testis was necessary to initiate male development of the internal ducts, and the experiments of Phoenix (1959) which showed that the hypothalamus is sexualised by fetal hormones were landmarks. Owing to the availability of animals for experimentation the effect of prenatal hormones – mainly testosterone and dihydro-testosterone – in masculinisation of anatomy and mating behaviour is well established. Female pseudohermaphrodite guinea pigs show a level of aggression which is similar to the males.

Other experiments have linked prenatal stress on male rats to suppression of male copulatory behaviour, and such males exhibit a female pattern of sexual response if castrated and given estrogens (Ward, 1974). This does not occur if prenatal stress is omitted. Dörner (1979) has taken this further and used neurotransmitters instead of stress. He speculates that neurotransmitters, directly used or stimulated by stress, through their mediating function in the brain may lead to the suppression of testosterone secretion in the fetus. The result of this would be failure of masculinisation of the brain and development of homosexuality in postnatal life.

b. Ongoing research is attempting to link prenatal hormones to the development of actual brain differences. A medial pre-optic nucleus in the rat termed SDN (sexually dimorphic nucleus) is larger in males and neonatally androgenised females, while it is smaller in normal females and castrated males (Gorski et al, 1977, 1978). Testosterone is necessary to prevent cell death in that nucleus in males.

The courtship song of the male zebra finch (an Australian song bird) is reduced by castration and restored by androgens. In keeping with this the male and female have brain differences in the group of neuronal nuclei which control the song. There are also brain differences in electrical responsivity that are not related to androgens (Gorski et al, 1977, 1978).

c. Spontaneous masculinisation of female fetuses occurs in animals and could have important implications. Female rats which develop in intra-uterine life directly between two male fetuses are slightly but significantly masculinised anatomically and behaviourally (compared to

any other intra-uterine position), although biologically female and capable of normal mating. It is hypothesised that androgen secreted by adjoining male fetuses was absorbed (Beach, 1977).

d. Rabbits are the only mammals in which nest building is confined to the female. Castrated females will build nests if treated with estrogens and progesterone, but the castrated male rabbit cannot be induced in this way. This may be seen as an aspect of gender behaviour determined prenatally.

2. Contribution of Learning to Gender and Sexually Dimorphic Behaviour in Animals

Though little is known at this time, some evidence comes from experimental psychology and ethology. Imprinting plays a role in some species as in the male mallard shown by Lorenz (1964), to be attracted only to other males as an adult if exposed to males alone in the time immediately following hatching. Harlow's (1962) experiments on rhesus monkeys are well known: infants reared in isolation with no interaction with peers are unable to participate in mature sexual activity as adults or to show maternal behaviour. Much of the work on animal learning has been done in a way to eliminate species differences so that analogies are weak (Skinner, 1966), or strained by ethologists to equate pair bonding in the Greylag Goose and man (Lorenz, 1966). Comparative psychology is now approaching the problem of learning in animals from the ecological perspective – what the animal needs to learn is determined by particular aspects of habitat and life style. It is possible that more knowledge about gender behaviour in animals as distinct from erotic behaviour will come from this approach.

In a number of bird species the full development of the male courtship song depends on the opportunity to hear the adult song at specific stages during development (Mason and Lott, 1976). Reared in isolation such birds produce a song that structurally resembles but lacks the richness of the adult song. On the other hand, the parasitic cowbird lays eggs in the nests of a variety of host species, its young are exposed to a range of adult songs and yet as adults they display the species typical song which is necessary for finding a mate of its own species.

There is an analogy with speech development – that like song development it is modifiable only within well defined biological limits. Thus in the realm of sexually dimorphic behaviour the role of learning in animals appears to be to bring out the fullness of a biologically determined repertoire.

B. Humans

1. Biological Foundations of Sex Differentiation

Except for the relatively rare errors of nature, sex determination depends inexorably on whether a Y chromosome is present at birth. Upto the sixth or seventh week of life, the gonads are undifferentiated (Diamond, 1966). How the genetic switch mechanism operates is still controversial, views being expressed for a gene on the Y chromosome, while some of nature's errors in man and animals suggest factors on X,

Y and autosomes (Polani, 1979). The H-Y antigen which has been conserved in evolution, appears to be the mediator, since no enzymal or hormonal effect of the Y chromosome has been discovered. In some unspecified way a profusion of the histocompatibility antigen on the surface of gonadal cells confers growth and differentiation into a testis. If 46 XX chromosomes are present the gonads normally become ovaries while in individuals with 45 XO type gonadal dysgenesis (sterile streaks) is the result. With reference to the H-Y antigen Hoenig (1981) has summarised the later work of Wachtel in the United States and Eicher in Germany as well as Engel et al's hypothesis. 46 XY in man and lower mammals can be associated with female morphology and 46 XX with male morphology. Autosomal localisation of the structural gene for the H-Y antigen, whose expression is regulated by an X-linked repressor and a Y-linked inducer are assumed, with mutations in receptor binding, repressor binding and antigen determinants on the autosomal gene resulting in the above morphology errors as well as in some 46 XY males being H-Y antigen negative and some 46 XX females antigen positive.

In normal development, as a result of the presence of H-Y antigen, the fetal testis produces an androgen which induces masculine development of the Wolffian ducts, as well as a non-androgenic substance (glycoprotein) to inhibit the Mülletian ducts which then atrophy. The fetal ovary may secrete an estrogen to switch the germinal elements to meiosis (George et al, 1978). In the absence of

fetal testicular secretions Wolffian rudiments disappear and feminine development proceeds.

The undifferentiated external genital tubercle appears at the end of the fifth week and is converted by dihydrotestosterone, a derivative of fetal testosterone, into a penis and scrotum by the thirteenth week. In the absence of testosterone the external genitalia develop into the female type without specific hormone induction after the twelfth week (Tanner, 1978). During the critical weeks of sex differentiation the developing adrenal glands are secreting androgens, estrogen and minute quantities of progesterone; the testis secretes 90 per cent testosterone and small quantities of estrogen and the ovary secretes estrogen, progesterone and small quantities of androgens. Diamond hypothesises that closely related and interacting but different sets of neural tissue are involved in the various components of sexual behaviour including reproduction (in Beach, 1976, pp 41-42). Factors of tissue competence, developmental timing and hormone secretion dosage could vary inducing all grades of heterosexuality, homosexuality or transsexuality to interact with future environmental influences.

It is not known at which of these stages, which neural tissues, and what dosages and combination of hormone secretions have an effect on behaviour. Some pointers do appear from the study and treatment of clinical syndromes. For instance, studies on males with 5 alpha-Reductase deficiency causing feminised external genitalia do suggest that testosterone itself may be involved in male gender identity (Imperato-McGinley, 1974, 1979). This will be discussed in more detail later. Androgens are responsible for eroticism in both sexes and restore libido and function

in male impotency when it is due to primary gonadal failure as in castration (Money and Erhardt, 1972).

Earlier workers such as Steinach, and others who applied his techniques, believed that effeminacy and homosexuality were caused by abnormal testicles. They carried out surgical operations to remove the "diseased" testicles and replaced them with at least one normal testicle and reported "cures" (Haire, 1924).

2. Innate Sex-dimorphism in Behaviour

The study of gender differences present from birth has produced some confirmations and also some changes in long held views. Apart from the external genitalia other physical differences exist at birth. Boys are heavier and have more muscle development (Anastasi, 1958). The newborn girl is physiologically 4-6 weeks more mature than the boy - the differential maturation increasing during the years of growth and development (Tanner, 1978). There is no question that the boy's physique is better adapted than the girl's for carrying out vigorous and strenuous physical activities.

Behavioural differences are not so clear cut. A study of newborn infants showed that excluding erections, boys and girls have the same amount of spontaneous motor activity (Korner, 1969). In boys however, the activity involves mostly startles (gross motor movements), and in girls rhythmic mouthing, smiles and sucks. Female neonates have lower tactile and pain thresholds (Lipsitt and Levy, 1959). Female infants attend more to auditory sequences, and males to visual patterns (Kagan and Lewis, 1965), but girls discriminate between faces better (Lewis, 1969).

Thirteen month old girls are significantly more dependent on their mothers than boys when exposed to strange situations (Goldberg and Lewis, 1959). Mothers in turn are more protective and less rough with their daughters than sons and all these differences are still present when children start nursery school (Brindley et al, 1972). The vast majority of all aggressive acts are initiated and received by boys (Shortall and Biller, 1970). Girls are generally much more protective and nurturant to newcomers in nursery school (McGraw, 1971).

Earlier studies favoured girls as being more advanced in language development from the onset of speech development (Goodenough, 1927). Recent studies appear not to show any sex differences but they are too small in sample size (Maccoby and Jacklin, 1974). However it is quite well established that among school children girls have greater verbal abilities. On the other hand beginning at ages 12-13 years boys excel in visual-spatial ability and mathematical skills (Hutt, 1972). Whether these differential abilities are innate or due to cultural standards and social reinforcements is hotly debated (Maccoby and Jacklin, 1974), but the evidence seems to favour biological influences (Ounstead and Taylor, 1972), although the matter is by no means entirely settled.

3. Evidence from Human Intersexuality

The existence of humans with ambiguous genitalia was well documented by earlier investigators such as Krafft-Ebing in the nineteenth century and Hirschfeld in the twentieth. Their researches arose from their interest and concern for individuals with abnormal sexual behaviour. A variety of disciplines are continuing to study hermaphrodites to

throw light on the origins of sexual, erotic and gender aspects. Before describing their work a brief review of the types of intersexes will be given.

With modern scientific advances, the whole area has assumed extreme complexity and proportions. Hirschfeld regarded each intersex as a partial aberration from the two sexes in such a way that the group of intersexes could be arranged on a continuum between male and female (quoted from Hoenig, 1977). Such reductionism is no longer considered valid.

The primary classification divides human intersexes into true and pseudo hermaphrodites. The vast majority fall into the second category because they do not possess the attributes of the "true" hermaphrodite, namely gonadal tissue of both sexes.

3.a True Hermaphrodites

These individuals have both ovarian and testicular tissue and over two hundred cases have been reported in the modern cytogenetic era. Cytogenetic sex is usually 46 XX. Low sex drive and infertility are the rule (Simpson, 1976).

3.b Pseudo-hermaphrodites

These individuals have unisexual gonads - either ovaries or testes. Their chromosomal sex is usually compatible with their gonads - XX with ovaries and XY with testes. Whether they are described as male or female pseudo-hermaphrodites depends on the presence or absence of the Y chromosome (Overzier, 1963; Simpson, 1976). Some of these syndromes provide important insights regarding biological contributions to

gender attitudes, role and behaviour as well as eroticism and gender identity, and will be discussed in greater detail.

3.b.i Female Pseudo-hermaphrodites

These are 46 XX individuals with ovaries, classified into genetic and teratogenic types (Simpson, 1976). The word "genetic" is used to mean that the condition is inherited and the word "teratogenic" to convey that fetal development was distorted by an extraneous influence such as medication taken by the mother during pregnancy.

a. Genetic Type

Congenital adrenal hyperplasia (adrenogenital syndrome) is inherited as an autosomal recessive disorder, leading to deficiency in one of the enzymes involved in the synthesis of cortisol: 21-hydroxylase, 11-hydroxylase and 3-01-dehydrogenase. The fetal adrenal gland begins to function in the third month, and deficiency in cortisol causes the pituitary gland to secrete raised levels of ACTH. Steroid precursors are elevated and diverted to androgen production in the adrenal cortex. If the fetus is female the external genitalia are virilised, but the Mullerian ducts proceed normally, being independent of androgens.

b. Teratogenic Type

It has been known for the greater part of this century that androgens given to pregnant animals will masculinize the offspring (Overzier, 1963). There have only been occasional reports of similar occurrence in humans until the late nineteen-fifties when the clinical importance for humans was substantiated, due to the adverse effects of treatment with synthetic progestins of pregnant women who had tended to abort (Black and Bentley, 1959). The genital tubercle appears in

the fetus at five weeks and female external genitalia are completed by fourteen weeks, and so between 5-14 weeks the fetus is most susceptible to androgen. Dosage, duration of treatment, timing of treatment as well as the potency of the androgen-like drug are crucial for virilization. Testosterone and related androgens are powerful, norethisterone and ethisterone are relatively strong synthetic progestins while progesterone and its 17-OH analogues are weak. Genotype may also be involved as only a minority of female fetuses are virilised. Virilising tumours in pregnant women can virilise the fetus but pregnancy is rare in those circumstances.

The female children born to the two groups described above provide important evidence for the effect of prenatal hormones on behaviour (Money and Erhardt, 1968, 1979). Although diagnosed at birth, correctly reared as girls and the enzyme defect treated with cortisol in the case of congenital adrenal hyperplasia, these girls nevertheless differed significantly from control girls. The differences were in showing high expenditure of energy in intense active outdoor play, having more boys than girls as friends, being labelled tomboys by others as well as themselves throughout childhood, increased career interest and lack of interest in baby care. Gender identity was always female and the girls were all heterosexual in adolescence. Fertility, however, was very low. Eroticism and gender identity on the other hand were not affected.

c. Gonadal Dysgenesis

These are 45 XO individuals and the clinical picture is usually called "Turner's Syndrome". Several cases were described in the nineteenth

and twentieth century before Turner in 1938 described a syndrome of sexual infantilism, congenital webbed neck and cubitus valgus. The gaonds are streaks of connective tissue with no primordial follicles, but Müllerian derivatives develop and the external genitalia are unambiguously female. Deficiency of ovarian hormones is reflected in an infantile uterus and often underdeveloped breasts, but does not appear to affect gender identity or behaviour. A wide variety of chromosomal anomalies are now known to be associated with streak gonads, and the reliability of estimates of incidence is limited by cytogenetic techniques, and availability of tissues. The evidence here seems to indicate that the absence of testosterone secretion in fetal life and later is crucial for such individuals to develop extreme femininity so consistently.

3.b.ii Male Pseudo-hermaphrodites

a. Testicular Feminization Syndrome

This is an X-linked recessively inherited form of pseudo-hermaphroditism, first delineated as a distinct entity by Morris (1953). 46 XY status cytogenetically with bilateral testes which are intra-abdominal or inguinal, yet these individuals have female external genitalia, blind vagina, and no Müllerian derivatives. Failure of masculinization in spite of adequate testosterone supplies is a result of androgen-insensitivity of the target cells; an androgen receptor required to bind dihydrotestosterone within the cell may be absent (Ohno, 1971). These "girls" grow up into extremely feminine and attractive women without exception. Absence of testosterone in Turner's Syndrome and androgen insensitivity in testicular feminization appear to result in

both these conditions in a rather uniform differentiation into behaviourally feminine individuals.

b. Klinefelter's Syndrome (Seminiferous tubule dysgenesis)

Individuals showing this syndrome are 47 XXY males (48 XXXY, 49 XXXXY are rare and always mentally retarded), with an incidence rate of 1:1000 live male births established in several geographic areas. Klinefelter et al (1942) described nine males with small testes, azoospermia, normal external genitalia, gynecomastia, lack of pubertal virilization and often raised urinary gonadotrophin. Testes are small in childhood, and at puberty the seminiferous tubules degenerate and are replaced by hyaline material. Although extra X chromosomes are inactivated, timing and incompleteness of inactivation may be responsible and inactivation may not occur in the germ cells. Gender role and identity disorders are not increased, but a long series of studies going back to 1953 have shown that Klinefelter males have a special kind of personality. They are described as passive, shy, submissive, with reduced sexual drive, yet given to outbursts of temper (Forssman, 1970; Nielsen, 1970). A controlled study by H. Hunter (1969) of Klinefelter males in subnormality institutions showed them to be suggestible, submissive, lack-lustre but irritable. Half of this group had no sex drive and the rest were almost exclusively homosexual, but this could be due to a long stay in unisexual wards. In addition, isolated cases of transsexualism have been reported in Klinefelter's Syndrome, but a connection has not been established.

c. 5 alpha-Reductase Deficiency Syndrome

This type of male pseudo-hermaphroditism has thrown light on aspects of sex and gender. In 1974, Imperato-McGinley et al reported on thirteen families with 24 male pseudo-hermaphrodites. Isolation and consanguinity in a village in the Dominican republic had resulted in the proliferation of an unusual syndrome transmitted as an autosomal recessive gene.

Until recently the villagers had reared these children with somewhat ambiguous but female looking genitalia as girls, not realising that the gonads in the inguinal region or in the "labia" were testicles. At puberty breasts did not develop, the voice deepened, muscularity greatly increased and the clitoris enlarged into a penis, but acne and facial hair were deficient. These "girls" although their feminine behaviour had been normal, readjusted themselves into "boys" with no apparent difficulty as their bodies changed.

In 1979, Imperato-McGinley et al reported on 38 known cases from the same area. Eighteen had been reared unambiguously as girls. They behaved like normal girls and felt to be girls. At puberty sixteen had changed to male gender identity and role, and later fifteen of these were adjusted to an active heterosexual role while the sixteenth was living alone on an isolated farm. The seventeenth had male gender identity and heterosexual activity but continued to dress and live as a woman. Only one case, the eighteenth maintained female gender identity and was reportedly seeking surgical reassignment.

In spite of much insecurity and teasing almost all the eighteen had changed gender identity and role spontaneously, once the realization came of being more akin to boys - strong evidence in favour of biological forces. These findings contrast sharply with those of Money et al (1957), who reported that all attempts to change the established gender identity in their mixed group of pseudo-hermaphrodites failed unless begun before the age of three. The deficiency of 5 alpha -Reductase greatly diminishes the conversion of testosterone to dihydrotestosterone. The latter, DHT, appears to control masculinization of external genitalia in the fetus, (therefore causing ambiguous genitalia when deficient), and also is responsible for prostate growth, facial hair, acne and temporal balding later on. Testosterone appears to be responsible for deepening voice, large muscle mass and growth of penis and scrotum at puberty. The greatly increased amount of testosterone produced in each of these patients which begins with puberty made sufficient dihydrotestosterone available and hence induced the external changes in the direction of masculinization. Imperato-McGinley et al hypothesize that gender identity itself is strongly influenced by testosterone.

d. Effect of Prenatal Estrogens and Progesterone on Boys

The data on girls subjected to abnormal levels of androgen in fetal life provides strong evidence for the effect of prenatal hormones on gender behaviour, without affecting gender identity and erotic orientation. Nature has not provided us with similar errors which would allow the same case to be made for cross gender behaviour in boys. There are some studies on boys exposed to estrogens or progesterone administered to mothers during pregnancy. While these studies are not in the same league as the

ones on androgenised girls, they appear to point to behavioural changes in the direction of effeminacy. Yalom (1973) studied twenty males in their late teens and twenty 6 year old boys exposed in utero to estrogen and progesterone, as treatment for diabetic pregnancy. Decreased aggression, assertion, athletic ability and masculine interests in comparison to controls is reported. Definite conclusions however cannot be drawn as the untreated controls had healthy mothers. Another study reported on 71 children (26 boys and 45 girls) exposed prenatally to combinations of synthetic progestogens (androgenising) and estrogens (Reinisch and Karow, 1977). Subjects exposed mainly to progestogens were said to be more independent and self-sufficient while the opposite was true for those who received mainly estrogens. The results were not analysed by sex so that no conclusions can be drawn about dimorphic gender behaviour.

In summary, certain types of human female and male pseudo-hermaphroditism provide strong evidence for the role of androgens in determining gender behaviour. Female fetuses exposed to androgens in utero are difinitely less "feminine" than control girls, and male pseudo-hermaphrodites who are able to secrete and have intra-cellular response to testosterone spontaneously overcome early rearing as girls. Furthermore, pseudo-hermaphrodites who either completely lack or are completely insensitive at the intra-cellular level to testosterone are totally feminine.

4. Evidence from Twin Studies and Family Studies

At this time there is little available evidence from twin studies about the development of gender behaviour. Evidence only exists for related fields like homosexuality and there they tend to support biological determination rather strongly. The largest and best known study is that of Kallman (1952). Thirty-seven adequately investigated male monozygotic pairs were 100 per cent concordant for homosexuality. In 26 dizygotic pairs concordance was only 12 per cent. Kallman himself regarded the total concordance for monozygous pairs with some suspicion. Smaller series of 3 to 6 monozygotic twins tend to support Kallman's findings (Sanders, 1934; Habel, 1950). Heston and Shields (1969) report on five monozygotic male twins with a concordance for homosexuality of 40-60 per cent and 14 per cent for seven dizygotic pairs. They also reported a family study - a sibship of fourteen with three pairs of monozygotic male twins. One pair was heterosexual and the other two were concordant for homosexuality. Hoenig et al (1974) reported a family from Newfoundland with two transsexuals, as well as a large number of homosexuals, bisexuals and individuals with inappropriate gender behaviour within the extended family.

Even in such a rare condition as transsexualism, Stoller (1975) reports a family with two sons, both extremely effeminate and living as females. Hore et al (1973) reported two brothers of Chinese ethnic origin who sought sex change surgery. In summarising the literature Hoenig (1974) lists reports of familial cases of transsexualism or transvestism reported by Randell, Liakos, Lukianowicz, Ellis and Krafft-Ebing among others. Randell's (1971) figures suggest a familial

incidence of 2.5 per cent which is extremely high, but he does not clearly separate transsexuals and transvestites. Benjamin (1971) mentions two sets of identical twins concordant for transsexualism.

5. Brain Abnormality and Gender Behaviour

Here again, any evidence is circuitous, with reports of brain damage in some cases of transvestism and transsexualism (Wålinder, 1965; Pennington, 1960). Hoenig et al, (1979) reported a very high incidence of EEG abnormalities in a consecutive series of forty-six transsexuals.

