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A PSYCHOLOGICAL INVESTIGATION OF
SEVEN HERMAPHRODITIC CHILDREN

by

Peter Lewis Kranz

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1969

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Peter Lewis Kranz

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ABSTRACT

A Psychological Investigation of
Seven Hermaphroditic Children

by

Peter Lewis Kranz, Doctor of Philosophy

Utah State University, 1969

Major Professor: Glendon Casto
Department: Psychology

An in-depth personality and intellectual evaluation of a group of hermaphroditic children residing in the state of Oklahoma was undertaken in this study. The following techniques were utilized in order to extensively study the impact of this anomaly on the families of these children: psychological tests, parental interviews by a social worker, and diagnostic play interviews conducted by the investigator. It was the purpose of this study to examine the psychological impact of sexual ambiguity on the child and his parents.

There were no significant differences between the two groups on any of the tests given. This may be attributed to the small sample size.

Certain trends seemed apparent but they could also have been effected by the limited sample. These trends were:

1. The play activities and interests of the children appeared to be age appropriate in relation to their socio-economic background. There was, however, a tendency on the part of the older children to prefer activities which were more masculine than feminine in nature.

2. Few close heterosexual relationships were mentioned by the subjects.

3. Four of the children stated that they would like to make nursing a career.

4. The three older children seemed more aware of their medical condition than the younger subjects and were aware that they were different in some ways from the normal population.

5. The three older subjects seemed more affected by the anomaly than the younger ones and were more sensitive to it and to relationships with others.

6. As a group there seemed to be nothing unusual in their typical daily routine except for the medication which had to be taken regularly.

7. The children seemed to be self-conscious and reluctant in describing themselves to the investigator particularly as it pertained to their medical anomaly.

8. An optimistic philosophy of life was expressed by the subjects in which emphasis was placed upon religious values, a desire to help others, and an ambition to live the golden rule.

9. In the children's explanations of how they would like to be different, reference was made to their medical condition.

10. In no case did the birth of a hermaphroditic child into a family inhibit future conceptions and subsequent births.

11. All families but one felt that they needed greater medical understanding and guidance with regard to the anomaly as well as with proper management of the condition once it had been diagnosed.

12. It was felt by four groups of parents that desirable sex change should occur in the child as early as possible, preferably before three years of age.

13. All families tended to keep the sexual anomaly issue closed and limited to their immediate family.

14. It appeared that socio-economic factors made little difference in the parents' general concern for their child and its adequate adjustment to the environment.

15. Accessible and comprehensible medical information about hermaphroditism is almost unavailable to those desiring it because of the current infrequency of incidence and variations in condition.

(181 pages)

CHAPTER I
INTRODUCTION

The term "hermaphroditism" is derived from the legendary appearance of the mythical child Hermaphroditus (born to Hermes and Aphrodite), who was said to possess genitalia of both sexes. In today's terminology a true hermaphrodite is an individual who possesses ovarian as well as testicular tissue. In order for the correct diagnosis of this intersexual state to be made, the presence of both types of gonadal tissue has to be proven histologically (Bartalos and Baramki, 1967). Other variations of hermaphroditism include male pseudohermaphroditism, a condition in which a person is genetically and gonadally masculine but whose body build and external genitalia have female features, and female pseudohermaphroditism, a condition in which a person is genetically and gonadally feminine but whose external genitalia and body build have male features.

The major center for research in the study of hermaphroditism is the Johns Hopkins University Hospital in Baltimore, Maryland. Wilkins, Jones, J. L. Hampson, J. G. Hampson, Van Wyk, Grumbach, Judson, and Money have been major contributors from this institution. Money is by far the most active researcher in the area of psychological implications of this disorder and is the major source which this investigator utilized in order to compile his review of literature.

In spite of the fact that some researchers feel that there are

no statistical data with regard to incidence¹ some meager data were found. It has been stated that true hermaphroditism is an extremely rare condition and that there have only been 40 cases reported which were adequately authenticated by microscopic examination of the gonads (Talbot et al., 1952). As of 1958, only 70 verified cases had appeared in the literature according to Lissner and Escamilla (1962). Danowski (1965) estimated that there are probably no more than 100 true hermaphrodites on record.