6. Late Reassignment of Gender

Money's postulates on the influence of the sex of rearing will be referred to later. Many authors have remarked on the unease found in children being reared in the "wrong" sex. (Diamond, 1966, 1976; Zuger, 1970; Golubeva, 1970; Ghabrial et al, 1962; Cappon et al, 1959.) Adjustment to the sex of assignment may be overruled by biological influences asserting themselves. Surgery and reassignment provide great relief even in late adolescence, even in cases where the ability to function sexually may not be possible.

7. Evidence for Gender Behaviour as a Function of Learning

That the nature/nurture controversy on masculine and feminine behaviour is not a recent phenomenon is shown by the following quotation from Moll in "The Sexual Life of the Child", (1913, p 43):

"We must not forget the frequent, intimate association between structure and function. Many, indeed, and above all the extreme advocates of women's rights, prefer to maintain that such sexually differentiated inclinations result solely from differences in individual

education: if the boy has no enduring taste for dolls and cooking, this is because his mother and others have told him, perhaps with mockery, that such amusements are unsuited to a boy; whilst in a similar way girls are dissuaded from the rough sports of boyhood" ... "The activity of the will may be effective within certain limits, especially where the inherited tendency thus counteracted is weak; but only within certain limits. Thus we can understand how it is that in some cases a child is impressed with characteristics normally foreign to its sex" ..... "...nonetheless we are compelled to assume that certain tendencies are inborn. The failure of innumerable attempts to counteract such inborn tendencies by means of education throw a strong light upon the limitation of the activity of the individual will; and the same must be said of a large number of other experiences."

Modern social learning theory is summarised by Mischel (1966). It is based largely on the work of Bandura and colleagues (1963). In this view the same behaviour elicits different rewards for one sex than for the other and so develops feminine and masculine behaviour. Imitation of models even without reinforcement plays a large role also in this theory. At the same time learning theorists are unable to find any evidence that "dependency" is rewarded more in girls and aggression is rewarded or tolerated more for boys.

Money's work on sex-reassignment (1955) appeared to show that gender behaviour along with gender identity tamely follows the sex of upbringing. Reassignment of sex after the age of 2½ years was said to lead to persistent adjustment problems for the child. In 1963, Money stated that "like hermaphrodites, all the human race follow the same

pattern - of psychosexual non-differentiation at birth." In 1968 however, Money stated, "there may well be a fetal hormonal effect on subsequent psychosexual differentiation, limited if so."

Money's advice on sex-reassignment has been largely accepted, yet there are cogent arguments against generalising from his reports. These arguments are summarized by Diamond (1966, 1976). The fact that many wrongly assigned individuals ask for reassignment after the onset of puberty points to the endocrine mediation of psychosexual orientation, as it is at puberty that adult expression of a psychosexual basis is being goaded into action. Diamond quotes a report on a familial genetic endocrine problem in the Dominican Republic that causes a large number of males to appear female at birth, in a small community. Reared as girls, post-pubertal orientation is male and the individuals change gender identity at the time of puberty. This has been discussed more fully under male pseudo-hermaphroditism.

Zuger (1970) has also been critical of Money. He points out that due to the poorly developed state of cytogenetics, Money's emphasis on upbringing owed something to Turner's Syndrome (45 XO) and Testicular Feminization being regarded as males (chromatin negative) who were well adjusted to being reared as girls. Later developments suggest that this is natural as individuals with 45 XO have no Y chromosome or testosterone, while those with complete testicular feminization are externally very feminine and are totally insensitive to androgens.

Imperato-McGinley et al (1979) point out that when Money's hypothesis was accepted techniques for assessing hormones and enzymes were poor. Money's prophecies were self-fulfilling because male

pseudo-hermaphrodites were castrated (and given female hormones), depriving the body of possible effects of testosterone.

Nevertheless, it is true that there is a strong cross cultural tradition of different attitudes, expectations and behaviour towards the newly arrived child by parents, depending on the baby's sex. Yet, Brush et al (1978) were unable to find any intercorrelation between measures of sex role behaviour in preschool children and point to the lack of any data on stability of sex role behaviour in 6-10 year old children.

In an earlier section innate behavioural sex differences in the newborn were mentioned. There are also studies of mother-child interaction which show that mothers behave differently towards sons and daughters from the earliest days (Moss, 1967). In this way mothers were credited with responsibility for the infants' behaviour. Further studies by Moss as well as others (Goldberg and Lewis, 1967), showed that there are only two important sex-dependent differences: mothers stimulate motor activity more in male infants, and imitate and so reinforce vocal behaviour in female infants.

The developmental psychologist Kagan (1977), surveying the psychology of sex differences concludes that "psychological differences between the sexes are in large measure the result of differential socialization; nevertheless the general agreement on the content of sex role standards across many cultures suggests that different societies are responding in the same way to biological differences in size, bodily proportions and normal life functions".

Father's presence and effectiveness as a male model are widely held to be necessary to promote masculinity in boys. Fathers are seen to abhor effeminacy in boys and to discourage it strongly (Goodenough, 1957). However, two independent investigators were unable to establish reduced masculinity ratings in father-absent boys (Butler, 1969; Barclay et al, 1967).

8. Cognitive Developmental Theory

The cognitive-developmental model of the way gender behaviour develops has been outlined by Lawrence Kohlberg (1966). Basically, it is the application of Piaget's stage-theory of cognitive development to the learning of gender identity and roles, giving emphasis to the child's own awareness and self-categorization as a girl or boy. The child is told his given name; similarly he is told of his status as a boy (or girl) and the tendency to cognitive consistency leads to positive values being given to objects and acts that are consistent both with gender identity as well as biological tendencies. The studies of Imperato-McGinley et al on the boys with 5-alpha Reductase deficiency seem to support the role of cognition and self-awareness in the development of gender behaviour.

9. Derivations from Psychoanalytic Theory

Psychoanalytically orientated workers evoke the time-honoured concepts of close-binding intimate mothers and distant fathers to explain a variety of male sexual deviance, especially homosexuality, and including transsexualism (Stoller, 1975; Bieber, 1962). Identification with the father's gender behaviour and role according to this involves satisfactory resolution of the oedipus complex (castration anxiety).

Regarding the development of male transsexualism, Stoller emphasizes that there are some differences from Bieber's theory of male homosexuality. The mother of the future male transsexual has not resolved the female equivalent of the oedipus complex (penis envy). Her son is her treasured phallus, and she promotes a "blissful symbiosis" with him. Such a boy is not demasculinized: he experiences no oedipal conflict because he feels like a girl, and his father described as a zero, makes no attempt to interfere.

Stoller agrees with Bieber that the mother of the homosexual-to-be boy fosters the child's fear of boys and in this way, his preference for playing with girls and rejection by boys. By infantilising him she prevents opportunities for corrective experiences with his siblings, peers and father. However Siegelman (1974) shows that for homosexuality, if the subjects are controlled for neuroticism there are no significant differences in the family constellation of homosexuals and heterosexuals. In a similar vein, Freund (1974) points out that, in the case of effeminate children, the question is open as to responsibility for the poor father-son relationship, nor do the findings indicate that the relationship itself caused the child's abnormalities.

To summarise one may, like Diamond state that the genetic and endocrine forces that underlie sexual differentiation are also involved in the organization of cognitive developmental processes, reinforcement qualities and predisposition to imitate. The present investigation into effeminate behaviour in boys is an attempt to make a contribution to the etiological questions raised in the foregoing survey of the literature.

CHAPTER 2: MATERIALS AND METHODS

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1. Setting of the Research

The geographic setting for the research is Newfoundland, a province of Canada which has a homogeneous population of English speaking Caucasians. Of Irish and British ancestry, the inhabitants' sociocultural traditions are in keeping with western cultural stereotypes for what is regarded as appropriate behaviour for the two sexes. The place for the study is the Dr.C.A. Janeway Child Health Centre, which is the only children's hospital in the province, a major referral centre. The psychiatric service in this centre, which provided the subjects for the study is the only one in the province for children at the time of the study. The children are referred by other medical practitioners such as family doctors and pediatricians for the whole gamut of psychiatric problems in childhood, but so far not for gender behaviour disorders.

The psychiatric assessment of children involves a painstaking evaluation of the medical, psychological and social aspects of the child and his family. It affords a unique opportunity to enquire into gender behaviour, while at the same time collecting data on related areas such as child rearing practices, psychiatric disturbances and other aspects of the family background as possibly affecting the child's sex typed behaviour.

2. Design of the Project

The objective of the project is to administer an item sheet which will, (a) identify effeminate behaviour both qualitatively and quantitatively and (b) elicit factual information from the child and parents regarding the presence of factors proposed by well known workers as being relevant to the development of gender behaviour and identity. As the project occurs in a setting of psychiatric assessment many relevant items are elicited as part of the general assessment process. Specific items on gender behaviour and its development, parental attitudes and gender role behaviour are easily included. The child's psychiatric interview is extended by direct questions as well as some simple projective techniques shown in the literature to be helpful in assessing gender identity.

3. Hypotheses

Several hypotheses arise from the literature review and from the project in particular.

i. It is hypothesised that effeminacy is not an all or none phenomenon - most boys will have some "feminine" characteristics, with only a few being at the extreme end of masculinity or effeminacy.

ii. Among the extremely effeminate boys a pattern of related factors will emerge which can be used to predict high effeminacy scores.

iii. Marital conflicts and abnormal child rearing practices reported in the literature as related to the development of effeminacy are not specific to this group of boys but affect children's vulnerability in a way that will vary with the individual child.

iv. A relatively high incidence of deviant gender behaviour will prevail in a psychiatric population.

4. Favourable Conditions for the Project in the Setting Chosen

i. As the only referral centre for children, a wide variety of children's disorders are seen. This is not an epidemiological study, and none of the children is being referred at this time for gender behaviour problems and sampling bias will not be expected from that point of view. As the children have usually been seen in the same hospital for minor or major non-psychiatric conditions, medical records are available for checking data and additional information.

ii. The nature of history taking in psychiatry makes the addition of a dimension on gender behaviour painless though time consuming.

iii. Most of the literature on effeminate boys and men comes from selective studies of clinical populations. Studying gender behaviour in an unselected series within a psychiatric population may be an advantage as it will even out the family psychopathology.

5. Principles in the Collection of Data

i. All the children and their parents have been interviewed by the investigator, who is a child psychiatrist and accustomed to interviewing families and children. This should improve reliability. Intelligence tests were carried out by a clinical psychologist.

ii. Successive referrals to the psychiatric clinic for diagnostic assessment of boys aged from six to twelve years including those having completed the twelfth birthday less than a month before the assessment date, were the subjects. Six years was chosen as an age when cognitive development would allow for gender constancy as a concept and cooperation in interviews and tests was possible. The twelfth birthday was taken as an arbitrary cut off point for pre-pubertal boys.

iii. Boys with an IQ of less than 70 were excluded. Defective formation of concepts regarding gender, and difficulties in interpreting interview questions and answers in this group were among the reasons. For similar reasons, children with gross brain damage and early onset psychoses were also excluded. Their numbers were very small and their intelligence levels were also usually below 70.

iv. Information obtained from the subjects and their families was always cross checked with the medical records in the hospital, with the school and when available, with social service agencies. This improved reliability greatly.

v. Both parents were requested to come to the first appointment for a lengthy interview as a matter of routine. The child's father was sometimes seen at a later date at his convenience. It was not possible to interview all the fathers due to the appointment being rejected, or due to the father being separated temporarily or permanently.

vi. The total time taken to collect information for the psychiatric assessment and the research instrument was approximately

2-3 hours. Psychological assessment was usually done at a separate appointment.

6. Measurements

i. Format of the Item Sheet

A sample of the item sheet is attached in Appendix A. Definitions and instructions are appended in Appendix B.

The item sheet has 151 items classified under seven categories, A to G. Parts A to D contain personal and demographic data including family structure, ratio of girls to boys in the sibship as well as among older siblings, career choice of mother and similar items considered relevant by other workers. Part E consists of the psychiatric diagnosis of the child on the triaxial method recommended for the International Classification of Diseases (Rutter, 1975). Section F, the parents' questionnaire, focuses on relevant aspects of the child's development. Effeminate behaviour and attitudes as noted by the parents as well as the parents' own attitudes and practices are included along with questions on psychiatric or gender problems in the child's first degree relatives. Section G contains items on the child's appearance, build and responses to questions pertaining to gender behaviour and attitudes.

ii. Assessment of Effeminate Behaviour

The items of effeminate behaviour and attitudes were collected from the literature. The publications of Richard Green (1974), Kurt Freund (1974), John Money (1967), Eleanor Maccoby (1966), Lawrence Kohlberg (1966), Albert Moll (1913), etc., and discussions with Mr. J. Kenna, Senior

Lecturer in Clinical Psychology at Manchester University, U.K., a known authority on gender disorders, have been the main sources.

It has been shown by Rutter and Graham (1968), that a reliable interview can be held with a child. Direct questioning of children has limitations imposed by the level of cognitive development and defensiveness. Child psychiatrists have always used indirect methods to elicit areas of anxiety and conflict, best discussed by Kanner (1957). Play, drawing, magical wishes and other attempts to explore the fantasy and inner world of the child may be expected to yield information on areas which the child may conceal in anticipation of disapproval or teasing.

Both direct and projective methods are used in the child's questionnaire. The "draw-a-person test" was first reported by Machover (1949), to reflect the subject's inner gender identity by way of the sex of the first person drawn. This has since been confirmed by Mainford (1953), Money and Wang (1966), Richard Green (1974) and several others. While over 80 per cent of masculine boys draw a male figure first, 60 to 65 per cent of effeminate boys draw a female first - the difference is very highly significant ($P < 0.001$). It is obvious at the same time that false positives are quite common, and a variety of factors other than effeminacy may influence the sex of the first person drawn.

A second projective test involves the choice of clothing for a neutral plastic doll and a third the choice of a picture for the child's bedroom. More obvious questions are about toys, friends, household chores, sex of closest adults, ambitions, hobbies, games extending to actual cross dressing behaviour, merged into the overall psychiatric interview to be non-intrusive.

The purpose of the items on effeminate behaviour and attitudes is to arrive at a score for effeminacy for each boy. For each item characteristic of effeminate boys a score of 2 was given. If the behaviour or attitude was absent a score of 0 was given, and a score of 1 for uncertain or ambiguous answers. As some of these items are much weaker than others as indications of effeminacy, they were submitted independently to two child psychiatrists and a clinical child psychologist for weighting. Appendix C describes the statistical procedure used to estimate the validity of the independent experts' weighting of the variables. A final effeminacy score for each boy was arrived at by adding all the weighted scores obtained.

Correlations with other factors in the item sheet suspected of influencing gender development were sought by appropriate statistical methods such as chi-square tests, regression analysis, etc.

7. Calculation and Analysis of the Results

The format of the item sheet (Appendix A) allows for the data to be punched on to IBM cards for analysis by computer using a "Statistical Package for the Social Sciences Program" (Nie et al, 1975).

The results of the computer analysis include frequency tables of the variables and a femininity score for each boy as shown in Part A of Chapter-4 (Findings).

In order to provide a control group, it was decided to divide the subjects into two halves (50 subjects in each) for further analysis. It is expected that the most effeminate and least effeminate boys would be at the two extremes with most of the boys showing mild effeminacy scores.

It is expected that statistical analysis comparing the groups with the lowest and the highest effeminacy scores will make it possible to make predictions about etiological variables that correlate significantly with the high score group. These variables can be used to predict the group scoring high for effeminacy in the second half of the subjects. These findings are reported in Part B of the Findings.

CHAPTER 3: RESULTS – THE CASE MATERIAL

CHAPTER 3: RESULTS - THE CASE MATERIAL

1. The Demographic Variables

One hundred boys who fulfilled the criteria were seen during a twenty month period of time. The variables have been analysed separately for the two successive groups of fifty boys.

The following tables indicate the frequency of the variables in the first fifty boys.

Table 3.1

Age Distribution of the Index Cases
(First 50 Boys)

Age in Years

Age	Frequency
Six	6 (12%)
Seven	6 (12%)
Eight	9 (18%)
Nine	10 (20%)
Ten	8 (16%)
Eleven	10 (20%)
Twelve	1 (2%)
Total	50 (100%)

Table 3.1 shows the age distribution of the first 50 boys, expressed as the age at the last birthday. A distinct trend is seen for more boys aged over eight years. This is in keeping with the general finding that children who are socially disruptive are more likely to be referred to psychiatric clinics than children whose maladjustment does not affect the environment and that disruptive behaviour becomes less tolerable as the child edges towards adolescence. The small numbers

in the group aged twelve years is due to the cut off point which was twelve years and one month.

Table 3.2

Age Difference between Parents

Category	Number of Boys
Mother older	6 (12%)
Father older	38 (76%)
Same age in years	6 (12%)
Total	50 (100%)

Table 3.2 shows that fathers are almost always older than mothers, 76 per cent. In 12 per cent of cases mothers are older and in the remaining 12 per cent both parents are of the same age in years.

Table 3.3

Age of Mother at Birth of Child

Category	Number of Boys
Under 20 years	9 (18%)
20-29 years	30 (60%)
30-39 years	7 (14%)
40+ years	4 (8%)
Total	50 (100%)

Table 3.3 shows that almost 60 per cent of the boys were born to women aged 20-29 years, about 20 per cent of the mothers being either less than twenty years old or over thirty years old at childbirth.

Table 3.4

Child's Place in Birth Order

Category	Frequency
Only child	8 (16%)
Eldest	14 (28%)
Second	13 (26%)
Third	8 (16%)
Fourth and rest	7 (14%)
Total	50 (100%)

Table 3.4 shows that 44 per cent of the boys were first born (combining oldest and only children). The figures bear out the reports of several investigators (Adler, 1926; Rutter, 1970) regarding the vulnerability of the first child.

Table 3.5

Number of boys and girls in household excluding index cases

Number of Children	Girls	Boys
One	13	19
Two	16	18
Three	3	0
Four	0	4
Total	36	41

Table 3.5 shows that the 50 households contain a total of 36 girls and 41 boys, in addition to the 50 index boys. Thus there is a significant excess of boys to girls in the households - altogether 91 boys and 36

girls. A significant excess of sons over daughters has been reported in families where the identified patient happens to be a male juvenile delinquent (Jones et al, 1980). As "antisocial" or "conduct" disorder is an important cause of referral to child psychiatry departments one can see a link with the excess of boys in the households of the present sample. Calculating the number of boys in the sample who had sisters only as older siblings (32 per cent) against brothers only as older siblings (34 per cent) the same relationship is seen.

Table 3.6

Religious Denomination

Category	Number of Boys
Roman Catholic	26 (52%)
Anglican	12 (24%)
United Church	6 (12%)
Other denominations	6 (12%)
Total	50 (100%)

Table 3.6 shows the religious affiliation of the boys' families. All belonged to one or other Christian denomination. The distribution is roughly in keeping with the proportions of the denominations in the population and does not show any significant trends against the expected distribution.

Table 3.7

Church Attendance

Category	Number of Boys
Regular	20 (40%)
Infrequent	25 (50%)
None	5 (10%)
Total	50 (100%)

Table 3.7 shows the pattern of church attendance. The regular church attenders (40 per cent) come from families where at least once weekly church attendance is mandatory for all the children.

Table 3.8

Ethnicity

Category	Frequency
Caucasian	50 (100%)
Other	0

Table 3.8 shows that all fifty boys are racially similar, that is white Caucasians.

Table 3.9
School Performance

Category	Frequency
In correct grade	38 (6) (76%)
Below correct grade	10 (20%)
In special class	2 (4%)
Total	50 (100%)

Table 3.9 shows that only 76 per cent of the boys are in the appropriate grade for their chronological age. The figure in parenthesis is the number receiving remedial help. However a much larger proportion were in fact not achieving at their grade level in school and were much in need of remedial help. This aspect of the interrelatedness of social and emotional difficulties with inadequate school performance has been commented on by many investigators, most clearly articulated by Michael Rutter (1970). Poor concentration in doing class room work is almost a sine qua non of children with a variety of psychiatric problems.

Table 3.10
Education of Parents

Category	Fathers	Mothers
Elementary	5 (10%)	5 (10%)
Jr. High	20 (40%)	20 (40%)
Sr. High	24 (48%)	23 (46%)
Univ. Degree	1 (2%)	2 (4%)
Total	50 (100%)	50 (100%)

Table 3.10 highlights the educational disadvantages of the family of origin of the index children. Over 50 per cent of the fathers and the mothers had not obtained more than grade 7 or 8 education. Over 40 per cent attended high school in grades 9, 10 and 11, but not many of them had matriculated. Only one father and two mothers out of the 100 parent figures had a university degree.

Table 3.11

Family Structure

Category	Frequency
Biological parents	34 (68%)
Single mother alone	6 (12%)
Single mother and her family	4 (8%)
Adoptive parents	6 (12%)
Total	50 (100%)

Table 3.11 shows that 68 per cent of the boys are living with a father and a mother of whom at least one and usually both are the biological parents. Twenty per cent are single mother families. Twelve per cent are living with two parents who adopted the boy in the first six months of life.

2. The Clinical Variables

Table 3.12

Psychiatric Syndromes of the Boys

	Category	Frequency
1.	Normal variation	2 (4%)
2.	Adaptation reaction	8 (16%)
3.	Hyperkinetic disorder	6 (12%)
4.	Speech disorder	1 (2%)
5.	Enuresis	2 (4%)
6.	Encopresis	1 (2%)
7.	Conduct disorder	11 (22%)
8.	Neurotic disorder	14 (28%)
9.	Personality disorder	2 (4%)
10.	Other clinical syndromes	3 (6%)
	Total	50 (100%)

Table 3.12 gives the psychiatric diagnoses of the index cases. The classification used is the latest revision of the International Classification of Diseases (1977). Four per cent of the boys were considered to be within normal limits. Sixteen per cent had symptoms attributable to the effect of adverse environmental factors. Twelve per cent of the boys were diagnosed as suffering from hyperkinetic disorder. As the prevalence of hyperactivity in school boys of this age in the general population is at least 1.2 per cent (Lambert et al, 1979) and probably higher, a rate of 12 per cent within the psychiatric clinic population appears realistic. Enuresis is usually treated by family doctors and pediatricians. To some extent this is also true of

encopresis which is less common but tends to require psychiatric intervention more often. The term "conduct disorder" covers a group of behaviours which are disapproved of socially, from excessive oppositional behaviour to truancy and stealing. Convention has sanctioned the use of the term, but as a diagnostic entity the term conduct disorder has shortcomings. The term "neurotic disorder" refers to conditions such as severe separation anxiety, other states of anxiety, fearfulness, depression, etc. which have characteristics modified by the fact that the child is still a developing organism with marked attachment to and dependence on his parents. Personality disorders are not easy to diagnose in children under thirteen years but in some children marked extraversion, introversion, compulsiveness and insecurity as predominant traits governing their existence are evident early enough. Finally conditions such as Tourette's syndrome are included in "other clinical syndromes".

Table 3.13

Presence of Etiological Factors of Attitudinal Type

Category	Frequency
Present	43 (86%)
Absent	7 (14%)
Total	50 (100%)

Table 3.13 shows that in 86 per cent of the children parental attitudes such as rejection and excessive overprotection were detected and played a role in the child's psychiatric syndrome.

Table 3.14

Psychiatric disorders in other Family Members

Category	Fathers	Mothers
Present	25 (50%)	28 (56%)
Absent	25 (50%)	22 (44%)
Total	50 (100%)	50 (100%)

Table 3.14 shows that 50 per cent of the fathers and 56 per cent of the mothers were considered to have significant psychiatric abnormalities. Overall, only 14 boys (28 per cent) had two parents with no significant psychiatric abnormalities. In addition four boys had a total of seven siblings with psychiatric problems.

Table 3.15

Psychiatric syndromes in Fathers and Mothers

Category	Fathers	Mothers
Organic psychosyndrome	1 (2%)	1 (2%)
Schizophrenia	0 (0%)	0 (0%)
Affective psychoses	2 (4%)	2 (4%)
Personality disorder	9 (18%)	25 (50%)
Alcoholism	13 (26%)	0 (0%)
Nil psychiatric	25 (50%)	22 (44%)
Total	50 (100%)	50 (100%)

Table 3.15 gives the breakdown of the psychiatric syndromes in the parents. One father and one mother each had an organic psychosyndrome, there were no schizophrenics and affective psychosis had been

diagnosed in two fathers and two mothers. Thus the predominant diagnoses were in the non-psychotic group. Nine fathers and 25 mothers were diagnosed to have personality disorders but the fathers made up for the deficiency with alcoholism.

Figures 1 and 2 (pages 61 and 62) show the percentile distribution of the heights and weights of the children. The distribution curve is almost normal, with a shift to the left, 71 per cent of the children being within the 50th percentile in height and 74 per cent similarly in weight. This was also borne out by the skin-fold thickness over the biceps (Table 3.16).

Table 3.16

Biceps skin-fold thickness

Category	Frequency
Within average range	44 (88%)
Above average range	6 (12%)
Total	50 (100%)

Table 3.16 gives the range of biceps skin-fold thickness. Only 12 per cent of the boys had measures above the mean for their ages although the incidence of obesity in boys in Newfoundland is reported to be high (Nutrition Canada, 1976). In the age group under study it has been established that there are significant differences between boys and girls in fat as measured over the biceps and other areas (Tanner, 1978). Tanner also reports that girls are less likely than boys to have fourth fingers longer than second (index) fingers.

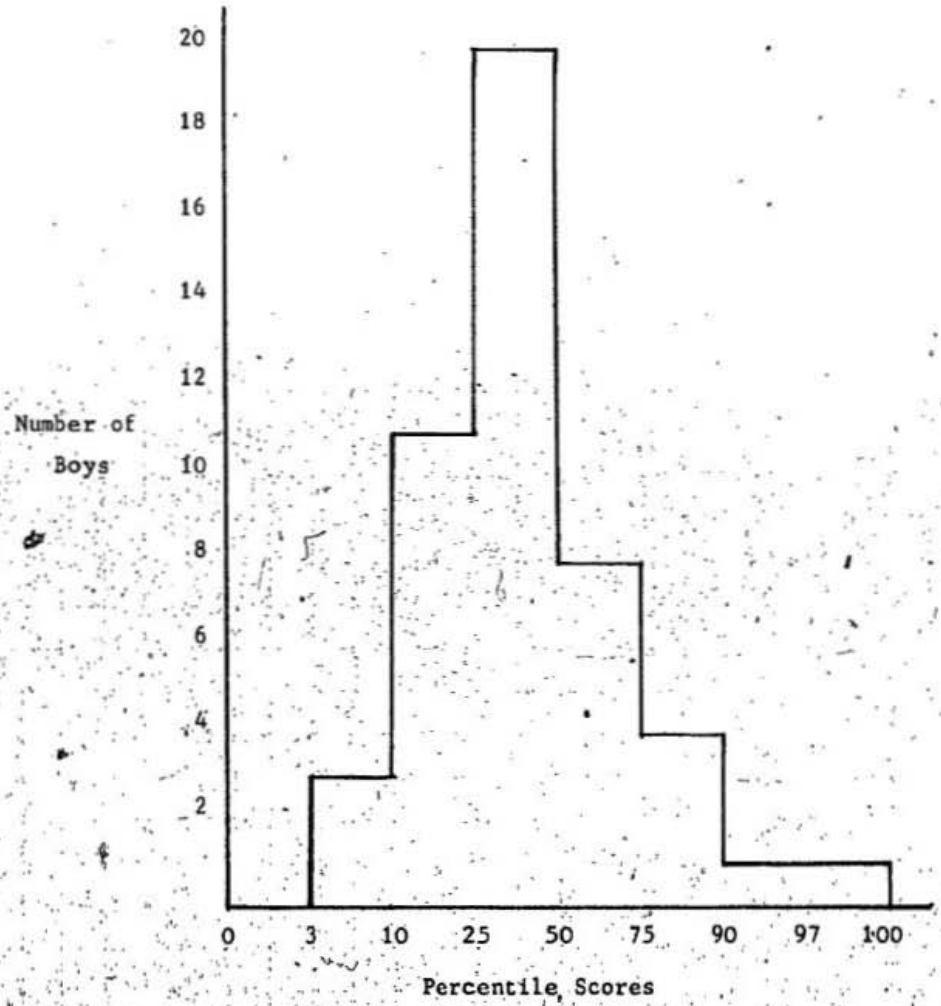

FIGURE 1

Distribution of Heights of First Fifty Boys

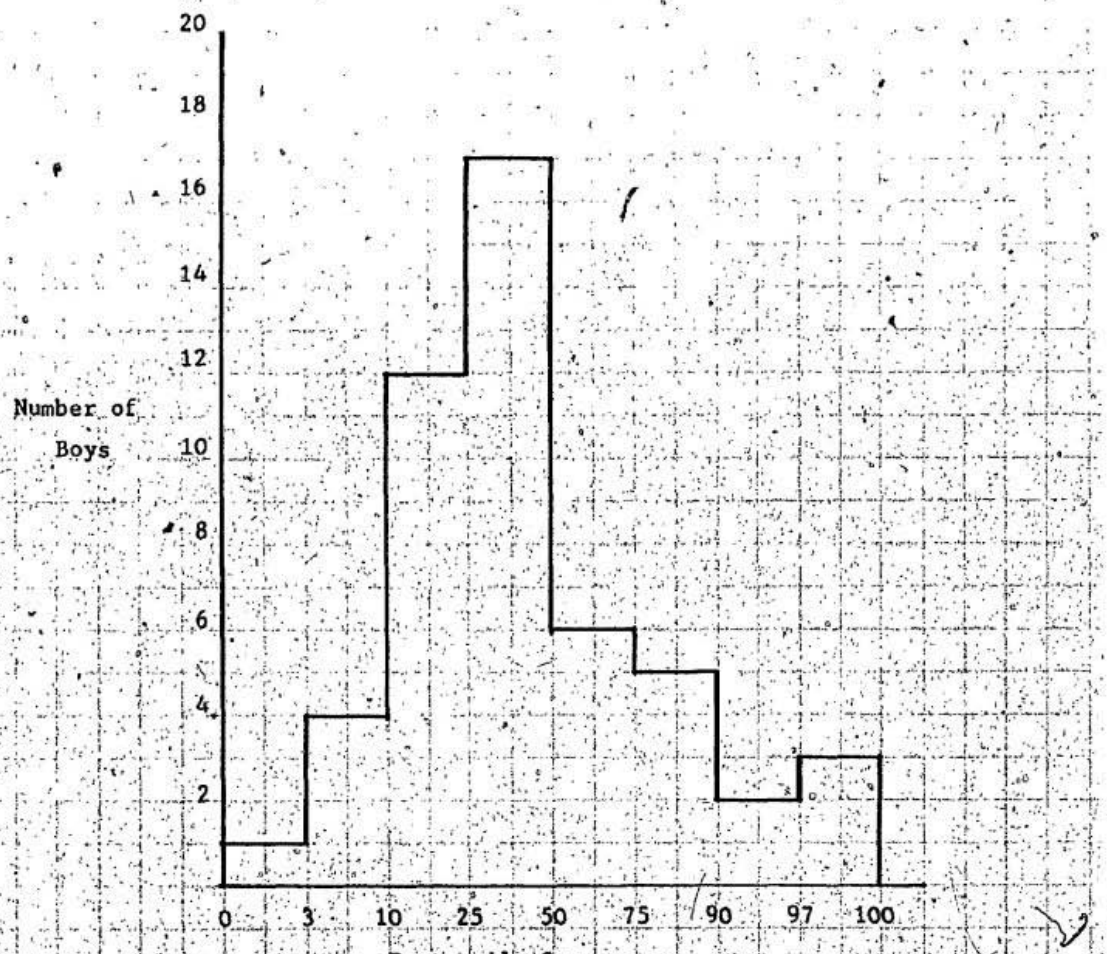

FIGURE 2

Distribution of Weights of First Fifty Boys

Table 3.17

Relative length of index and fourth finger

Category	Frequency
Index longer	6 (12%)
Fourth longer	20 (40%)
Equal	24 (48%)
Total	50 (100%)

Table 3.17 shows the distribution of the relative lengths of index and fourth fingers.

3. Variables that may influence Gender Behaviour

As already explained, these variables were culled from a review of old and contemporary literature as well as discussions with those presently engaged in research in the field.

Table 3.18

Sex of the child hoped for

Category	Frequency
Boy	18 (36%)
Girl	10 (20%)
No preference	20 (40%)
Not known	2 (4%)
Total	50 (100%)

Table 3.18 shows that at least 20 per cent of the mothers were hoping for a girl and could have been disappointed when a boy was born.

Only 36per cent were decidedly for a boy.

Table 3.19

Baby's appearance at birth ,
(mother's view)

Category	Frequency
Masculine	35 (70%)
Feminine	7 (14%)
Not known	8 (16%)
Total	50 (100%)

Table 3.19 shows that 14 per cent of the boys were considered to have a girlish facial appearance at birth by the mothers, but these were not necessarily those mothers who were hoping for a girl, who often replied that the baby was very much a boy. Seventy per cent of mothers were sure that the baby looked masculine at birth.

Table 3.20

Physical proximity to mother in infancy and later

Category	Constant	Average	Minimal	Total
First year	19 (38%)	20 (40%)	11 (22%)	50 (100%)
Beyond 3 yrs	18 (36%)	19 (38%)	13 (26%)	50 (100%)

Ethological studies of parent child interaction show that in the first year both boys and girls have close physical contact with their parents, especially mother (Lewis and Weinraub, 1974). By the age of two years boys are transferring to the "distal" type of attachment behaviour towards both parents while girls do so only with the father

and maintain "proximal" behaviour with the mother. Table 3.20 shows that in the psychiatric clinic sample 36 per cent of boys were exhibiting proximal behaviour well beyond infancy. We also note that 26 per cent of the boys lacked the normal degree of affectional behaviour after infancy.

Table 3.21

Age in years at which boy stopped sleeping with mother

Category	Frequency
One	18 (36%)
Three	8 (16%)
Four	3 (6%)
Five	2 (4%)
Six	1 (2%)
Seven	4 (8%)
Eight and later	4 (8%)
Total	50 (100%)

The over-dependent behaviour of this sample is also borne out in Table 3.21. One-fifth of the boys often slept with their mothers well past the age of five years. This is an aspect of family life often glossed over by parents who generally appeared to be reluctant to admit the fact. Only about one-third of the boys had moved permanently into a separate bed by the end of the first year.

Table 3.22

Adult to whom the boy is closest

Age period	Mother, other female	Father, other male	No one
Pre-school	45 (90%)	5 (10%)	0 (0%)
School age	35 (70%)	12 (24%)	3 (6%)

This table (3.22) appears to bear out the old adage that a boy's best friend is his mother. Only 10 per cent of the boys were closer to the father before starting school and this increased only to 24 per cent when the boys were going to school. Maximum closeness to other relatives was very rare; occasionally a grandparent or uncle was favoured. Six per cent of the boys had become alienated and were not seen as "close" to any adult.

Table 3.23

Occupational gender of parents

Category	Mothers	Fathers
Masculine	2 (4%)	39 (78%)
Feminine	40 (80%)	4 (8%)
Neutral	6 (12%)	5 (10%)
None	2 (4%)	2 (4%)
Total	50 (100%)	50 (100%)

A traditional view of occupations is expressed in this table (3.23). Eighty per cent of the mothers and 78 per cent of the fathers held traditional occupations. Of the remainder, most held occupations that are not strongly sex-typed, such as fishplant workers, teachers, etc.

Of the two mothers with masculine occupations one was a farmer and the other a fisherwoman. Of the four fathers with feminine occupations three were cooks and one was a hair-dresser. The parents with no occupation (two fathers and two mothers) did neither housework nor held a job outside the home. Stoller (1975) postulates a strong connection between masculinity in the mother and transsexualism in her son. Of course the present study is only concerned with effeminacy, so that the absence of masculinity in the mothers of effeminate boys would not contradict his hypothesis.

Table 3.24

Which parent is main disciplinarian

Category	Frequency
Father	6 (12%)
Mother	38 (76%)
Both	4 (8%)
Neither	2 (4%)
Total	50 (100%)

Table 3.25

Avoidance of disciplinarian role by father

Category	Frequency
Avoids	21 (42%)
No avoidance	16 (32%)
Doubtful	9 (18%)
Not applicable	4 (8%)
Total	50 (100%)

Table 3.26

Which parent has major voice in financial matters and life style

Category	Finances	Life style
Mother	23 (46%)	22 (44%)
Father	15 (30%)	17 (34%)
Equal share	12 (24%)	11 (22%)
Total	50 (100%)	50 (100%)

Tables 3.24 to 3.26 deal with the politics of power within the families. Discipline is left largely to the mothers, fathers usually claiming that they are not at home at the time of the misdemeanour or that they do not feel the punishment is necessary. In some cases the mothers preferred to leave the fathers out of the picture because they claimed the fathers were excessively harsh. Thus the main disciplinarian is the mother in 76 per cent of the cases, the father in 12 per cent and equally shared in 8 per cent. In 4 per cent neither parent assumed responsibility because a grand-parent interfered or assumed responsibility. Forty-two per cent of the fathers were seen as avoiding a role in discipline, and only 32 per cent were definitely interested in playing a role. In 8 per cent father could not discipline the children either due to working away or being separated from the family.

Almost half the fathers left major decisions on money and life style to their wives. However these figures — 46 per cent and 44 per cent for financial expenses and life style include cases where the father is absent temporarily or permanently. In a third of the cases father appears to hold and exercise all power and only about a quarter

of the mothers felt that the responsibilities were shared equitably. Social learning theorists emphasize power value as a factor in children's acceptance of sex typed roles (Maccoby, 1967, 1974; Mischel, 1966), but data is insufficient at this time.

Table 3.27

Mother's satisfaction with husband's role in the family

Category	Frequency
Satisfied	15 (30%)
Mild dissatisfaction	11 (22%)
Strong dissatisfaction	21 (42%)
Not applicable	3 (6%)
Total	50 (100%)

Table 3.28

Father's participation in family activities

Category	Frequency
Maximal	6 (12%)
Average	16 (32%)
Minimal	28 (56%)
Total	50 (100%)

Table 3.29

Family conflicts and disruption

Category	Frequency
No serious disruptions	23 (46%)
Severe conflicts	10 (20%)
Conflicts with temporary separation	8 (16%)
Permanent separation from father	9 (18%)
Total	50 (100%)

Tables 3.27 to 3.29 show that (a) only a third of the mothers are satisfied with their husbands' share in family life, (b) slightly over half of the fathers play little part in family activities, and (c) severe marital problems are evident in over half the families. Such a profile of family life is not unexpected in a child psychiatric population, and it may also be expected to influence gender behaviour if a cherishing father is essential for developing masculine behaviour.

Table 3.30

Active encouragement/discouragement of feminine behaviour

Category	Father	Mother
Encouragement	2 (4%)	12 (24%)
Discouragement	9 (18%)	12 (24%)

Interest shown by boys in feminine activities and clothing is said to be encouraged either by enjoying and helping the boy's performance or by failing to discourage it actively, in the case of

effeminate boys (Green, 1974). The mothers interviewed in this study did not feel there was any harm in letting sons dress up in girls clothing or play with their sister's dolls. Some participated in the play, letting the boy play house in the female role as he did not seem to have any friends to play with. There was a universal belief among the parents that interest in girls clothing and play activities would be outgrown by the age of 7 or 8 years. However, as table 3.30 shows only 24 per cent of the mothers and 4 per cent of the fathers actually found themselves participating in activities that may be seen as positively reinforcing effeminacy, because the majority of the boys did not show persistent interest in female clothing, make-up or play.

4. Variables used to measure Gender Behaviour.

The items in this part of the questionnaire are used to arrive at a score for effeminacy for each child. As previously stated in Chapter 3, the items were arrived at from the literature and discussions with research workers in this field. The answers to questions are based on parental reports, the investigator's observations of the child, the child's own reports and as well the results of some projective tests.

Table 3.31

Types of feminine activities and the number of children who participated in or imitated such activity at any time in preschool age period

Category	Frequency
Clothing	15 (30%)
Hair styling	17 (34%)
Make-up	17 (34%)
Maternal housework	19 (38%)

Table 3.32

Types of female clothing

Category	Frequency
Outer dress	5 (10%)
Lingerie	2 (4%)
Night dress	2 (4%)
Several of the above	4 (8%)
None	37 (74%)
Total	50 (100%)

Table 3.33

Age in years at which any cross dressing first seen

Category	Frequency
2 - 5 years	16 (32%)
6 - 12 years	5 (10%)
Never	29 (58%)
Total	50 (100%)

Tables 3.31 to 3.33 give some of the details on cross dressing and other cross-gender behaviour. A third of the boys under five years were known to have put on mother's or sister's clothes, tried their hair styles or make-up and imitated mother doing housework. Jewellery, handbags and high heeled shoes were rarely favoured. It is clear that aping mothers' activities in self-adornment and housework is relatively common in pre-school children. There is confirmation of this in Green's finding that 18 per cent of typical masculine boys had occasionally cross dressed in early childhood (1976). In boys aged more than five years cross dressing appears to be uncommon - 10 per cent as opposed to 32 per cent in the younger age group, as shown in Table 3.33. Only 58 per cent were completely free of experimenting with "feminine" activities.

Table 3.34

Clothing preference at the time of assessment

Category	Frequency
Typical masculine	38 (76%)
Atypical masculine	9 (18%)
Feminine	3 (6%)
Total	50 (100%)

Table 3.34 shows that 6 per cent of the first fifty boys actually had a preference for wearing typical girls' clothing. The majority, 76 per cent, would wear only the casual jeans and T-shirt favoured by their fellow school boys. Eighteen per cent preferred more ornate but still masculine clothing such as suits which the majority group generally refused to wear.

Table 3.35

Feminine choices in play and chores

Category	Frequency
"House"	4 (8%)
Acting	3 (6%)
Toys	2 (4%)
Sports	5 (10%)
Helping mother	23 (46%)

Table 3.35 shows the percentage of boys who preferred the female role in playing house (8 per cent), in play acting (6 per cent) and who preferred Barbie Dolls (4 per cent), girls sports activities (10 per cent) and mother as the adult they liked to help (46 per cent). It should be pointed out however, that 21 per cent of the boys were unwilling to help either parent and only 20 per cent wished to help fathers.

Table 3.36

Peer Choices

Category	Peers calling for him	Peers called on by him	Current Playmates
Girls	5 (10%)	2 (4%)	4 (8%)
Boys	28 (56%)	22 (44%)	28 (56%)
Both	6 (12%)	12 (24%)	10 (20%)
None	11 (22%)	14 (28%)	8 (16%)
Total	50 (100%)	50 (100%)	50 (100%)

Table 3.36 shows the peer relationships pattern. About half the boys (44 - 56 per cent) are mixing almost exclusively with other boys.

About a fifth (20 - 24 per cent) are able to play well with girls and boys while about a tenth (8 - 10 per cent) like to play almost exclusively with girls. The fact that a sixth (16 per cent) of the children were solitary and friendless is not surprising in this sample. Unpopularity with peers is well established as a signpost of trouble in childhood.

Table 3.37

Types of teasing

Category	Frequency
Romantic	13 (26%)
Sissy, Suki	12 (24%)
Pansy	6 (12%)

Bullying and teasing of children who are different in any way by their peers is a fact of life. Sensitivity and a tendency to be hurt easily drew teasing for 24 per cent of the children while 12 per cent were called names implying homosexuality.