Pseudohermaphroditism occurs far more frequently, about once in 1,000 persons, and approximately 75 percent of patients with pseudohermaphroditism are felt by Lissner and Escamilla (1962) to be males. It can be a result of the most common adrenal abnormality encountered in childhood: congenital adrenal hyperplasia (Bartalos and Baramki, 1967). Adrenal hyperplasia is an increase in the size of the adrenal glands as compared to normal. There is a resultant androgenic excess which may cause virilizing effects within the fetus, infant or child (Brainerd, Margen, and Chatton, 1967). If this condition appears within a female, sexual ambiguity is often the result. The statistics relating to pseudohermaphroditism with regard to incidence of adrenal hyperplasia are meager, and they vary from researcher to researcher. Childs, Grumbach and Van Wyk (1956) report one case in every 67,000 live births in the state of Maryland and Prader (1958) reports one case in every 8,000 births in Switzerland.

¹John Money, letter to the author, Peter L. Kranz, March, 1968; Darrel Smith, interview at the Oklahoma Medical Center, Oklahoma City, Oklahoma, March, 1968.

Statement of Problem

There has been relatively little research relating to the psychological problems of the child with intersex difficulties and hormonal dysfunction. Most reports are of the case study variety and lack utilization of objective measurement and effective controls. The use of objective measures appears particularly deficient since many studies offer conclusions regarding sex role identification, self concept, parental attitudes, expectancies, related child adjustment, achievement, etc. It was the purpose of this study to gather data relating to these factors and to compare the psychological test data between an experimental group of hermaphroditic children and a control group. The psychological impact of sexual ambiguity on the child and his parents was also examined. Psychological tests, parental interviews by a social worker, and diagnostic play interviews were utilized as sources of data. It is felt that the major contribution of this study was the acquisition of quantifiable data which past studies have not obtained. Focus on the family was also a contribution of this study.

Sample size was restricted due to the number of available hermaphroditic school-age children in the state of Oklahoma. This fact has limited the N to seven children. Three of these children have been diagnosed as male pseudohermaphrodites with testicular feminizing syndrome, and four of the children as female pseudohermaphrodites with congenital adrenal hyperplasia. Small samples are common in related research. For example, in a study conducted by Money, Hampson, and Hampson (1955b) a sample size of 11 was used.

Another study by Dewhurst and Gordon (1963) utilized an N of 20, and Berg, Nixon, and MacMahon (1963) reported a case study which included only one subject.

The objectives of this study were: (1) to compare the performance of an experimental and control group on various diagnostic instruments, (2) to carry out an in-depth personality and intellectual evaluation of each hermaphroditic child, and (3) to study in-depth the impact of this anomaly on the families of these children.

CHAPTER II
REVIEW OF LITERATURE

This review of literature is divided into three parts. The first part is concerned with sex assignment of the neonatal period, the second part with sex assignment of the post-neonatal period, and the third part with parental management.

Sex Assignment: Neonatal Period

There is considerable evidence to indicate that much of a child's psychosexual inclinations and behavior are not predetermined by the chromosomal pattern, the morphology of the gonads, or the type of sex hormones, but instead are largely determined through the gender role assignment made early in life. This hypothesis was proposed initially by Money, Hampson, and Hampson (1955a, b) and later supported through the work of many other researchers (Hampson, 1955; Money, Hampson, and Hampson, 1957; Money, 1955, 1963, 1965a, b, c, d; Bunge et al., 1959; Wilkins et al., 1955; Sturgis et al., 1962). These researchers feel that the parent's attitude toward the child's sex role is the single most important factor in the determination of psychological maleness or femaleness. A finer discrimination is made in cases in which it is felt that the psychological maleness or femaleness of the child is not a result of any single one or combination of the following physical variables of sex: chromosomal sex, gonadal sex, hormonal sex, internal accessory reproductive structures

and external genital morphology. Rather, the psychosexual neutrality present at birth becomes differentiated later on, primarily as a result of social interactions with those significant others in the environment (Money, Hampson, and Hampson, 1957). The significance of gender role will be discussed more thoroughly under "Sex Assignment: Post-neonatal Period."