Table 3.38

Parents' observations on gender behaviour

Category	Frequency
"Not manly"	5 (10%)
"Should have been a girl"	3 (6%)
"Not like other boys"	3 (6%)

The parents of the children were generally on the defensive side about most complaints or observations made by others about the boys. However,

10 per cent replied that the patient was not likely to grow up as manly as his father, 6 per cent said his behaviour and looks would have fitted better if he had been a girl while 6 per cent said that he had never been like other boys with respect to gender behaviour (Table 3.38).

Table 3.39

Cross dressing in public

Category	Frequency
Ever went out dressed as a girl	4 (8%)
Never	46 (92%)
Total	50 (100%)

This table (3.39) shows that 8 per cent of the boys had been seen in public cross dressed - either in their sister's or their mother's clothes. The parents were not always aware of this.

Table 3.40

Satisfaction with being a boy

Category	Frequency
Girls luckier	9 (18%)
Wished to be girl in the past	6 (12%)
Wishes to be girl now	0 (0%)
Believes he is a girl	0 (0%)

Table 3.40 shows that 18 per cent of the boys thought girls were luckier. Reasons given by the boys often indicated that they thought girls were better at school work, got less punishment, found studying

easier and liked school. The boys also said less frequently that girls get more presents, have more friends and more parties. One boy said that girls could get married. Twelve per cent had at least rarely wished to have been a girl in the past.

Table 3.41

Boys' responses to gender typed questions

Category	Frequency
Rough play:	
enjoys	28 (56%)
hates	22 (44%)
Ambition:	
male	31 (62%)
female	2 (4%)
neutral	17 (34%)
Job preference:	
male	33 (66%)
female	2 (4%)
neutral	15 (30%)

In spite of the general belief that boys love rough play 44 per cent expressed dislike (Table 3.41). This must be viewed in the context of rough behaviour being socially disapproved so that the children may be expressing what they believe is good conduct. When asked to express their ambition for occupation the majority gave masculine responses (cop, fireman, truck driver, fisherman, etc.) or neutral responses (fishplant worker, teacher, storekeeper, etc.). Only four per cent chose obviously "female" occupations - beautician, housekeeper, cook and nurse. When given a forced choice between masculine (fisherman or truck driver),

neutral (teacher or fishplant worker) and feminine (nurse or beautician) jobs, the proportion was barely changed. The children who chose feminine occupations almost all said that the jobs could be done by both men and women.

Table 3.42

Sex typed choices in chores, sports, company for movies, best friend

Category		Frequency
Chores:	feminine	7 (14%)
Sports:	feminine	2 (4%)
Movies:		
	girl	9 (18%)
	mom	20 (40%)
	boy	36 (72%)
Best friend:		
	girl	6 (12%)
	none	8 (16%)

When given a forced choice of chores between washing dishes, making beds, cleaning rooms (feminine) and shovelling snow, cutting grass, chopping wood (masculine), 14 per cent chose the "feminine" chores (Table 3.42). It could be claimed that the indoor chores are not necessarily "feminine", in most families boys are also required to do these. In Newfoundland at this time many boys do consider such work as suitable for their sisters and if made to do them do not wish their peers to know this. In the case of sports it is even more problematical as few girls at this time stick to skipping and hopskotch. Only two boys preferred these games to hockey and football. When asked to select one person to take to a

movie 40 per cent chose mother and 18 per cent chose a girl. In some cases the girl was chosen because the boy preferred the company of girls and in others because the boy viewed his relationship with the girl as potentially heterosexual. When asked to name a best friend among their peers 72 per cent named a boy, 12 per cent a girl and 16 per cent did not have a best friend - usually no friends at all.

Table 3.43

Wish to become a mother or father

Category	Frequency
Father	36 (72%)
Mother	1 (2%)
No choice	13 (26%)
Total	50 (100%)

Asked to choose their future parenting role 72 per cent wanted to be a father, and two per cent a mother. Twenty-six per cent were unable to choose a role or said that they would not be parents (Table 3.43).

Table 3.44

Draw a person

Category	Frequency
Male	31 (62%)
Female	12 (24%)
Uncertain	7 (14%)
Total	50 (100%)

Starting with Machover (1949), a large number of authors have commented on the finding that the majority of human beings exhibit a spontaneous preference to draw their own sex first when asked to draw a person without further specification (e.g., Mainford, 1953; Money, 1966; Green, 1974). At no age does the proportion fall below 50 per cent, even in childhood, and it is usually above 70 per cent. By contrast almost 66 per cent of effeminate boys draw a girl first (Money and Wong, 1966; Green and Money, 1964). These differences are statistically significant. Among the subjects studied here 62 per cent drew a boy first and 24 per cent a girl (Table 3.44). Fourteen per cent had difficulty drawing a human figure and were unable to assign a sex to their attempt, posing a rather negativistic attitude to the whole venture.

Table 3.45

Choice of clothes for doll

Category	Frequency
Masculine	26 (52%)
Feminine	17 (34%)
Mixed	7 (14%)
Total	50 (100%)

The boys were given a doll of ambiguous appearance and a set of paper clothing cut out from magazines for boys and girls. They were asked to choose an outfit for the doll. Fifty-two per cent of the boys chose a boy's outfit; 34 per cent chose a girl's outfit, reasoning that the doll was a girl (Table 3.45). Eleven per cent chose a mixed outfit, not

appearing to be certain which clothes were for boys and which for girls. In the It Scale for Children (Brown, 1957), children make choices for "It", an ambiguous drawn figure. The choices include objects and figures typical of and associated with the role of one sex in contrast to the other sex. The mean score on the test was significantly more masculine for boys and more feminine for girls with less variability among the boys.

Table 3.46

Choice of picture for bedroom

Category	Frequency
Racing car	25 (50%)
Two girls	12 (24%)
Neither	13 (26%)
Total	50 (100%)

The children were shown two posters - one of a flashy racing car and the other of two pretty girls aged about seven and requested to choose one for their bedroom. Fifty per cent chose the car and 24 per cent chose the picture of the two girls. Twenty-six per cent firmly declined either for their rooms (Table 3.46).

CHAPTER 4: RESULTS - THE FINDINGS

PART A

CHAPTER 4: RESULTS - THE FINDINGS: PART A

1. Effeminacy Scores

The variables used to score "gender behaviour" as described in Chapter 3 comprise a wide selection involving subjective and objective material elicited from parents, child as well as observations of the investigator. The method of scoring was described in Chapter 2. The final effeminacy score was obtained on each child by adding the scores obtained on the variables. The lowest score obtained by any one of the 100 subjects was 12 and the highest 196.7.

Figures 3 and 4 (pages 83 and 84) show the distribution of effeminacy scores among the first fifty boys. Figure 3 gives the frequency distribution when class intervals of 30 units are used. There is a very sharp fall in the number of boys who obtain scores of 100 or more. Figure 4, using arbitrary equidistant cut off points divides the boys into three groups labelled Low, Moderate and High effeminacy scorers. Twenty-five or 50 per cent of the group scored 12-62 (Low), 18 or 36 per cent scored 63-112 (Moderate) and 7 or 14 per cent scored 113-162 (High). The fact that 86 per cent of the boys score low to moderate on effeminacy reinforces Bem's concept of androgyny. The Bem Sex Role Inventory recognises that the personality dimensions of masculinity and femininity need not be polarised (Sandra Bem, 1974). According to Bem's postulation individuals may be androgynous, i.e., both instrumental and expressive depending on the situational appropriateness of these various behaviours and conversely, strongly sex typed individuals may be seriously limited in adapting from situation to situation.

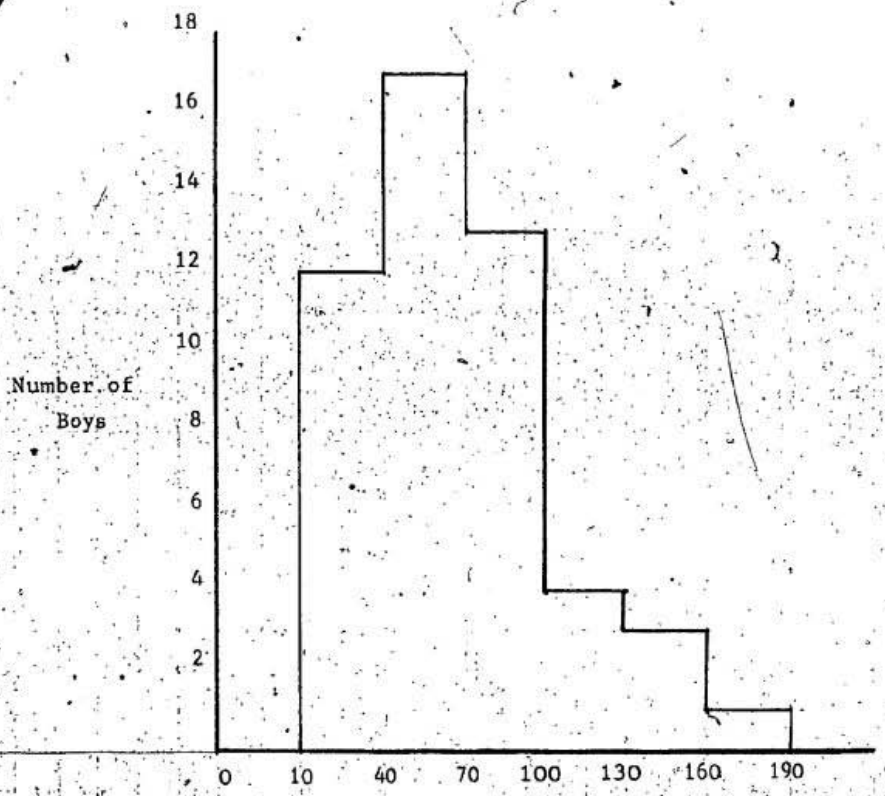

FIGURE 3

Distribution of Effeminacy Scores of First Fifty Boys

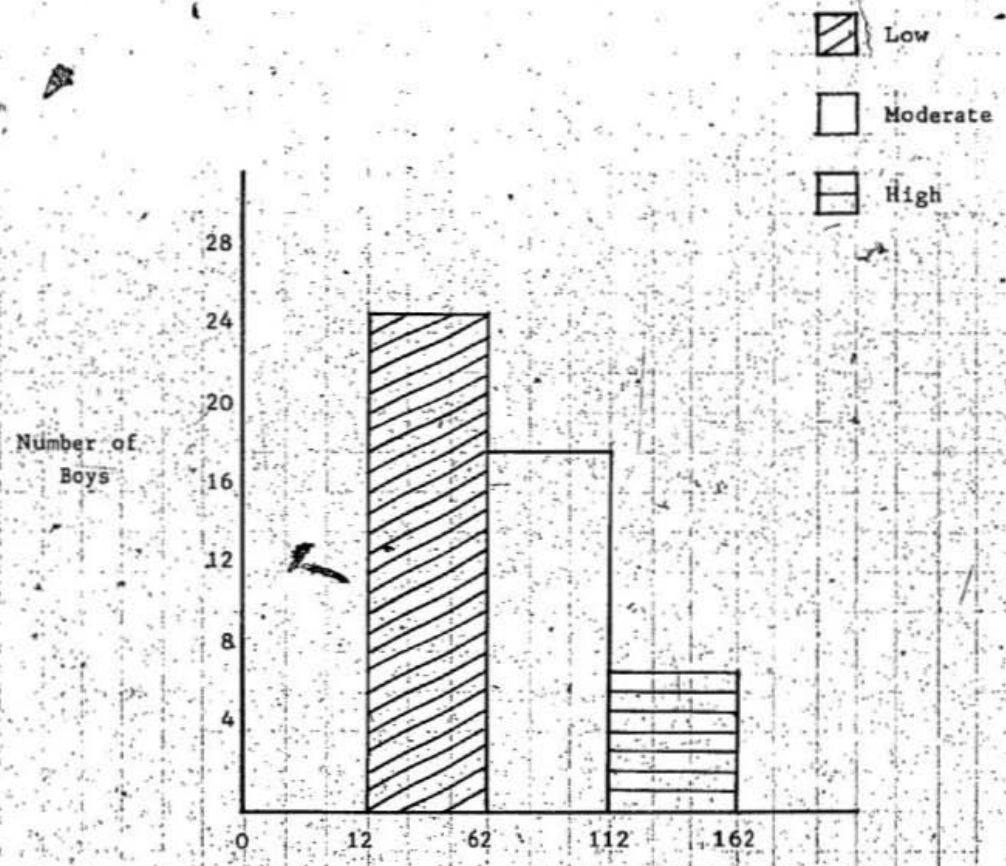

FIGURE 4

Trichotomous Distribution of Effeminacy Scores of First Fifty Boys

2. Relationship between Effeminacy Scores and Other Variables

The next stage in probing the results was to elicit the relationship, if any, between the three groups of effeminacy scores - low, moderate and high, and all of the other variables. The latter have been described in in Chapter 3 under the headings of "demographic", "clinical" and "gender influencing" variables. Using the SPSS cross tabulations were obtained for all the sub-categories in these variables against the three groups of effeminacy scores. At the same time statistical tests were carried out to reveal significant relationships. However in this initial cross-tabulation the number of boys in each sub-category was small. The tables were then contracted into two columns against the three rows of effeminacy scores and the chi square method used to assess significance. These tables now follow.

Table 4.1

Effeminacy Scores by Age

	Less than 9 Yrs	9 Yrs and Older	Totals
Low	14 (56%)	11 (44%)	25
Moderate	3 (16.7%)	15 (83.3%)	18
High	4 (57.2%)	3 (42.8%)	7
Totals	21	29	50 (100%)

$X^2 = 10.2$ with 2 DF, $P < 0.01$

In the moderately effeminate boys 83.3 per cent fall in the older age group. This is statistically significant at the 0.01 level. The difference is still present when the high scoring group is omitted as in table 4.2.

Table 4.2

Effeminacy Scores by Age

	Less than 9 Yrs	9 Yrs and Older	Totals
Low	14 (56%)	11 (44%)	25
Moderate	3 (16.7%)	15 (83.3%)	18
Totals	17	26	43 (100%)

$X^2 = 6.8$ with 1 DF, $P < 0.01$

This difference between the younger and older group with respect to moderate effeminacy scores seems to be in keeping with Kohlberg's findings that boys' preferential sex typing of activities peaks at age 6-7 (Kohlberg, 1966). Thus the older boy and especially the adolescent boy is less rigid as the capacity for abstract thinking increases.

Table 4.3

Effeminacy Scores by Parental Age differences

	Less than 5 Yrs in age diff.	More than 5 Yrs in age diff.	Totals
Low	16 (64%)	9 (36%)	25
Moderate	12 (67%)	6 (33%)	18
High	6 (85.7%)	1 (14.3%)	7
Totals	34	16	50 (100%)

$X^2 = 1.01$ with 2 DF, $P < 0.60$ (NS)

There are more moderate and high scorers in the groups of children whose parents' ages are within five years of each other. The differences however are not significant. None of the analyses done to test the effect

of mothers being older than fathers, or fathers being much older than mothers, etc. showed any significant relationships with the effeminacy scores. It had been speculated that unusual age differences between the parents may have effects on effeminacy. For instance, mothers who are considerably older than the father may dominate the family, and lead to greater identification with herself.

Table 4.4
Effeminacy scores by maternal age at childbirth

	15–29 Years		30–44 Years		Totals
Low	18	(78.3%)	5	(21.7%)	23
Moderate	14	(78%)	4	(22%)	18
High	4	(67%)	2	(33%)	6
Totals	36		11		47 (100%)

$X^2 = 0.4$ with 2 DF, $P < 0.85$ (NS)

Age of the child's natural mother at the birth of the child was known in 47 cases. However the relationship to the effeminacy scores was not statistically significant, although the figures show a trend to high effeminacy scores in the children of older mothers.

Table 4.5

Effeminacy scores by the ordinal rank of the child

	Only Child	Others	Totals
Low	2 (25%)	23 (55%)	25
Moderate	2 (25%)	16 (38%)	18
High	4 (50%)	3 (7%)	7
Totals	8 (100%)	42 (100%)	50

$X^2 = 9.5$ with 2 DF, $P < 0.01$

A highly significant relationship was found between being an only child and high effeminacy scores. No relationship emerged from testing the significance of being the eldest, youngest, second child, etc. It can be speculated that an only child receives an undue amount of attention and proximity from his mother who may also show her concern over having only one child by restricting his more adventurous activities.

Table 4.6

Effeminacy scores by presence of older sisters

	No older sisters	Rest	Totals
Low	17 (68%)	8 (32%)	25
Moderate	11 (61%)	7 (39%)	18
High	6 (86%)	1 (14%)	7
Totals	34	16	50 (100%)

$X^2 = 0.78$ with 2 DF, $P < 0.70$ (NS)

The presence of older sisters has been thought to be conducive to effeminacy (Green, 1974; Stoller, 1968). Imitation, modelling, sibling rivalry, etc. could be involved. However no statistically significant relationship was found in this sample between having one or more older sisters and effeminacy scores. In fact almost all the high effeminacy scorers have no older sisters.

Table 4.7

Church attendance by effeminacy scores

	Never Attends	Rest	Totals
Low	1 (20%)	24 (53%)	25
Moderate	3 (60%)	15 (33%)	18
High	1 (20%)	6 (14%)	7
Totals	5 (100%)	45 (100%)	50

$X^2 = 4.2$ with 2 DF, $P < 0.12$ (NS)

No relationship was found between religious denomination and effeminacy scores. Contingency tables for the various degrees of church attendance were calculated for significance. The only table which aspired towards significance was table 4.7, but the numbers are too small for the non-attenders to draw any conclusions. Pomeroy (1967) in his report on the sexual histories of 25 transsexuals found that 23 had been devoutly religious or active churchgoers. He speculates that a rigid religious training may make it more difficult to accept masculinity and sexuality, especially homosexuality. Table 4.7 cannot be construed as confirming or contradicting Pomeroy's thesis.

Table 4.8

Effeminacy scores by mother's present employment status

	I Full time Housewives	II Rest	Totals
Low	17 (68%)	8 (32%)	25
High	2 (28%)	5 (72%)	7
Totals	19	13	32 (100%)

$X^2 = 3.5$ with 1 DF, $P < 0.06$

Having a mother whose only occupation is as homemaker appears to protect against effeminacy when moderate scorers are excluded reaching a probability of less than 0.06. Mothers who have additional employment at home or outside or are totally disabled are represented in column II. It may be anticipated that such mothers foster a less sex typed role in their sons on principle as well as for the convenience of having sons to take on homemaking chores when required.

Table 4.9

Effeminacy scores by family structure

	I Nuclear Family	II Rest	Totals
Low	15 (60%)	10 (40%)	25
Moderate	13 (72.2%)	5 (27.8%)	18
High	1 (14.3%)	6 (85.7%)	7
Totals	29	21	50 (100%)

$X^2 = 7.41$ with 2 DF, $P < 0.03$

In Group I the children are living with their biological parents without second degree relatives. The relationship between high effeminacy scores and not living in the conventional nuclear family is significant at the 0.03 level. Group II consists of single parents, extended families and adoptive families. Only one of these groups by itself showed statistical significance, as shown in the next table (4.10).

Table 4.10

Effeminacy scores by family structure

	Nuclear Family	Single Mother living with her family	Totals
Low	15 (93.75%)	1 (6.25%)	16
Moderate	13 (100%)	0 (0%)	13
High	1 (25%)	3 (75%)	4
Totals	29	4	33 (100%)

$X^2 = 16.3$ with 2 DF, $P \leq 0.001$

Families in which the mother is a single parent and lives with her own biological family had a highly significant rate of extreme effeminacy. Green (1974, 1978) and Stoller (1968) among others have emphasized the role of grandmothers and other older female relatives in encouraging effeminacy and overprotection. In an extended family the presence of other children such as cousins, nephews and nieces may also provoke a need in the child for a closer relationship with his only parent and promote identification with her.

Table 4.11

Effeminacy scores by child's psychiatric diagnosis

	Neuroses and Personality Disorders	Other Diagnoses	Totals
Low	5 (20%)	20 (80%)	25
Moderate	6 (33%)	12 (67%)	18
High	5 (71%)	2 (29%)	7
Totals	16	34	50 (100%)

$X^2 = 6.65$ with 2 DF, $P < 0.04$

Although there are ten categories in the breakdown of the psychiatric syndromes, in testing each for significant associations, it was decided to combine the group of neuroses and personality disorders. The only two children diagnosed as having personality disorders fitted into this group as being mainly shy and oversensitive. A statistically significant relationship is present between children presenting with neurotic reactions and certain personality trait disorders with high effeminacy scores as shown by table 4.11. This finding is not unexpected. In childhood such children are usually seen in psychiatric clinics for school phobia and various types of social maladjustment related to overdependence, usually on the maternal parent but not infrequently on both parents. Such children tend to avoid rough play and usually do not evince much interest in the games and hobbies of the average boy.

Table 4.12

Sex of child wanted by Effeminacy Scores

	Definitely Wanted Boy	Rest	Totals
Low	11 (44%)	14 (56%)	25
High	1 (14%)	6 (86%)	7
Totals	12	20	32 (100%)

$X^2 = 3.43$ with 1 DF, $P < 0.07$

The relationship between having definitely wanted a boy and low scores on effeminacy almost reaches statistical significance at 0.07. Fewer restrictions may be placed on the masculine development of the child by a mother with a strong desire for a son.

No significant relationships were found between effeminacy scores and the child's weight or physical health at birth. However there were fewer effeminate boys among those who weighed more than 8 lbs. at birth.

Table 4.13

Effeminacy scores by mother's recollection of the boy's facial appearance at birth

	Very much a boy	Rest	Totals
Low	21 (60%)	4 (26.5%)	25
Moderate	14 (40%)	4 (26.5%)	18
High	0 (0%)	7 (47%)	7
Totals	35 (100%)	15 (100%)	50

$X^2 = 18.24$ with 2 DF, $P < 0.001$

There is little doubt that there is a highly significant relationship between maternal perception of the masculinity of the baby and subsequent development or absence of high degree of effeminacy. Several factors could be seen as involved in this. The mother may be projecting her desire for a daughter. The behaviour of the child, may subsequently convince the mother that he "always" looked like a girl. A frail pretty baby boy may show a natural tendency to develop fewer "masculine" behaviours.

Physical Proximity to Mother by Effeminacy Scores

Table 4.14

Proximity in first year by Effeminacy Scores

	Constant Proximity	Average to Very Little	Totals
Low	5 (26.4%)	20 (65%)	25
Moderate	9 (47.2%)	9 (29%	18
High	5 (26.4%)	2 (6%)	7
Totals	19 (100%)	31 (100%)	50

$X^2 = 7.6$ with 2 DF, $P < 0.03$

Table 4.15

Proximity to mother after the first year by Effeminacy Scores

	Constant Proximity	Average to Very Little	Totals
Low	4 (22%)	21 (66%)	25
Moderate	8 (45%)	10 (31%)	18
High	6 (33%)	1 (3%)	7
Totals	18 (100%)	32 (100%)	50

$X^2 = 12.8$ with 2 DF, $P < 0.005$

Close physical contact between mother and son lasting beyond the stage of total dependency of the baby is significantly related to effeminacy. The effect is even more marked when the proximity lasts into the preschool and school years.

Table 4.16
Effeminacy scores by years of sharing mother's bed

	Never after first year	Shared mother's bed upto 11 years	Totals
Low	15 (52%)	12 (48%)	25
Moderate	5 (27%)	13 (72%)	18
High	0 (0%)	7 (100%)	7
Totals	18	32	50 (100%)

$X^2 = 7.04$ with 2 DF, $P < 0.03$

The raw contingency tables showed a positive correlation between increasing effeminacy scores and the length of time the boy had slept in his mother's bed. One eleven year old boy had slept all his life in his parents' bed between his father and mother, with his mother's arm around him. Contracting the raw tables into two main groups, those who had never been in their mother's bed beyond infancy and the rest, the significant relationship remains, at the 0.03 level.

Table 4.17

Occupational gender of father by Effeminacy Scores

	Masculine Occupation	Rest	Totals
Low	23 (59%)	2 (18%)	25
Moderate	12 (31%)	6 (54.5%)	18
High	4 (10%)	3 (27.5%)	7
Totals	39 (100%)	11 (100%)	50

$X^2 = 5.9$ with 2 DF, $P < 0.05$

Fathers who have an occupation which is conspicuously masculine such as fishing and driving heavy equipment vehicles have significantly fewer sons with moderate and high effeminacy scores. This relationship does not reach statistical significance in the case of the mother's occupation as shown in table 4.18 although there is a trend for the mothers with feminine occupations to have more masculine sons, probably because most of these mothers are full time homemakers which has already been shown to be related in this way.

Table 4.18

Effeminacy Scores by mothers' occupational gender

	Feminine Occupation	Rest	Totals
Low	23 (57.5%)	2 (20%)	25
Moderate	13 (32.5%)	5 (50%)	18
High	4 (10%)	3 (30%)	7
Totals	40 (100%)	10 (100%)	50

$X^2 = 4.95$ with 2 DF, $P < 0.09$

Table 4.19

Effeminacy Scores by which parent is major disciplinarian

	Mother Only	Rest	Totals
Low	20 (52.6%)	5 (41.7%)	25
Moderate	13 (34.4%)	5 (41.7%)	18
High	5 (13%)	2 (16.6%)	7
Totals	38 (100%)	12 (100%)	50

$X^2 = 0.26$ with 2 DF, $P < 0.90$

Although 38 of the fifty children are disciplined solely by their mothers, the relationship of this factor to effeminacy is not significant. Again the variable as to whether the father deliberately avoids a role in discipline did not relate to effeminacy scores. The only contingency table that showed statistical significance involved testing those cases where the father was not available against the rest as shown in table 4.20.

Table 4.20

Effeminacy Scores by father's availability to discipline

	Father unavailable to discipline	Rest	Totals
Low	0 (0%)	25 (54%)	25
Moderate	1 (25%)	17 (37%)	18
High	3 (75%)	4 (9%)	7
Totals	4 (100%)	46 (100%)	50

$X^2 = 11.72$ with 2 DF, $P < 0.005$

Thus father's attitude to discipline is much less important than his availability in the home. There are significantly more boys with high effeminacy scores when the fathers are not available to play a role in discipline.

Table 4.21

Effeminacy Scores by which parent decides on major financial expenditure

	Father	Mother	Totals
Low	10 (67%)	9 (41%)	19
Moderate	4 (26%)	9 (41%)	13
High	1 (7%)	4 (18%)	5
Totals	15 (100%)	22 (100%)	37

$X^2 = 4.015$ with 2 DF, $P < 0.15$

While there is a trend to higher effeminacy scores in both the moderate and high ranges among the sons of families where the mother decides on major financial expenditures such as purchasing a car, this did not reach statistical significance.

Table 4.22

Effeminacy Scores by which parent makes final decision on life style

	Mother Alone	Rest	Totals
Low	8 (36%)	17 (68%)	25
Moderate	8 (36%)	10 (28.5%)	18
High	6 (28%)	1 (3.5%)	7
Totals	22 (100%)	28 (100%)	50

$X^2 = 6.69$ with 2 DF, $P < 0.03$

From table 4.22 it appears that when mothers dominate the life style, effeminacy in the boys is significantly promoted.

Table 4.23

Effeminacy Scores by mother's expressed dissatisfaction with father's role

	Very Dissatisfied	Rest	Totals
Low	13 (62%)	12 (41%)	25
Moderate	7 (33%)	11 (38%)	18
High	1 (5%)	6 (21%)	7
Totals	21 (100%)	29 (100%)	50

$X^2 = 3.55$ with 2 DF, $P < 0.15$

It does not seem that mothers' expressed dissatisfaction conduces to effeminacy in the son. The trend if anything is in the opposite direction, although not to a significant degree. It is quite likely that mothers' dissatisfaction is projected on to the son and liable to reduce the identification with him that may otherwise occur. Contingency

tables for mother's hostility towards men in general showed even less significant relationships to effeminacy scores, although such hostility appeared to reduce rather than increase effeminacy scores in the moderate range. Another related variable - "family disruption", although very prominent in the whole sample, bore no statistically significant relationship to effeminacy scores.

Table 4.24

Effeminacy Scores by whether father lives at home

	Father lives at home	Father does not live at home	Totals
Low	21 (54.5%)	4 (40%)	25
Moderate	15 (38%)	2 (20%)	17
High	3 (7.5%)	4 (40%)	7
Totals	39 (100%)	10 (100%)	49

$X^2 = 6.89$ with 2 DF, $P < 0.03$

The fact that the boy's father is not living at home in almost 20 per cent of the families appears to be related to high scores of effeminacy, reaching significance at the 0.03 level. The variable regarding father's time in family activities however is not significantly related to effeminacy scores. Comparing fathers who spent a lot of time in family activities with the rest obtained only a chi square value of 1.6 with two degrees of freedom, probability being less than 0.40.

Table 4.25

Effeminacy Scores by whether father encouraged feminine behaviour

	Father encouraged feminine behaviour	Rest	Totals
Low	0 (0%)	25 (100%)	25
Moderate	2 (11%)	16 (89%)	18
High	0 (0%)	4 (100%)	4
Totals	2	45	47 (100%)

$X^2 = 3.38$ with 2 DF, $P < 0.2$

Only two fathers ever encouraged effeminacy and their sons were both in the moderate range for effeminacy. With the very small numbers no significance emerges from the test.

Table 4.26

Effeminacy Scores by whether father discouraged feminine behaviour

	Father discouraged feminine behaviour	Rest	Totals
Low	1 (17%)	24 (58%)	25
Moderate	2 (33%)	16 (39.6%)	18
High	3 (50%)	1 (2.4%)	4
Totals	6 (100%)	41 (100%)	47

$X^2 = 16.71$ with 2 DF, $P < 0.005$

Table 4.26 shows that there is a highly significant relationship between high effeminacy scores and father's attempts to discourage effeminacy, which must be regarded as an effect rather than the cause of effeminacy!

Table 4.27

Effeminacy Scores by whether mother encouraged feminine behaviour

	Mother encouraged feminine behaviour	Mother did not encourage feminine behaviour	Totals
Low	2 (17%)	23 (60.5%)	25
Moderate	6 (50%)	12 (31.5%)	18
High	4 (33%)	3 (8%)	7
Totals	12 (100%)	38 (100%)	50

$X^2 = 8.58$ with 2 DF, $P < 0.02$

Mother's encouragement of feminine behaviour is certainly an important factor and is shown to reach statistical significance. The variable of mother discouraging feminine behaviour however did not reach statistical significance as shown in table 4.28.

Table 4.28

Effeminacy Scores by whether mother discouraged feminine behaviour

	Mother discouraged feminine behaviour	Mother did not discourage feminine behaviour	Totals
Low	20 (51%)	5 (45%)	25
Moderate	12 (28.5%)	6 (55%)	18
High	7 (20.5%)	0 (0%)	7
Totals	39 (100%)	11 (100%)	50

$X^2 = 3.37$ with 2 DF, $P < 0.15$

The variable as to whether any psychiatric disorder was present or not in either parent or both did not relate significantly to effeminacy scores. The presence of psychiatric disorder in siblings however did appear to relate to the development of high scores of effeminacy as shown in table 4.29.

Table 4.29

Effeminacy Scores by presence of psychiatric disorders in siblings

	Present	Absent	Totals
Low	3 (60%)	21 (95.5%)	24
High	2 (40%)	1 (4.5%)	3
Totals	5 (100%)	22 (100%)	27

$X^2 = 5.18$ with 1 DF, $P < 0.02$

While the numbers are small it does seem that a significant number of boys scoring very high on effeminacy will have psychiatric disorders diagnosed among their siblings.

Finally, a number of other variables, namely the specific psychiatric diagnosis in either parent, presence of sexual abnormalities in the family (minute numbers), the child's height, weight and skin fold thickness and his intelligence did not reveal any significant statistical relationships with the three categories of effeminacy scores.

CHAPTER 4: RESULTS - THE FINDINGS

PART B

CHAPTER 4: RESULTS - THE FINDINGS: PART B

In this section a method of using the data on the first fifty boys to arrive at a way of predicting the effeminacy scores in the second fifty boys and the degree to which this was successful will be demonstrated.

Since the two groups of fifty boys were successive referrals and not matched, the frequency tables of both groups were scrutinised to see if there were any marked differences. Although differences were not marked, and were mostly minute the data was tested for significant differences. A list of the variables tested and the probability that the differences are due to chance follows.

Table 4.30

Variable	Difference between first 50 and second 50 boys
1. Age distribution of the boys ...	$P > 0.7$
2. Age difference between parents ...	$P > 0.65$
3. Age of mother at birth of child...	$P > 0.76$
4. Child's place in birth order ...	$P > 0.50$
5. Number of boys and girls in household ...	More boys in group II $P > 0.3$
6. Religious denomination ...	$P > 0.8$
7. Race ...	All Caucasian
8. Church attendance ...	More non-attendance in group II $P < 0.5$
9. School achievement of boys ...	More in special class in group II $P < 0.2$

Table 4.30 continued

10.	Parents education ...	More high school educated mothers in group II P < 0.15
11.	Height and weight distribution...	Almost identical
12.	Family structure ...	Fewer single parent families in group II P < 0.6
13.	Psychiatric diagnosis of boys ...	More personality disorders, adaptation reactions and fewer conduct disorders in group II P < 0.6
14.	Parental attitudinal factors ...	P < 0.8
15.	Presence of psychiatric disorder in parents ...	Fewer fathers in group II with disorders P < 0.3
15.	Psychiatric syndromes in parents.	P < 0.8
16.	Effeminacy scores ...	Scores: Low — Group I: 25, Group II: 21 Moderate — Group I: 18, Group II: 21 High — Group I: 7, Group II: 8 Chi Square 0.642 with 2 DF P < 0.5

It is clear from the above list that there are no statistical differences between the first and second set of boys that would make the use of the second group as the control for the first group invalid.

The method chosen to validate the findings on the first fifty subjects with the data on the second fifty was as follows. From the cross tabulation analysis of the first data set a number of variables were chosen for showing a high degree of statistical significance at the 5% level of

confidence or fairly close to it. Multiple regression analysis was done on the first data set to assess the relative weight of these variables in producing the "high" effeminacy scores. These variables are listed below.

Table 4.31

1. "Only child" status.
2. Mother's only occupation is as homemaker.
3. Mothers who are incapacitated from any work.
4. Nuclear families and the rest.
5. Nuclear families and mother with extended family.
6. Boys with personality disorders and neuroses combined.
7. Boys with personality disorders.
8. Boys whose mothers definitely wanted a boy.
9. Boys who were very masculine at birth.
10. Boys in constant physical proximity to mother in first year.
11. Boys who were in unusually close physical proximity to mother in early and late childhood.
12. Boys who did not sleep with mother after first year.
13. Boys whose fathers have a traditional masculine occupation.
14. Boys whose mothers have a traditional feminine occupation.
15. Boys whose fathers are not available to discipline them.
16. Boys whose mothers make major decisions on life style.
17. Boys whose mothers are dissatisfied with father's role.
18. Boys whose fathers live at home.
19. Boys whose fathers discourage feminine behaviour.
20. Boys whose mothers encourage feminine behaviour.
21. Boys who have at least one sibling with psychiatric disorder.

For the purpose of multiple regression analysis each of the above variables was given a value of 1 or 0 according to whether that variable was present or not. Thus being an only child carried a value of 1 and not being an only child 0.

Results of Initial Multiple Regression Analysis

The 21 variables achieved an R^2 of .73221, thus explaining 73 per cent of the variance. The correlation coefficients showed that the 21 independent variables were not significantly interrelated, except for variables 10 and 11 which were about early and late physical promimity and obtained a correlation coefficient of 0.6. From the 21 variables, the nine most significant variables were selected for further analyses. Multiple regression analysis carried out on these nine gave results as listed below.

Table 4.32

Variable	B		R Square	Description of Variable
6	+ 12.336159	B1	.14862	Personality disorder + neuroses
11	- 14.507047	B2	.28059	Did not sleep with mother after first year.
15	+ 12.476024	B3	.35987	Mother makes final decision on life style.
21	- 13.260200	B4	.35991	Baby appeared very masculine at birth.
8	- 14.222810	B5	.39647	Mother definitely wanted a boy.
7	+ 66.754506	B6	.51249	Personality disorders
19	+25.068675	B7	.58554	Mother encourages feminine behaviour.
9	+ 9.807735	B8	.60365	Constant proximity to mother in first year.
10	+ 6.953264	B9	.60721	Unusually close proximity to mother in later childhood.

The purpose of obtaining the results on Table 4.32 was to arrive at a method of predicting the effeminacy scores for the second fifty boys. These nine variables account for 60 per cent of the variation and are expected to produce the best regression fit possible for the data set of the first fifty boys.

Cross Validation Analysis

Method:

There are nine significant independent variables labelled X_1 -.. X_9. The dependent variable effeminacy score is labelled Y. As previously noted X_1 -.. X_9 can only take values of 1 or 0.

The best regression fit is of the following model:

$$Y = B_0 + B_1X_1 + B_2X_2 + \ldots\ldots\ldots\ldots + B_9X_9$$

where B_0, B_1, ... B_9 are the output of the SPSS regression fit. This is the best fit as far as we know, and it has its own R^2 value which tells us how good the fit is with respect to the data of the first set.

The next procedure is to find out how good the fit is for purposes of prediction. Here, this question will be answered by cross-validating the regression equation obtained from the first data set with the second data set, i.e., the second sample of fifty boys. The steps are as follows:

1. Obtain the best regression fit $Y = B_0 + B_1X_1 + \ldots\ldots\ldots + B_9X_9$ from data set I.

2. Use this equation on data set II to obtain the expected Y values for the second fifty boys. We call these Ei, where i = 1 ..... 50. Note that for the second fifty boys the actual effeminacy scores have already been computed using the same method as for the first fifty boys. We call these Ai, where i = 1 ..... 50.

3. Compute the correlation coefficient between Ai and Ei. If this is high enough, the regression fit is good for the entire population being sampled.

Details of Analysis

Using the first data set, we obtain significant variables:

B	Denoted here	Actual Variable
12.336	X_1	Personality disorder + neuroses
66.754	X_2	Personality disorders
−14.223	X_3	Mother definitely wanted a boy.
9.808	X_4	Constant proximity to mother in first year.
6.953	X_5	Unusually close proximity to mother in later childhood.
−14.507	X_6	Did not sleep with mother after first year.
12.476	X_7	Mother makes final decision on life style.
25.069	X_8	Mother encourages feminine behaviour.
−13.260	X_9	Baby appeared very masculine at birth.

$$B_0 = 61.351$$

Step 1.

$$Y = 61.351 + 12.336X_1 + 66.754X_2 - 14.223X_3 + 9.808X_4 + 6.953X_5 - 14,507X_6 + 12.476X_7 + 25.069X_8 - 13.260X_9$$

$$R^2 = .607$$

$$R = .7792$$

Step 2.

Using the regression equation obtained in Step 1 the expected (Ei) values for Y are obtained for the second fifty boys in data set II. Ei and Ai for each case is set out below.

i	Ai	Ei
1	104.5	146.61
2	59.0	90.59
3	55.4	157.20
4	132.6	127.99
5	27.9	32.62
6	100.8	89.92
7	86.7	156.42
8	57.1	59.39
9	44.5	46.84
10	107.0	108.70
11	110.1	108.70
12	16.0	33.58
13	23.4	59.52
14	33.7	47.13
15	100.5	152.92
16	35.7	102.92
17	118.2	48.09
18	33.1	101.43
19	106.6	113.77
20	130.3	98.90

Step 2 continued

21	132.7	127.99
22	52.4	90.59
23	35.6	58.68
24	141.5	92.59
25	109.6	83.63
26	28.1	59.32
27	52.5	59.32
28	72.5	115.52
29	65.9	100.51
30	47.4	32.62
31	87.7	68.30
32	20.7	32.62
33	91.2	61.35
34	58.4	81.46
35	17.4	32.62
36	97.1	61.35
37	108.8	127.99
38	196.7	184.93
39	89.3	102.92
40	72.1	71.66
41	93.4	80.78
42	178.2	194.75
43	73.9	63.89
44	54.9	45.10

Step 2 continued

45	84.3	125.93
46	132.8	71.13
47	27.2	71.13
48	15.3	46.84
49	88.7	46.84
50	80.1	115.51

Step 3.

Computation of Correlation Coefficient of Ai and Ei

$\Sigma Ai = 3889.1$ $\Sigma Ei = 4498.43$

$\bar{A}i = 77.78$ $\bar{E}i = 89.97$

$\Sigma AiEi = 408,447.76$

$\Sigma A^2i = 390,384.28$ $\Sigma E^2i = 493.852.15$

Correlation Coefficient R_c =

$$\frac{n \Sigma AiEi - (\Sigma Ai)(\Sigma Ei)}{\sqrt{n \Sigma A^2i - (\Sigma Ai)^2} \sqrt{n \Sigma E^2i - (\Sigma Ei)^2}}$$

$$= \frac{20,42222,388 - 17,494,844.11}{\sqrt{19,519,214 - 15,125,098.18} \times \sqrt{24,692,607.5 - 20,235,872.46}}$$

$$= \frac{2,927,543.89}{2090.21 \times 2111.10}$$

$$= 0.6615$$

Since R_c .6615 is quite close to R = .7792 on data set I we can conclude that the regression fit produces values quite close to the actual Y values of the second set of fifty boys. The regression fit on the first set of data gave us an R of .7792 and R^2 of .607. Hence, 60 per cent of the variance in Y is explained by the nine variables. This R^2 is high and the fit is good; the R_c .6615 obtained by using the nine variables is also high, therefore the use of significant independent variables from data set I to predict effeminacy scores (Y) for data set II is validated.

CHAPTER 5: DISCUSSION

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Introduction

This research has been concerned with the concept of effeminacy and its measurement. Definitions were given at the outset to show that effeminacy is not an all or none phenomenon. It is a blend of gender behaviour, attitudes and roles, which, when present in boys are considered inappropriate. Effeminacy therefore is quantitative, and may be found to exist in a range varying from mild to extreme. A method was devised to measure effeminacy by computing the scores assigned to a number of variables related to gender.

As a composite of behaviour, attitudes and roles, it follows that effeminacy is relative, and to a large extent culturally determined. Even within the culture, subcultural variations may be present. Sex typing of roles is accepted earlier by boys than girls; in working class boys and girls gender roles are accepted earlier than in middle class boys and girls. Middle class girls show a delay and reluctance to accept sex typed limitations for up to two years or longer when compared to working class girls (Rabban, 1950). If the boy were to rebel to the same extent as the girl, his behaviour tends to appear much more deviant than that of the girl. To control for such cultural biases as much as possible, the items used to identify effeminacy were shown to independent experts and their ratings obtained to weight the items, as explained in the chapter on methodology.

The experimental sample consisted of 100 consecutive referrals to the only child psychiatry clinic in the Province. Apart from routine psychiatric assessment the protocol included a number of items

concerned with the measurement of effeminacy as well as the etiology of effeminacy. While such items were, in the main, related to social, emotional and behavioural factors, some anthropometric measurements were included: height, weight, androgyny score and skin fold thickness as there are proven differences between the sexes. These biological measures however did not prove to be relevant, and in any case some of these measures are not significantly different in the pre-pubertal age group.

Rather than presenting a descriptive analysis of the total sample, it was decided to analyse the first half of the sample, and to use those etiological variables that showed a significant association with effeminacy as predictors of the effeminacy scores for the second half of the sample.

A. The Fist Fifty Boys

1. Composition of the Sample. These fifty boys were referred for problems thought to require assessment by a child psychiatrist. Reluctance to accept referral is quite strong in the population. As a result, the problems had usually existed for years, and much persuasion, or a crisis was required before appointments were accepted. Regardless of the actual findings of the investigation none of the boys was referred for cross gender behaviour, nor did parents spontaneously broach the subject when discussing the reasons for seeking help.

Two-thirds (65 per cent) of the children lived within thirty miles of the hospital and a fifth (20 per cent) lived less than 100 miles away from the hospital. Of the remainder a tenth (10 per cent)

came from the island portion, up to 500 miles away and a twentieth (5 per cent) were from Labrador (more than 1000 miles away).

Socially the sample is a relatively deprived group of families. Only a quarter of the parents claimed to have completed high school education but this did not ensure having passed the final examinations. Occupational status of the fathers and mothers for all practical purposes was almost entirely in the lower range, only one father and two mothers having ever worked in the semi-professional category and just one father in the professional category.

As befits a child psychiatry population, family strife was a prominent feature. For 34 per cent of the boys, the parents were not living together, usually as a result of conflicts. Twenty per cent of the parents, although not separated at the time of assessment, experienced serious marital conflicts. Only 42 per cent of the parents maintained that there were no serious clashes between them. Thirty per cent of the mothers expressed mild to strong dissatisfaction with the quality of their husbands' participation in family life.

Only about half of the parents were free of psychiatric disorder. Personality disorder was the diagnosis in almost all the abnormal mothers. Predominantly, these mothers were a mixture of the insecure, anxious and compulsive types. In the fathers, the diagnosis of personality disorder was less common but alcoholism made up for this.

In spite of the family discord and abnormal personalities of the parents, seldom did more than one child show serious maladjustment. Other than the index cases there were only seven more children in the fifty families who also had a psychiatric disorder. This suggests that

the child's disorder is a function of interaction between the temperamental or other peculiarities of the individual child and mismanagement by parents or other significant adults.

The psychiatric diagnosis in the index cases is of particular interest as it was hoped to establish an association between particular syndromes and effeminacy. Two boys were thought to be normal, and the complaint for which they were referred was a variation within normal limits. A further eight boys were felt to be responding to stress and to have no serious inherent or established problems. Six boys had the hyperkinetic syndrome, which usually responds to stimulant drugs of the amphetamine group. Four had special symptom disorders - speech disorder, enuresis (wetting) and encopresis (fecal incontinence without organic defects). The diagnostic code conduct disorder refers to a behavioural pattern of antisocial type. This includes less serious problems such as excessive lying, bullying and defiance as well as major criminal activity. Eleven boys were in this category. Fourteen boys had emotional disorders characterised by excessive anxiety, unhappiness, oversensitivity and poor relationships due to difficulties in mixing often presenting as cases of school phobia. Two boys had personality disorders characterized by pronounced insecurity and oversensitivity. Three "others" included miscellaneous conditions such as Tourette's syndrome.

With respect to the effeminacy scores, there was a surprising finding. Seven or 14 per cent of the fifty boys obtained high scores, while 50 per cent scored in the low range and 36 per cent in the moderate range. It must be stressed that no child was referred for discordant

gender role behaviour, and the high scorers cannot be equated to the feminine boys reported by other workers (Green, 1974; Lebovitz, 1972; Zuger, 1978, etc). The distribution of effeminacy scores did not approximate a normal distribution curve as had been hoped; thus the high scoring boys even in this sample appear to be deviant in gender behaviour. After a score of about 110, there was a sharp drop in the numbers of boys scoring high although the highest score among these fifty boys was 160.

2. Results of Contingency Tables. The paucity of research in this area made it advisable to cross tabulate the effeminacy scores against as many variables as possible to obtain significant associations. The Chi square method was the most suitable test for statistical significance although Pearson's R was also helpful where the data had ordinal characteristics. Only the significant variables will be discussed here.

a. Age. If the fifty boys were divided into those who were under 9 years of age and the rest, there was an increase in moderate scores of effeminacy in the older age group, with a probability of less than 0.01. This may reflect the loosening of rigid sex typed concepts with increasing age and reasoning ability, in keeping with Kohlberg's findings (1966).

b. Rank of Child. Having the status of only child was significantly correlated with high effeminacy scores at a probability level of less than 0.01. This was an unexpected finding from the view point that we have no previous research evidence of this. It is arguable that an only child may be permitted prolonged physical proximity, and be

overprotected with restriction from more "risky" masculine activities. The finding that 50 per cent of the mothers had personality disorders of the insecure type is probably related, increasing the risk for the only child to be treated in this way.

c. Comparing the children of mothers who were engaged fully in home-making with the rest showed that the latter group of boys had a greater number in the high-effeminacy scoring group reaching a probability of less than 0.06. Here again we have no previous research evidence for this. It may be argued that the latter group of boys were affected by such factors as (i) working mothers expecting and encouraging their sons in "feminine" chores; (ii) working mothers presenting a less stereotyped model, and (iii) a number of related factors such as that more working mothers may be single with lack of a male model at home.

d. The twenty-nine boys who lived in the traditional "nuclear" family presented only one with high-effeminacy score. The other twenty-one consisting of single parents, extended families and adoptive families had six high-effeminacy scorers. This was significant at a level of less than 0.03. Father's influence may be described as felt in several ways - his absence in single families, his reduced importance in extended families and his reduced interest in the case of adopted children, where mother's desire for children is usually the main reason for adopting. Green (1976) compared 55 extremely feminine boys with matched controls and found no difference in the marital status of the mothers. However his sample was collected by soliciting referrals of extremely deviant boys and is not strictly comparable.

e. In assessing the types of "non-nuclear" families the category of "single mothers living with their family of origin" attained significance for high effeminacy at a probability level of less than 0.01. Figures however are rather small for drawing conclusions. Taking the last two findings together, it does appear that the boy's biological father has a role in gender development. Several writers have suggested that mothers promote femininity in their daughters and fathers promote masculinity in their sons (Goodenough, 1927; Radke, 1946). In the population studied here, in general, fathers left "upbringing" matters to their wives, not usually taking an active role in developing the boys' interests. It appears more likely that the presence of the father in itself has an emotional impact causing the boy to want to copy him.

f. There were fourteen children with a psychiatric diagnosis of emotional disorder and two children with personality disorder of the sensitive and insecure type, basically similar to the former. These sixteen were associated with high-effeminacy scores to a probability level of less than 0.04. This is not surprising as children with anxiety are usually overdependent and excessively close to mother or to both parents. Stoller (1968, 1974), speaks of the transsexual boys as being free of neurosis due to the absence of oedipal conflicts, which he contrasts with the homosexual boy. This psychoanalytical view is contested by Siegelman (1974) in general terms, but he concedes that the effeminate homosexuals score higher in neuroticism.

g. Of the boys whose mothers had a strong preference during the pregnancy for having a son, only one boy was in the high-effeminacy category. The probability for this was less than 0.07, not achieving statistical significance. However the trend appears to be strong suggesting that such mothers would promote masculine behaviour and discourage feminine behaviour, although the literature suggests that this is the role of the father (Goodenough, 1927; Sears, Rau and Albert, 1965).

h. None of the boys who appeared extremely boy-like at first sight to their mothers, scored in the high-effeminacy range. This was highly significant (probability less than 0.001). This category included some whose mothers had desired a girl. Green (1974) states that some effeminate boys are so beautiful that they are mistaken for girls, and their appearance tends to influence others to comment and behave in a manner that reinforces effeminacy. A child who is patently a boy may be least subjected to such influences.

i. Unusual degrees of physical proximity, involving much physical contact between mother and son was significantly related to high-effeminacy scores. Probability was less than 0.03 in considering such proximity in the first year, and dropped to less than 0.01 in considering proximity in later childhood. It has been established that one year old girls seek maternal contact much more than boys (Goldberg and Lewis, 1969), and that mothers initiate more proximity with daughters than with sons in nursery school children (Brindley et al, 1972). Stoller has emphasized the "blissful symbiosis" of the male transsexual boy with his mother.

In the clinic population of this study overdependent boys were common, 9, 10, or 11 year old boys often sitting on their mothers' laps. Green (1974) gives instances of effeminate boys being picked up more often as babies and cuddled more than other children in the same family, by their mothers and by other women.

j. The fact that sleeping in their parents bed (in spite of possessing a separate bedroom) was such a common practice in the clinic population, came as a surprise. This was seldom volunteered and had to be elicited by subtle questioning. Although half the boys who scored in the low-effeminacy range had slept with their mothers beyond the age of 3 years, all seven high-effeminacy scorers came into this category (probability less than 0.03). Furthermore Spearman's Rank Correlation Coefficient showed a high positive correlation of increasing effeminacy with each year of continuing to sleep with mother. Green (1974) states that 20 per cent of (extremely) effeminate boys frequently slept alongside their mother. He speculates that the increased contact may impede formation of a separate identity. It may also require inhibition of sexual arousal to female bodies, a protective mechanism against the intimacy resulting from such contact. In the present research none of the boys had a gender identity disorder - they had no doubt that they were boys, and in fact half the boys who slept with their mothers well beyond the age of 3 years scored in the low range of effeminacy. It may be concluded from this that close contact with mother does not of itself cause effeminacy or homosexuality, but is simply an indication of over-dependence on the part of mother or child or both. A prolongation of such contact may then impede development towards autonomy and

independence in the boy and foster any incidental neurotic traits.

k. Only three of the seven boys in the high-effeminacy range had fathers whose occupations were not in the conspicuously masculine tradition, yet this yielded a probability of less than 0.05. Constitutional factors may be involved where the boy's biological father is not himself a stereotype of cultural attitudes.

l. From a number of variables concerned with intra-family relationships only two achieved significance. Learning theorists (Mischel, 1966; Maccoby and Jacklin, 1974), have emphasized the role of power in intra-family decision making for promoting identification between child and parent.

i. The only significant variable with regard to power that emerged was mother either having to or insisting on making major decisions on life style such as where the family will live, which school the children shall attend, how leisure time is spent, etc. (probability less than 0.03).

ii. Father's participation in family activities had no significance but whether father lived at home was significant (probability less than 0.03). According to this, father's "physical" presence was more important than his "psychological" presence. This is at variance with the views of several research workers (Green, 1974; Kagan, 1958). In a later publication, Green (1976) states that his group of 55 extremely feminine boys were significantly more often separated from their biological fathers than the masculine controls, but no details are given on the length of separation.

m. Not surprisingly mother's active encouragement of effeminate behaviour was associated with high-effeminacy scores (probability less than 0.02). Since none of the mothers of the seven boys in the high-effeminacy range had a strong desire for a son during the pregnancy, it is possible that their desire for a daughter was frustrated. Similar findings come from Green (1974) and Stoller (1968, 1974). In the present study the encouragement included deliberately cross dressing the boy in infancy and early childhood, and easily acquiesing when the boy wanted to have dolls, make-up, jewellery, etc. As the boys grew older mothers became ambivalent and would attempt to discourage before giving in to being pestered.

B. Prediction of Effeminacy Scores for the Second Fifty Boys

Nine significant variables were chosen from the cross tabulation analysis for the purposes of multiple regression analysis, in order to arrive at a regression equation that would be used to predict effeminacy scores for the second half of the experimental sample. These variables are listed below.

1. Two variables relating the psychiatric diagnosis of the boy - "emotional disorders" and "personality disorders".

2. Two variables concerned with mother's desired expectation of the sex of the child during pregnancy and her reaction as to whether the baby actually looked like a boy.

3. Four variables concerned with mother's behaviour towards the boy - proximity in infancy and later, encouragement of feminine behaviour and allowing the boy to sleep in the parental bed,

4. One variable related to power within the family, namely whether mother makes the final decisions with respect to the life style of the family.

For the first fifty boys multiple regression analysis using the above variables gave an R of .7792 and R^2 of .607, thus explaining 60 per cent of the variation in the effeminacy scores.

The regression equation of this half was used to predict effeminacy scores for the second fifty boys. Since the same item sheet had been used and analysed for all 100 boys, the actual effeminacy scores of the second half were obtained in the same way as the first. The correlation coefficient between the actual and predicted scores for this group was computed and the answer was .6615. Therefore the use of significant variables from the first data set to predict effeminacy scores on the second data set is validated.

C. "Ideal" Type of Effeminate Boy

This section will describe effeminacy in terms of typology. In the context of this work the "ideal" type will be derived from factors that were useful in predicting effeminacy scores. The word ideal is not used to refer to effeminacy as an ideal state, but to include all the possibilities that such an attribute may cogently include. Individual reality will usually diverge from the ideal as people vary enormously.

The ideal effeminate boy is born to or adopted in early infancy by a mother who actually wanted a daughter or did not strongly wish for

a son. At birth, or soon after, the baby is perceived as not looking obviously masculine. He tends to be very cuddly and affectionate as a baby. At the toddler stage the desire for closeness to his mother does not begin to diminish, and his mother makes no effort to discourage him. He may be regarded by his mother as frail and vulnerable, and sometimes as exceptionally good looking in a girlish way. Close physical contact may be permitted or encouraged for a variety of reasons. These include the attractiveness of the child for the mother and certain needs of the child arising from his vulnerability. Thus he may be a "nervous" child who becomes panicky if his mother is out of his sight; has sleep disturbances such as night terrors; a variety of physical symptoms usually with no discoverable physical basis; fears and phobias, etc. The mother herself may be agoraphobic and require her son's presence but this is seldom revealed without probing. The mother may actively prevent the boy from becoming autonomous by intervening in the neighbourhood and with the school whenever her son is involved in rough play or is reprimanded by the teacher. Occasionally the father may be the main provider of overprotection and allow the child to continue physical closeness to both parents. Almost always the effeminate boy sleeps in the bed of his mother, even when his parents are living together. He has traits of insecurity, sensitivity and may develop compulsive and ritualistic behaviour. Antisocial behaviour is uncommon, but may become a problem when he faces pressure in later childhood to change his cross gender behaviour, as he feels rejected even by those closest to him who earlier had admired, and complied. Stigmatization by peers for overtly feminine behaviour often leads to truancy from school. In lesser

degrees of effeminacy the boy is a loner relying on his parents for company while the few boys who continue to cross dress drift into the company of known homosexuals. The conventional nuclear family is under-represented in the background of the effeminate boy. Extended families with the mother sometimes being single or widowed, and being an only child are features that are over-represented. In his childhood major decisions involving the life style of the family are made by his mother.

D. Examples of Effeminate Boys

(For reasons of confidentiality the initials are fictitious.)

1. L.H.

L was eight years old at assessment. He is an only child, referred at the request of his worried parents. Their complaints were that for several years L complained of headaches and stomach-aches before school, worse when he had tests. His appetite was always very poor. He hardly eats at meal times but does receive unlimited pocket money which is spent on junk food. He has many fears including the school bus which he finds is too noisy. His mother is a teacher in his school and at recess he seeks her out and clings instead of playing with other children.

L's father is a fisherman and his paternal grandparents live next door. L spends a lot of time with his grandmother and often sleeps with her. L has a fervent attachment to this grandmother, who still rocks him to sleep in her arms and sometimes lets him sleep in a nightgown.

In appearance L is frail and worried looking, at the 5th per-centile in height and 3rd percentile in weight. He prefers playing

with girls and his ambition is to be a cook. He states that boys are rough and it is better to be a girl. Although he feels tempted to go outdoors with his father, he often refuses and goes to his grandmother who is a diabetic, and L feels a duty to care for her health.

2. F.C.

F was nine years old when he was seen for assessment at the urgent request of his school. F had a twin brother, physically and emotionally quite unlike F, two older brothers and a younger sister. The school complained that F in the past year did no school work, disrupted the class and was constantly fighting. He stole pencils and money at school. He had been stealing small change at home for a few years. As F's home was 450 miles away, he was assessed and treated as an in-patient. His mother gave no other information in the beginning.

F is a well developed boy, friendly and pleasant. He is extremely attached to his mother who is separated from her husband and tends to change residence once a year. F appeared to have low self-esteem and did not express any feminine interests at first, but in answer to a question he said that girls were luckier than boys because they could get married. He was noticeably fascinated by feminine clothing and jewellery which he would tough surreptitiously.

As we got to know F better, he confided that his mother always said he looked like a girl. He asked staff members anxiously if he looked like a girl, and seemed genuinely relieved when the answer was negative. When interviewed again, F's mother confirmed that she co-operated in letting F dress like a girl, play with his sister's dolls

and she herself would play house with him, with F acting a female role. F's mother said that he pestered her until she gave in. She complained that F was overly affectionate with her and jealous of any physical contact between her and her boy friend.

E. Clinical Significance of Effeminacy in Childhood

As this research was done in a clinical setting, the question is now raised as to the importance of diagnosing and treating effeminacy in the clinical practice of child psychiatry.

During psychiatric history taking, and in the examination of the child, knowledge of predictive factors and signposts will enable the examiner to determine if unusual degrees of effeminacy are present. In the present investigation fifteen out of 100 boys fell into this category. Without special questions and specific observations it would not have been possible to arrive at this figure. The children's parents tended to avoid giving expression to any misgivings or fears about the masculinity of their sons although they had often cherished those fears.

Whether effeminacy should be a target of treatment cannot be answered in an unequivocal fashion. The earlier notions of Freud (1924), that a man who is a little effeminate is more balanced finds echoes in contemporary views (Bem, 1974), that a mixed or "androgynous" self concept allows the individual to be more flexible and resilient. In the present study probing unduly for erotic abnormality was not done to avoid vitiating the probability of influencing the family and helping the child. Turning to the follow-up studies of well known investigators such as Money (1979), Green (1974), Zuger (1978),

Lebovitz (1972) and Bakin (1968), a deviant outcome for sexuality is favoured. The strongest relationship is with homosexuality. In their late teens or young adult years 20 to 80 per cent of the boys were definitely homosexual. Transsexualism with homosexual propensity was less common at nil to 20 per cent. Transvestism was least common as a deviant outcome in this group. The effeminate mannerisms tended to disappear in adolescence, and even in this group some were declared to be heterosexual at follow-up. Where adequate treatment was undertaken, cross gender behaviour and social adjustment were influenced but not the erotic drive (Green, 1972, 1974; Money, 1979), with a greater chance of being effective in the younger boys.

Effeminacy therefore may not be of clinical significance per se, but when associated with significant emotional and social maladjustment which are directly related to it, then effeminacy could become one of the targets for therapeutic endeavour. Equally when the boy himself desires to be more like other boys, there is a role for the physician in modifying factors perceived as causative.

CHAPTER 6: SUMMARY AND CONCLUSIONS

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A. Summary

In Chapter 1, under Section A, operational definitions of the words sex, gender, effeminacy and eroticism were given and the characteristics of certain related clinical syndromes were outlined. This laid the foundation for assaying the literature as it impinges on the focus of this research.

B. I The preamble, under Section B reveiwed the literature on sexual dimorphism in those areas that are relevant to the study of effeminacy. After considering biological studies, contributions from cultural and historical studies were surveyed.

B. II Gender differences were noted to be invariably present, yet extremely malleable depending on sociocultural traditions. Cross-cultural studies of children showed remarkable consistency in boys being more aggressive and girls more affectionate and responsible. Examples were given from ancient myths as well as modern history and anthropology, showing that in spite of the consistency within each epoch and society deviants from the accepted norm do exist, as illustrated by the Chevalier d'Eon or the practice of institutionalizing transvestites in India, Japan and Canada among other countries.

B, III The question of how gender differences come about was further explored. Gender was noted to be but one aspect of the nature/nurture controversy. The role of biology, stress and learning was considered for animals. Recent research had linked prenatal androgen

in animals to actual anatomical brain differences underlying differences in gender behaviour.

In humans, the biological foundations of sex determination and differentiation were reviewed. Much of our knowledge was owed to the study of the "abnormal". Human intersexuality was reviewed, including the syndromes which are especially relevant to the study: postnatal gender behaviour of girls subjected to androgenic hormones in fetal life and boys with ambiguous genitalia raised as girls who are reported to readjust to the male role when pubertal hormones assert themselves on their muscles and genitalia. The problems of children subjected to late re-assignment of gender as put forward by Money exerted a profound influence on the action taken by physicians for the past two decades, but he was recently being strongly challenged. Contemporary social learning, cognitive-developmental and psychoanalytically derived theories on gender differences were reviewed.

2.1 The research underlying this thesis took place in a children's hospital serving the entire population of Newfoundland.

2.2 The purpose of the research was to measure effeminacy and to identify significant associations with demographic and etiological factors. To achieve this end an item sheet was compiled and completed on one hundred successive boys referred to the psychiatric service. The boys were 6-12 years of age and free of gross brain pathology, childhood psychoses and mental retardation.

2,3 The hypotheses were that effeminacy was quantitative; that most boys would have some of its features with few at the extremes; that the extremely effeminate boys would reveal a pattern of background factors that could be used to predict high scores on effeminacy; that a relatively high incidence of effeminacy at the higher end would be found in a psychiatric clinic population, and that marital conflicts and abnormal child-rearing practices are non-specific in that the maladaptation produced in the child will depend on the child's own vulnerability.

2,4 The setting of the research was advantageous, (a) in that child psychiatric assessment procedure is normally over-inclusive and (b) the frequent availability of other medical records for cross checking information.

2.4,5 All the boys and their families were interviewed by the researcher. The item sheet was constructed to be suitable for computer analysis with variables chosen from well known studies in the literature, and also on the advice of established researchers in the field. The items for measuring effeminacy were submitted to three independent experts for weighting. Each boy was given an effeminacy score based on the sum of the scores on the items. The total sample of one hundred boys was analysed in two halves of fifty successive inceptions. Significant variables associated with high-effeminacy scores in the first fifty were used to predict effeminacy scores for the second fifty boys, to be compared to their true effeminacy scores.

3. The results of the frequency tables constructed for variables in the demographic, clinical, gender influencing and gender behaviour

categories were described for the first fifty boys. All were Caucasian and almost half were doing poorly in school. Their background was predominantly in the lower socioeconomic strata. Sixty-eight per cent were living with both biological parents at the time of referral and 12 per cent were living with parents who adopted them within the first four months of birth. The two major symptom clusters among child psychiatry syndromes - conduct disorder and emotional disorder made up 50 per cent of the psychiatric diagnostic categories. Eighty-six per cent of the boys were subject to adverse etiological factors of the parental attitudinal type. Fifty per cent of the total parent population had significant psychiatric disorder almost always non-psychotic. Anthropometry on the boys such as height, weight, skin fold thickness and androgyny score followed the normal distribution.

Overdependent behaviour was pronounced in these boys (36 per cent), and 20 per cent were sleeping with their mothers well beyond the age of five years. Discipline was largely left to the mothers. Only half the boys had not experienced severe disruption due to marital conflicts in the parents. Thirty per cent of the boys had shown at least passing interest in feminine clothing and accessories, usually at the pre-school age. Twenty-four per cent drew a female when asked to draw a person.

4.A.1 Effeminacy Scores. The final effeminacy score for each boy was obtained by summation of the scores on individual items. For the first fifty boys the lowest score was 12, the highest 160, with a sharp fall in the number of boys scoring more than 100. The distribution

was not "normal", and dividing the range equidistantly into three parts, 50 per cent were in the Low-Effeminacy range, 36 per cent in the Moderate-Effeminacy range and 14 per cent in the High-Effeminacy range.

4.A.2 The relationship of high-effeminacy scores to proposed etiological factors. Only children showed a significant relationship. So did boys who were not living in the conventional nuclear family of biological parents without second degree relatives living in the home. Those boys receiving a psychiatric diagnosis of emotional disorders and personality disorders of the insecure/sensitive type also had a significant excess of high scorers. Mother's perception that the boy did not look "very much a boy" at birth also correlated with high scores. Excessive physical proximity to the mother in infancy, but especially in later childhood was significantly associated. Sleeping with mother was also strongly correlated in an ordinal fashion, effeminacy scores increasing with each year of continuing to sleep with mother. Having fathers with conspicuously masculine jobs was negatively correlated. Whether the fathers lived at home was more important to negatively correlate with high-effeminacy scores, than the role played by fathers in terms of family activities or discipline. The only area where mother's domination over father has a positive relation on high-effeminacy scores is if she makes all major decisions affecting life style. Mothers' encouragement of effeminate behaviour was strongly associated while having psychiatrically disturbed siblings almost approached significance.

4.B The data of the first and second halves of the one hundred boys was checked for significant differences in demographic and

clinical variables, and pattern of effeminacy scores. There were none, so the use of the second fifty boys as a control to predict effeminacy scores proceeded. Multiple regression analysis of the first data set gave nine variables that accounted for 60 per cent of the variation in the effeminacy scores. The regression equation obtained from this analysis was utilised to obtain "expected" values for the effeminacy scores of the second data set. The "actual" values were meantime calculated in the same way as for the first data set and now the correlation coefficient was computed for the "actual" and "expected" scores. R_c was .6615, therefore the predictive force of the nine variables was validated.

B. Conclusions

Effeminacy, as defined and measured in this research was present to a high level in 15 per cent of the total sample of one hundred boys while 39 per cent scored moderately and 46 per cent scored low, attesting to the enormous variability of children. In spite of a few in the extreme category none was referred for effeminacy.

A number of factors appeared to be associated with obtaining high scores on effeminacy, but no link was found with anthropometric measurements and hence there were no biological correlates.

Certain factors that indicate unusual physical and emotional closeness between mother and son were implicated: excessive physical proximity in infancy and especially in later childhood and sleeping with mother into late childhood. Factors that favour such closeness

such as being an only child, physical absence of the father and presence of emotional factors such as anxiety or insecurity in the boy pinpointing his vulnerability were also strongly associated. Maternal factors that were important were not having expressed a strong preference for a son, not having perceived the newborn baby as very typically boyish and having participated positively when the boy showed preferences for feminine clothing and pursuits. Among various aspects of family life, the factor of mother having the final say in major life style decisions was the only one relating to high effeminacy scores.

The "ideal" effeminate boy, as developed by this research, is the only child of a mother who did not yearn for a son. He is a cuddly baby and does not become distal from his mother as he grows older, and he usually sleeps with his mother into late childhood. He is perceived as nervous and allowed to be overdependent and at least initially not discouraged in cross gender behaviour. His father may not be living at home, and even when he is, his mother is perceived as making major decisions on life style.

The findings of this research partly support the work of Green, Money and Zuger. Differences may be due to the fact that their subjects were selected for extremely effeminate behaviour. Many parental characteristics cited proved to be non-specific.

The hypotheses that effeminacy is not an all or none phenomenon; that higher levels of effeminacy would be relatively common in a psychiatric clinic population and that predictive factors in the background could be discovered were validated. The hypothesis that

effeminacy scores would follow a normal distribution was contradicted by the findings.

The clinical implications of the findings are as yet arguable. In most cases effeminacy is probably not of clinical significance and does not automatically become a target of treatment, but in a few treatment may be desirable where the child himself wishes to change.

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APPENDIX "A"

APPENDIX "A"

THE ITEM SHEET (QUESTIONNAIRE)

First Middle Surname

Name of Child _____

Name of Mother _____

Name of Father _____

Day Month Year

Date of birth of child _____

Home Address _____ Tel. No. _____

Date of inception _____

Table of Contents

A. PERSONALIA

Column	Row	ITEM	
		Referring Agency	
1.	0	N.K.	
	1	N.A.	
	2	Family Doctor	
	3	School Medical Officer	
	4	Pediatrician	
	5	Psychiatrist	( )
	6	Other Specialist - specify	
	7	Emergency Room	
	8	Child Welfare Worker	
	9	Family Court	
	10	Other Legal Authority	
	11	Other Agency - specify	
		Age of Child in years at inception	
2.	0	5	
	1	6	
	2	7	
	3	8	
	4	9	( )
	5	10	
	6	11	
	7	12	

Column	Row	Item	
		At inception of child, number of months completed since last birthday	
3.	0	0	
	1	1	
	2	2	
	3	3	
	4	4	
	5	5	
	6	6	( )
	7	7	
	8	8	
	9	9	
	10	10	
	11	11	
		Age of mother in years at inception	
4.	0	N.K. Specify	
	1	N.A. Specify	
	2	20–24	
	3	25–29	
	4	30–34	
	5	35–39	
	6	40–44	
	7	45–49	( )
	8	50–54	
	9	55–59	
	10	60–64	
	11	65+	

Column	Row	Item	
		Age of father in years at inception	
5.	0	N.K. Specify	
	1	N.A. Specify	
	2	20-24	
	3	25-29	
	4	30-34	
	5	35-39	
	6	40-44	( )
	7	45-49	
	8	50-54	
	9	55-59	
	10	60-64	
	11	65+	
		Parental age difference in years Father's age minus Mother's age	
6.	0	N.K. Specify	
	1	N.A. Specify	
	2	-15 and over	
	3	-10 to -14	
	4	-5 to -9	
	5	-1 to -4	( )
	6	0	
	7	1 to 4	
	8	5 to 9	
	9	10 to 14	
	10	15 to 19	
	11	20 and over	

Column	Row	Item	
		Age of mother in years at birth of child	
7.	0	N.K. Specify	
	1	N.A. Specify	
	2	15-19	
	3	20-24	
	4	25-29	
	5	30-34	
	6	35-39	
	7	40-44	( )
	8	45-49	
	9	50+	
		Age of father in years at birth of child	
8.	0	N.K. Specify	
	1	N.A. Specify	
	2	15-19	
	3	20-24	
	4	25-29	
	5	30-34	
	6	35-39	( )
	7	40-44	
	8	45-49	
	9	50-54	
	10	55-59	
	11	60+	

Column	Row	Item
		Child's rank in relation to siblings
9.	0	N.K.
	1	Eldest
	2	Second
	3	Third
	4	Fourth
	5	Fifth
	6	Sixth ( )
	7	Seventh
	8	Eighth
	9	Ninth
	10	Tenth
	11	Eleventh and over - specify
	12	Only child
		Total children in full sibship
10	0	N.K.
	1	1
	2	2
	3	3
	4	4
	5	5
	6	6 ( )
	7	7
	8	8
	9	9
	10	10-14 specify
	11	15+ specify

Column	Row	Item	
		Total number of half siblings	
11.	0	N.K.	
	1	None	
	2	1	
	3	2	
	4	3	( )
	5	4	
	6	5+	
		Number of older sisters of child	
12.	0	N.K.	
	1	None	
	2	1	
	3	2	
	4	3	
	5	4	( )
	6	5	
	7	6	
	8	7+	
		Number of older brothers of child	
13.	0	N.K.	
	1	None	
	2	1	
	3	2	
	4	3	( )
	5	4	
	6	5	
	7	6	
	8	7+	

Column	Row	Item	
		Difference of number of older sisters to older brothers - sisters minus brothers	
14.	0	N.K.	
	1	-6 and over	
	2	-5	
	3	-4	
	4	-3	
	5	-2	
	6	-1	
	7	0	( )
	8	+1	
	9	+2	
	10	+3	
	11	+4	
	12	+5	
	13	+6 and over	

Chart showing age and sex of siblings

15.

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

B. SOCIOCULTURAL DATA

Column	Row	Item	
		Religion of child	
16.	0	Roman Catholic	
	1	Anglican	
	2	United Church	
	3	Salvation Army	( )
	4	Pentecostal	
	5	Other Christian	
	6	Other	
		Concordance between parental and child's religion	
17.	0	N.K.	
	1	N.A.	
	2	Both parents and child are of same religion	
	3	Father's religion is different	
	4	Mother's religion is different	( )
	5	Both parents of different religion to child's	
		Child's attendance at church services in past year	
18.	0	N.K.	
	1	N.A.	
	2	Regular	( )
	3	Occasional	
	4	Never	

Column	Row	Item
		Ethnic group of child
19.	0	N.K.
	1	N.A.
	2	Caucasian, born in Newfoundland
	3	Caucasian, born elsewhere in Canada
	4	Caucasian, born outside Canada
	5	N. American Indian
	6	Eskimo ( )
	7	Asiatic
	8	Black
	9	Mixed - specify
	10	Other - specify
		Educational achievement of child
20.	0	N.K.
	1	N.A.
	2	In regular class level with age
	3	In regular class at age level with some remedial teaching
	4	In regular class below age level
	5	In special education or opportunity class
	6	In school for retarded ( )
	7	Other - specify

Column	Row	Item
		Education of mother - highest achieved
21.	0	N.K.
	1	N.A.
	2	No schooling
	3	Less than grade 6
	4	Grade 6 - 9
	5	Grade 10 ( )
	6	Grade 11 - 12
	7	Attended University, not completed
	8	Completed University

		Education of father - highest achieved
22.	0	N.K.
	1	N.A.
	2	No schooling
	3	Less than grade 6
	4	Grade 6 - 9
	5	Grade 10 ( )
	6	Grade 11 - 12
	7	Attended University, not completed
	8	Completed University

Column	Row	Item
		Highest occupation achieved by mother
23.	0	N.K.
	1	Professional
	2	Semi-professional
	3	Proprietor (large)
	4	Proprietor (small)
	5	Clerical & Sales
	6	Skilled
	7	Semi-skilled ( )
	8	Unskilled
	9	Farmer
	10	Housewife
	11	Never in labour force
	12	Other
		Highest occupation achieved by father
24.	0	N.K.
	1	Professional
	2	Semi-professional
	3	Proprietor (large)
	4	Proprietor (small)
	5	Clerical & Sales
	6	Skilled
	7	Semi-skilled
	8	Unskilled ( )
	9	Farmer
	10	Housewife
	11	Never in labour force
	12	Other

Column	Row	Item
		Present employment status of mother
25.	0	N.K.
	1	N.A.
	2	Housewife
	3	Additional employment at home
	4	Part-time outside employment
	5	Full time outside employment
	6	Seasonal employment ( )
	7	Unemployed
	8	Other
		Present employment status of father
26	0	N.K.
	1	N.A.
	2	Part-time employment
	3	Full time employment
	4	Seasonal employment ( )
	5	Unemployed
	6	Other
		Duration of unemployment of father
27.	0	N.K.
	1	N.A.
	2	Less than 1 year
	3	1 - 4 years
	4	5 - 9 years ( )
	5	10+ years

C. HOUSEHOLD DATA

Column	Row	Item
		Present housing status of child and family
28.	0	N.K.
	1	N.A.
	2	Live in house or apartment
	3	Live in house or apartment with shared facilities
	4	Live in mobile home
	5	Live in boarding home ( )
	6	Live in hotel
	7	Live in commune
	8	Other
		Family Structure
29.	0	N.K.
	1	N.A.
	2	Nuclear family with both parents
	3	Nuclear family with mother only
	4	Nuclear family with father only
	5	Extended family with both parents
	6	Extended family with mother only
	7	Extended family with father only
	8	Lives with grandparents ( )
	9	Lives with older siblings
	10	Lives with adoptive family
	11	Lives in foster home
	12	Other

Column	Row	Item	
		Number of women in household	
30.	0	N.K.	
	1	N.A.	
	2	0	
	3	1	
	4	2	
	5	3	( )
	6	4	
	7	5	
	8	6+	
		Number of men in household	
31.	0	N.K.	
	1	N.A.	
	2	0	
	3	1	
	4	2	
	5	3	( )
	6	4	
	7	5	
	8	6+	

Column	Row	Item	
		Total adults in household	
32.	0	N.K.	
	1	N.A.	
	2	0	
	3	1	
	4	2	
	5	3	( )
	6	4	
	7	5	
	8	6	
	9	7+	
		Number of girls in household	
33.	0	N.K.	
	1	N.A.	
	2	0	
	3	1	
	4	2	( )
	5	3	
	6	4	
	7	5	
	8	6	
	9	7+	

Column	Row	Item
		Number of boys in household
34.	0	N.K.
	1	N.A.
	2	0
	3	1
	4	2
	5	3
	6	4
	7	5
	8	6
	9	7+
		Total children in household
35.	0	N.K.
	1	N.A.
	2	1
	3	2
	4	3
	5	4
	6	5
	7	6
	8	7
	9	8
	10	9
	11	10
	12	11+

D. GEOGRAPHIC DATA

Column	Row	Item
		Distance from Clinic
36.	0	0-15 miles
	1	16-30 miles
	2	31-100 miles
	3	101-300 miles ( )
	4	301-500 miles
	5	Over 500 miles
		Type of community
37.	0	Major city - more than 20,000 population
	1	Small city - 10,000-20,000
	2	Large town - 5,000-10,000
	3	Small town - 1,000-5,000 ( )
	4	Large community - 500-1,000
	5	Small community - Less than 500
	6	Other - specify

E. DIAGNOSTIC DATA

Column	Row.	Item
		Psychiatric Diagnosis
38.	0	Normal variation
	1	Adaptation reaction
	2	Hyperkinetic syndrome
	3	Speech & language disorder – specify
	4	Enuresis
	5	Encopresis ( )
	6	Conduct disorder
	7	Neurotic disorder – specify
	8	Childhood psychosis – specify
	9	Organic psychosyndrome – specify
	10	Psychosomatic disorder – specify
	11	Personality disorder – specify
	12	Mental subnormality
	13	Other clinical syndrome – specify
		Intellectual level
39.	0	Above average
	1	Average
	2	Dull normal
	3	Borderline ( )
	4	Retarded
		Associated or etiological factors
40.	0	None known
	1	Major physical disorder excluding C.N.S. disease
	2	Major environmental factor of emotional or attitudinal nature
	3	Major environmental factor of socio-economic nature ( )

F. PARENTAL QUESTIONNAIRE

Column	Row	Item
41.		During pregnancy were you hoping for a girl or boy?
	0	N.A.
	1	N.K.
	2	Girl ( )
	3	Boy
	4	No preference
42.		Did you have treatment in pregnancy?
	0	N.A.
	1	N.K.
	2	Estrogens - specify ( )
	3	Androgens - specify
	4	Progestogens - specify
	5	Other hormones - specify
	6	Non hormones - specify
43.		During pregnancy what did you predict the child was going to be from movements?
	0	N.K.
	1	N.A.
	2	Girl ( )
	3	Boy
	4	No idea

Column	Row	Item
44.		What was the baby's weight at birth?
	0	N.K.
	1	Less than 3 lbs.
	2	3-3 lbs. 15 oz.
	3	4-4 lbs. 15 oz.
	4	5-5 lbs. 15 oz. ( )
	5	6-6 lbs. 15 oz.
	6	7-7 lbs. 15 oz.
	7	8-8 lbs. 15 oz.
	8	9-9 lbs. 15 oz.
	9	10+ lbs.
45.		How was the child delivered?
	0	N.K.
	1	N.A.
	2	Normal vaginal delivery
	3	Abnormal presentation - no instruments used, specify
	4	Forceps applied
	5	Vacuum cup applied ( )
	6	Caesarian Section
	7	Other - specify
46.		What was the baby's condition at birth?
	0	N.K.
	1	N.A.
	2	Normal ( )
	3	Needed help to breathe but then all right
	4	Kept in incubator for over 24 hours
	5	Continued to be ill for first week
	6	Continued to be ill for more than one week

Column	Row	Item
47.		Did the baby look like a girl or boy to mother?
	0	N.K.
	1	N.A.
	2	Girl ( )
	3	Boy
	4	Uncertain
48.		Did the baby look like a girl or boy to father?
	0	N.K.
	1	N.A.
	2	Girl ( )
	3	Boy
	4	Uncertain
49.		What was the degree of physical proximity with mother during first year?
	0	N.K.
	1	N.A. ( )
	2	Constant physical proximity to mother
	3	Normal degree of physical proximity to mother
	4	Seldom picked up by mother
50.		Did the baby show cuddly behaviour?
	0	N.K.
	1	N.A.
	2	Very cuddly ( )
	3	Normal
	4	Not cuddly

Column	Row	Item
51.		Was there unusually close physical proximity to mother beyond the first year?
	0	N.K.
	1	N.A.
	2	Yes ( )
	3	Normal degree of proximity
	4	Less than normal
52.		After the age of one year has he been sharing mother's bed?
	0	N.K.
	1	N.A.
	2	No ( )
	3	Always sleeps with mother
	4	Often slept with mother upto the age of 3
	5	Often slept with mother upto the age of 4
	6	Often slept with mother upto the age of 5
	7	Often slept with mother upto the age of 6
	8	Often slept with mother upto the age of 7
	9	Often slept with mother upto the age of 8 and over
53.		Who taught the child to urinate in toilet, standing up?
	0	N.K.
	1	N.A.
	2	Father
	3	Mother ( )
	4	Other male
	5	Other female
	6	Urinates in female position

Column	Row	Item
54.		At what age did he start using the toilet by himself at home?
	0	N.K.
	1	N.A.
	2	3 years
	3	4 years ( )
	4	5 years
	5	6 years
	6	7 years
	7	8 years
55.		At what age did he start using the toilet by himself in public places?
	0	N.K.
	1	3 years
	2	4 years
	3	5 years ( )
	4	6 years
	5	7 years
	6	8 years
56		At what age did mother stop taking him into "ladies"?
	0	N.K.
	1	N.A.
	2	3 years
	3	4 years
	4	5 years ( )
	5	6 years
	6	7 years
	7	8 years

Column	Row	Item
57.		Who taught him to tie his shoe laces?
	0	N.K.
	1	N.A.
	2	Father
	3	Mother
	4	Teacher ( )
	5	Other male
	6	Other female
58.		Before starting school what kind of clothes did he like to wear?
	0	N.K.
	1	N.A. ( )
	2	Masculine - specify
	3	Feminine - specify
	4	Uncertain
59.		Before starting school what type of clothes did he hate?
	0	N.K.
	1	N.A. ( )
	2	Typical masculine clothes
	3	Feminine clothes
	4	Uncertain
60.		Before starting school did he imitate his father at his toilet - shaving, etc.?
	0	N.K.
	1	N.A. ( )
	2	Yes
	3	No

Column	Row	Item	
61		Before starting school did he imitate his father at his work - fishing, drilling, sawing, etc.?	
	0	N.K.	
	1	N.A.	( )
	2	Yes	
	3	No	
62		Before starting school did he imitate his mother doing her hair?	
	0	N.K.	
	1	N.A.	
	2	Yes	( )
	3	No	
63		Before starting school did he imitate his mother using make-up?	
	0	N.K.	
	1	N.A.	
	2	Yes	( )
	3	No	
64		Before starting school did he imitate his mother working - cooking, cutting food, vacuuming, feeding baby, mopping, etc.?	
	0	N.K.	
	1	N.A.	
	2	Yes	( )
	3	No	
65		Before starting school did he show excessive modesty?	
	0	N.K.	
	1	N.A.	
	2	Yes	( )
	3	No	
	4	Not sure	

Column	Row	Item
66.		After starting school did he show excessive modesty?
	0	N.K.
	1	N.A.
	2	Yes ( )
	3	No
	4	Not sure
67.		After starting school what type of clothes does he refuse to wear?
	0	N.K.
	1	N.A.
	2	Masculine ( )
	3	Feminine
	4	Creased or soiled
	5	Uncertain
68.		After starting school what type of clothes does he favour?
	0	N.K.
	1	N.A.
	2	Masculine ( )
	3	Feminine
	4	Atypical
69.		When he plays make believe games which part does he like to play usually?
	0	N.K.
	1	N.A. ( )
	2	Mother, sister, nurse, other female
	3	Father, brother, doctor, other male
	4	Alternating
	5	Never plays such games

Column	Row	Item	
70.		Has masturbation been noticed?	
	0	N.K.	
	1	N.A.	
	2	Frequently	( )
	3	Occasionally	
	4	Never	
71.		Has he ever shown erotic behaviour other than masturbation?	
	0	N.K.	
	1	N.A.	
	2	With boys or men	( )
	3	With girls or women	
	4	With both sexes	
	5	Other - specify	
	6	None	
72.		Does he have a nickname?	
	0	N.K.	
	1	N.A.	
	2	Masculine	( )
	3	Feminine	
	4	Neutral	
	5	None	
73.		Does he get teased about being romantic?	
	0	N.K.	
	1	N.A.	( )
	2	Yes	
	3	No	

Column	Row	Item	
74.		Does he take play-acting roles?	
	0	N.K.	
	1	N.A.	
	2	In public	( )
	3	At home only	
	4	Never	
75.		When he play acts what roles does he choose?	
	0	N.K.	
	1	N.A.	
	2	Masculine roles	( )
	3	Feminine roles	
	4	Both equally	
	5	Never play acts	
76.		Whom does he like helping at home?	
	0	N.K.	
	1	N.A.	( )
	2	Father, brother, other male	
	3	Mother, sister, other females	
	4	Both equally	
	5	Never helps	
77.		What games does he like to play best?	
	0	N.K.	
	1	N.A.	
	2	Masculine	( )
	3	Feminine	
	4	Neutral	

Column	Row	Item	
78.		What kind of toys does he want you to give him?	
	0	N.K.	
	1	N.A.	
	2	Masculine	( )
	3	Feminine	
	4	Neutral	
79.		When he calls for a playmate does he ask for a girl or boy?	
	0	N.K.	
	1	N.A.	
	2	Boy	( )
	3	Girl	
	4	Either equally	
	5	Does not call	
80.		When other children call for him to play are they usually boys or girls?	
	0	N.K.	
	1	N.A.	
	2	Mostly boys	( )
	3	Mostly girls	
	4	Both equally	
	5	No one calls	
81.		Are his current playmates boys or girls?	
	0	N.K.	
	1	N.A.	
	2	Mostly boys	( )
	3	Mostly girls	
	4	Both equally	
	5	Solitary	

Column	Row	Item
82.		Does he prefer to be with boys or girls?
	0	N.K.
	1	N.A.
	2	Boys
	3	Girls ( )
	4	No preference
	5	Solitary
83.		Before the age of 5 which adult was he closest to?
	0	N.K.
	1	N.A.
	2	Father
	3	Mother
	4	Brother ( )
	5	Sister
	6	Other male
	7	Other female
	8	None
84.		After the age of 5 which adult is he closest to?
	0	N.K.
	1	N.A.
	2	Father
	3	Mother
	4	Brother ( )
	5	Sister
	6	Other male
	7	Other female
	8	None

Column	Row	Item
85.		Did mother share bath with child after age 5?
	0	N.K.
	1	N.A.
	2	Frequently ( )
	3	Occasionally
	4	Never
86.		Did mother share bath with him before age 5?
	0	N.K.
	1	N.A.
	2	Frequently ( )
	3	Occasionally
	4	Never
87.		Have other people ever remarked that he looks like a girl?
	0	N.K.
	1	N.A.
	2	Frequently ( )
	3	Occasionally
	4	Never
88.		Has the child ever been teased for being a "sissy"?
	0	N.K.
	1	N.A.
	2	Frequently ( )
	3	Occasionally
	4	Never

Column	Row	Item
89.		Does father or mother feel he has always been different from other children?
	0	N.K.
	1	N.A. ( )
	2	Yes - with regard to general behaviour
	3	Yes - with regard to gender behaviour
	4	Yes - with regard to gender and general behaviour
	5	Not different
90.		Do you think he will be as manly as his father?
	0	N.K.
	1	N.A.
	2	More so ( )
	3	Yes
	4	Less so
	5	Not manly
91.		At what age was he first ever noticed wearing feminine-wear articles?
	0	N.K.
	1	Never occurred
	2	2
	3	3
	4	4 ( )
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10
	11	11
	12	12

Column	Row	Item	
92.		Did he wear female articles publicly or privately or both?	
	0	N.K.	
	1	Never occurred	( )
	2	Privately only - in the home	
	3	Publicly only - outside the home	
	4	Both	
93.		Before starting school what feminine articles did he like to try wearing?	
	0	N.K.	
	1	N.A.	
	2	Handbag	
	3	High-heeled shoes	( )
	4	Make-up	
	5	Other - specify	
	6	Several of above - list	
	7	None	
94.		Before starting school what feminine clothes did he like to try out?	
	0	N.K.	
	1	N.A.	
	2	Dress	
	3	Underwear	( )
	4	Nightwear	
	5	Several of above - list	
	6	None	

Column	Row	Item	
95.		Occupational gender of father.	
	0	N.K.	
	1	N.A.	
	2	Masculine	
	3	Feminine	( )
	4	Neutral	
	5	No occupation	
96.		Occupational gender of mother.	
	0	N.K.	
	1	N.A.	
	2	Masculine	
	3	Feminine	( )
	4	Neutral	
	5	No occupation	
97.		Which parent plays major role in discipline?	
	0	N.K.	
	1	N.A.	
	2	Father	
	3	Mother	( )
	4	Share equally	
	5	Neither	
98.		Does father avoid role in discipline?	
	0	N.K.	
	1	N.A.	
	2	Yes	( )
	3	No	
	4	Doubtful	

Column	Row	Item
99.		Which parent makes major decisions involving finances?
	0	N.K.
	1	N.A.
	2	Father ( )
	3	Mother
	4	Share equally
100.		Which parent has final say in making major changes in life style of family?
	0	N.K.
	1	N.A.
	2	Father ( )
	3	Mother
	4	Share equally
101.		Is mother satisfied with father's role in family?
	0	N.K.
	1	N.A. ( )
	2	Strong dissatisfaction
	3	Mild dissatisfaction
	4	Satisfied
102.		Does mother express hostility towards men in general?
	0	N.K.
	1	N.A.
	2	Marked hostility ( )
	3	Mild hostility
	4	None

Column	Row	Item
103.		Have there been serious disruptions in the stability of family life?
	0	N.K.
	1	N.A.
	2	Separation of parents ( )
	3	Frequent severe fights, not separated
	4	Prolonged separation due to father's occupation
	5	No serious disruptions
	6	Other - specify
104.		Does father live at home?
	0	N.K.
	1	N.A. ( )
	2	Yes
	3	No
105.		Does father spend time in family activities?
	0	N.K.
	1	N.A.
	2	A great deal ( )
	3	Average
	4	Little or none
106.		Does father spend time in activities with the children and is there any preference?
	0	N.K.
	1	N.A. ( )
	2	Prefers activities with daughter(s)
	3	Prefers activities with son(s)
	4	No preferences, but does spend time in activities with children
	5	Does not partake in family activities involving the children

Column	Row	Item
107.		Is father's occupation responsible for lack of time with family?
	0	N.K.
	1	N.A.
	2	Yes ( )
	3	No
	4	Doubtful
108.		Does father encourage feminine behaviour by laughing, admiring, etc.?
	0	N.K.
	1	N.A.
	2	Yes ( )
	3	No
110.		Does father discourage feminine behaviour by "boys don't", "only girls do", punishment?
	0	N.K.
	1	N.A.
	2	Yes - specify ( )
	3	No
	4	Inconsistently
111.		Does mother discourage feminine behaviour?
	0	N.K.
	1	N.A.
	2	Yes - specify ( )
	3	No
	4	Inconsistently

Column	Row	Item
112.		Is there gross psychiatric disorder in parents?
	0	N.K.
	1	N.A.
	2	No ( )
	3	In mother - specify
	4	In father - specify
	5	In both - specify
113.		Is there gross psychiatric disorder in siblings?
	0	N.K.
	1	N.A. ( )
	2	Yes, in one sibling - specify
	3	Yes, in more than one sibling - specify
	4	No
114.		What is chief psychiatric diagnosis in father?
	0	N.K.
	1	No psychiatric disorder
	2	Organic psychosyndrome - specify pathology
	3	Schizophrenia
	4	Affective psychosis ( )
	5	Alcoholism
	6	Personality disorder - specify
	7	Abnormal psychgenic reaction
	8	Other - specify

Column	Row	Item
115.		What is chief psychiatric diagnosis in mother?
	0	N.K.
	1	No psychiatric disorder
	2	Organic psychosyndrome, specify pathology
	3	Schizophrenia
	4	Affective psychosis ( )
	5	Alcoholism
	6	Personality disorder - specify
	7	Abnormal psychogenic reaction
	8	Other specify
116.		Are there known cases of sexual abnormalities in parents or siblings?
	0	N.K.
	1	N.A.
	2	Homosexuality ( )
	3	Cross dressing with or without homosexuality
	4	Other - specify
	5	None
117.		Does either parent have strong feelings about homosexuality
	0	N.K.
	1	N.A.
	2	Strong feelings against
	3	Indifferent ( )
	4	Strong feelings in favour
	5	Other - specify
	6	Never heard of it

Column	Row	Item
118.		Marital status of all paternal uncles and aunts over 30 years old.
	0	N.K.
	1	N.A.
	2	0 - 24% % married
	3	25 - 49%
	4	50 - 74% ( )
	5	75 - 100%
119.		Marital status of all maternal uncles and aunts over 30 years old.
	0	N.K.
	1	N.A.
	2	0 - 24% % married
	3	25 - 49%
	4	50 - 74% ( )
	5	75 - 100%

G. CHILD'S QUESTIONNAIRE

re: gender behaviour and tests

Column	Row	Item	
120.		Height of child	
	0	N.K.	
	1	N.A.	
	2	Below 3rd percentile	( )
	3	Between 3rd - 10th percentile	
	4	Between 10th - 25th percentile	
	5	Between 25th - 50th percentile	
	6	Between 50th - 75th percentile	
	7	Between 75th - 90th percentile	
	8	Between 90th - 97th percentile	
	9	Above 97th percentile	
121.		Weight of child	
	0	N.K.	
	1	N.A.	
	2	Below 3rd percentile	
	3	Between 3rd - 10th percentile	( )
	4	Between 10th - 25th percentile	
	5	Between 25th - 50th percentile	
	6	Between 50th - 75th percentile	
	7	Between 75th - 90th percentile	
	8	Between 90th - 97th percentile	
	9	Above 97th percentile	
122.		Facial appearance of child	
	0	N.K.	
	1	N.A.	
	2	Strikingly feminine	( )
	3	Neutral	
	4	Strikingly masculine	

Column	Row	Item
123.		Deportment of child (carriage, bearing, posture)
	0	N.K.
	1	N.A.
	2	Feminine - specify ( )
	3	Uncertain
	4	Masculine
124.		How the child is dressed.
	0	N.K.
	1	N.A.
	2	Feminine - describe ( )
	3	Uncertain - describe
	4	Masculine - describe
125.		Hair style of child - child's opinion.
	0	N.K.
	1	N.A.
	2	Feminine ( )
	3	Uncertain
	4	Masculine
126.		Hair style of child - interviewer's opinion.
	0	N.K.
	1	N.A.
	2	Feminine ( )
	3	Uncertain
	4	Masculine
127.		Length of hair - child's
	0	N.K.
	1	N.A.
	2	At nape of neck ( )
	3	Below nape of neck
	4	Shoulder length
	5	Below shoulder length

Column	Row	Item
128.		Child's gestures
	0	N.K.
	1	N.A.
	2	Feminine ( )
	3	Uncertain
	4	Masculine
129.		Relative size of 2nd and 4th finger of dominant hand.
	0	N.K.
	1	N.A. ( )
	2	2nd finger is longer than 4th
	3	Equal length
	4	4th finger is longer than 2nd
130.		Child's handedness
	0	N.K.
	1	N.A. ( )
	2	Uses right hand mostly for writing
	3	Uses both hands equally for writing
	4	Uses left hand mostly for writing
131.		Child's biceps skin fold thickness. (mean of three tries)
	0	N.K.
	1	N.A.
	2	Below average ( )
	3	Average range
	4	Above average range

Column	Row	Item
132.		Androgyny score (3biac -<1 biiliac)
	0	N.K.
	1	N.A.
	2	Below average ( )
	3	Average range
	4	Above average
133.		Is it luckier to be a girl or boy?
	0	N.K.
	1	N.A.
	2	Girl ( )
	3	No preference
	4	Boy
134.		Have you ever wished you had been born a girl?
	0	N.K.
	1	N.A.
	2	Yes ( )
	3	Don't know
	4	No
135.		Do you now wish you have been born a girl?
	0	N.K.
	1	N.A.
	2	Yes ( )
	3	Don't know
	4	No

Column	Row	Item
136.		Do you ever think you are really a girl?
	0	N.K.
	1	N.A.
	2	Yes ( )
	3	Don't know
	4	No
137.		Do you like playing rough?
	0	N.K.
	1	N.A.
	2	No ( )
	3	Don't know
	4	Yes
138.		What job would you like to do when you leave school?
	0	N.A.
	1	Don't know
	2	Feminine type ( )
	3	Neutral type Specify:
	4	Masculine type
139.		When you finish school which of these jobs would you like?
	0	N.K.
	1	N.A.
	2	Feminine ( )
	3	Neutral
	4	Masculine
140		Is that a man's job or woman's job?
	0	N.K.
	1	N.A.
	2	Feminine ( )
	3	Neutral
	4	Masculine

Column	Row	Item
141.		Who is your best friend?
	0	N.K.
	1	N.A.
	2	A girl ( )
	3	Don't know
	4	A boy
142.		If you had two tickets to the movies, you would take one person - who?
	0	N.K.
	1	N.A.
	2	A girl
	3	Don't know ( )
	4	A boy
	5	Mother
	6	Father
143.		What kind of chores do you prefer to do at home?
	0	N.K.
	1	N.A.
	2	Feminine ( )
	3	Neutral
	4	Masculine
144.		What are your favourite games?
	0	N.K.
	1	N.A.
	2	Feminine ( )
	3	Neutral
	4	Masculine

Column	Row	Item	
145.		Are they (your favourite games) girls' or boys' games?	
	0	N.K.	
	1	N.A.	
	2	Girls	( )
	3	Both	
	4	Boys	
146.		Who do you want to be like when you grow up?	
	0	N.K.	
	1	N.A.	
	2	Feminine ideal	( )
	3	Neutral or Don't know	
	4	Masculine ideal	
147.		When you grow up do you want to be mummy or daddy?	
	0	N.K.	
	1	N.A.	
	2	Mummy	( )
	3	Don't know	
	4	Daddy	
148.		Draw a Person Test	
	0	N.K.	
	1	N.A.	
	2	Drew female	( )
	3	Sex uncertain	
	4	Drew male	

Column	Row	Item
149.		Choose clothes for "it".
	0	N.K.
	1	N.A.
	2	Chose feminine clothes ( )
	3	Chose mixture
	4	Chose masculine clothes
150.		Choose a picture Test.
	0	N.K.
	1	N.A.
	2	Feminine ( )
	3	No choice
	4	Masculine
151.		Child's Intelligence Test (WISC, F.S.)
	0	N.K.
	1	N.A.
	2	Below 70
	3	70 - 79
	4	80 - 89 ( )
	5	90 - 99
	6	100 - 109
	7	110 - 119
	8	120 - 129
	9	130 - 139
	10	140+

APPENDIX "B"

APPENDIX "B"

DEFINITIONS AND INSTRUCTIONS FOR CODES IN THE ITEM SHEET ("QUESTIONNAIRE")

Front Page

Information pertaining to the identity of the boy and his family is entered here but must be kept confidential. A research number starting with Number 1 is assigned in order of inception, and this number is placed also on Page 1 of the item sheet so that the front page can be removed and stored.

A. Personalia

Item

1. Enter the number assigned to the agency which made the first contact with the clinic.

2,4,5, 7,8 Age on latest birthday.

B. Socio-economic Data

18. Enter 2 if church attendance is at least once a week.

20. Enter 5 if the class is for a small number of children of various with learning and/or emotional problems.

21,22 Enter highest grade passed for rows 4 – 6.

C. Household Data

29. 1. In the nuclear family there are no second degree relatives.
2. Include adoptive children only if adopted within the first six months of birth.
3. Include children living in foster homes only if placed for the first time within three months of assessment date.

32,34, 35 Include those who have not yet attained 18th birthday.

E. Diagnostic Data

38,39, 40 As in International Classification of Diseases, 9th revision (1977) using Axis I, III and V.

F. Parental Questionnaire

49. Constant proximity entails the mother keeping the infant in physical contact almost continuously and always within sight while doing housework.

51. Unusual proximity beyond the first year is present when the toddler or pre-school child continues to be in frequent physical contact with his mother, being carried or sitting in her lap. The mother prefers not to go to places where she cannot take him with her.

65,66 Excessive modesty is present when the boy is too bashful to dress or undress without complete privacy often causing problems with communal changing of clothes, showering, etc.

68. "Atypical" here refers to clothing which is masculine but against the general trend or fashion.

73. "Romantic" in the sense of being sentimental and susceptible.

77. Masculine sports and games are ice hockey, football, cops and robbers, making model airplanes, wrestling, etc.
Feminine sports and games are hopscotch, jump rope, dressing up, ring-around-the-rosy.
Neutral games are basket ball, soft ball, base ball, card games, roller skating, boating, checkers, etc.

78. Masculine toys are trains, tools, spacemen, cars, trucks, etc.
Feminine toys are dolls, cooking and serving utensils, doll houses, toys for playing house, doctor, sewing, etc.

83,84 Closest adult is the person whose company the child prefers above all and with whom he has a secure relationship.

95. Masculine occupations are fishing, truck driving, engineering, construction work on roads and buildings, working on boats, motor mechanics, etc.
Feminine occupations are homemaking, child care, cooking, beautician, physiotherapy, nursing, etc.
Neutral occupations are clerical work, teaching, working in fish plants, chauffering, waiting at table, etc.

100. Life style includes location or relocation in the narrow and wider geographic area, choosing schools and churches, contacts with friends and relatives, ways used to supplement family income, etc.

105. Family activities involve both work such as child care, housekeeping, children's school progress, etc., as well as playing with children, hobbies with children, being involved in leisure activities of marital partner and children, etc.

112. Psychiatric disorder assessed as gross if it has received treatment or is presently causing significant distress to the person and/or others in the vicinity.

G. Child's Questionnaire

120,121 Percentile charts as used in the children's hospital.

122,123, 126,128 Subjective impression of interviewer.

131,132 As in Taranger, J and Karlberg, P (1976).

138,139 As defined in parental questionnaire.

APPENDIX "C"

APPENDIX "C"

ANALYSIS OF RATINGS UTILIZED FOR WEIGHTING
THE VARIABLES USED TO OBTAIN AN EFFEMINACY SCORE

Experiment

Given: there are three expert raters, K, J and M who are asked to rate 52 effeminacy variables on a scale of 1 (low) to 3 (most).

Summary of results of Experiment

Variables that Drs.	K, J, M	rate similarly	= 18
	K, J	rate similarly	= 27
	J, M	rate similarly	= 29
	K, M	rate similarly	= 28
	K, J, M	rate dissimilarly	= 4

Assume: Majority rule, that is, if two experts agree on the rating given to the question, then it is the correct rating.

Given that the raters are independent and experts in their field, one can argue for the above assumption.

What we would like now is an estimate of the probability that each of the experts is right. A simple way of doing this is by using the relative frequency concept and the assumption of majority rule.

$$P(\text{Dr.}_i \text{ is right}) = \frac{\#\text{ of times } i \text{ is in the majority}}{\#\text{ of questions}}$$

From the results of the experiment,

$$P \text{ (Dr. K is right)} = \frac{27 + 28 - 18}{52} = \frac{37}{52}$$

$$P \text{ (Dr. J is right)} = \frac{27 + 29 - 18}{52} = \frac{38}{52}$$

$$P \text{ (Dr. M is right)} = \frac{29 + 28 - 18}{52} = \frac{39}{52}$$

Note that this is an independent probability estimation of the experts' correctness in general, i.e., on the average this is the number of times the expert is right in his rating.

Now we have the problem of weighting each question with reference to its importance in measuring effeminacy.

Experiment

Drs. 1, 2 and 3 are given a question and asked to rate the answer for importance in measuring effeminacy. The higher the rating, the higher the importance.

Typically, let (x_1, x_2, x_3) be the rating of an answer to a question regarding femininity, by the experts. We are interested in rating this answer on a general level and on an ordinal scale. One way to do it is to assign a linear functional score by value of answer to question:

$$v(x_1, x_2, x_3) = \sum_{i=1}^{3} x_1 \, P \text{ (Dr. i is right in his valuation)}$$

Note that the term $\{ x_1 \, P \text{ (Dr. i is right in his valuation)} \}$ is the expected value of the rating by Dr. i, assuming that when the expert is wrong, no weight is given to his rating.

Also note that since the valuation function v is ordinal, we can normalise the probabilities that the experts are right. Let

$$P_i = \frac{P \text{ (Dr. i is right)}}{\sum_{i=1}^{3} P \text{ (Dr. i is right)}} \quad , \text{ where } i = 1, 2, 3$$

then, $$P_1 = \frac{\frac{37}{52}}{\frac{37}{52} + \frac{38}{52} + \frac{39}{52}} = \frac{37}{114} = 0.32$$

$$P_2 = \frac{38}{114} = 0.33$$

$$P_3 = \frac{39}{114} = 0.34$$

It is interesting to note that eachof the experts gets an almost equal weighting, re-inforcing the fact that the experts were indeed independent and "equally expert".

Then given a ranking (x_1, x_2, x_3) to any answer to a variable measuring effeminacy, the value attached to the answer is:

$$v(x_1, x_2, x_3) = P_1x_1 + P_2x_2 + P_3x_3$$