If the preceding assumptions concerning gender role hold true, several considerations should be taken into account. The obstetrician and/or pediatrician should attempt to settle the sex of the newborn child as quickly as possible. Several researchers feel that this assignment should be instituted within the first few weeks of life before the child's gender role becomes too firmly established (Money, Hampson, and Hampson, 1955a, b, 1956; Wilkins et al., 1955; Gross and Meeker, 1955; Money, 1961c, 1968b; Wilkins, 1965; Melicow, 1967). However, most writers also feel that it is preferable that there be a delay of a few days or, if need be, even a few weeks, during which time finality of sex is decided rather than to state a determination which is not clear and which might later need to be retracted (Gross and Meeker, 1955; Hampson, Money, and Hampson, 1956; Bunge et al., 1959; Wilkins, 1965). Regarding the basis for determining the sex of a child, Wilkins (1965, p. 335) states: "It is most important that in earliest infancy, a firm and rational decision be made in regard to the gender in which the patient is best adapted to lead as normal a life as possible, devoid of psychosexual maladjustments." Others have expressed similar ideas (Hampson, 1955; Money, Hampson, and Hampson, 1955a, b, 1956; Wilkins et al., 1955; Money, 1961c).

Therefore, before the physician in charge arrives at a particular sex determination, it is necessary that he carry out a thorough investigation. This should include comprehensive diagnostic studies, of which the buccal smear and the 17-ketosteroid test are especially important; familial history, including pregnancy data; and a thorough physical examination of the infant with particular attention being given to its genital morphology. In this way the diagnosis of the exact type and etiology of the disorder can be determined, giving assurance of a permanent decision concerning the sex assignment made and thereby preventing a speculative pronouncement of sex which may later have to be reversed. However, there are some cases of hermaphroditic children in which the question of ambisexuality is not suspected at birth due to the apparent clarity regarding the morphology of the external genitalia (Money, Hampson, and Hampson, 1956). In cases such as these, it is recommended that the infant be declared by the attending physician either of the male or female sex.

If the external organs of the child are so predominantly male, or so predominantly female that no amount of surgical reconstruction will convert them to serviceably and erotically sensitive organs of the other sex, then the sex assignment should be directed toward maintaining the person in that sex. (Money, Hampson, and Hampson, 1955b, p. 288)

Early uncertainty is aroused only when there is some ambiguity concerning the appearance of the external genitals (Money, Hampson, and Hampson, 1955b). When this is the case, researchers at the Johns Hopkins Hospital concluded (after a 3 1/2 year study of the psychological development of 65 hermaphroditic infants, children and adults) that the use of a simple criterion like gonadal structure or chromosomal pattern in the assignment of a hermaphrodite child to

one sex or the other is extremely unwise. Instead they recommend that the attending physician give consideration not only to external genital morphology but also to the adequate functioning ability of the genitalia in his choice of sex assignment. In this regard corrective hormonal intervention can also be considered.

The most frequently raised objection in giving primary consideration to the genital anatomy of the hermaphroditic infant is that this flagrantly disregards the issue of fertility. There are no reported cases in which a male pseudohermaphrodite or true hermaphrodite has become a parent (Money, Hampson, and Hampson, 1955b). With regard to male pseudohermaphrodites, it has been stated by Wilkins (1965) that those who possess external female genitalia should be reared as girls. Male pseudohermaphrodites regularly feminize at puberty if they remain untreated. Although they do not menstruate or bear children, they frequently marry and live normal sex lives. Since their testes secrete estrogens at puberty, gonadectomies are not performed until after adolescence so that the patients may be convinced of their femininity without hormonal therapy. The testes are usually removed shortly after the individual reaches the age of 20 years due to the possible risk of malignancy. Once the gonadectomy has been performed it is essential that substitution therapy with estrogens be administered. Plastic correction may be carried out in those cases in which the individual's vagina is too short for satisfactory coitus (Wilkins, 1965).

One of the primary considerations in the selection of the appropriate sex for the male pseudohermaphrodite with ambiguous or

male external genitalia is the size of the phallus and the anatomy of the external genitals (Wilkins, 1965). Provided that the phallus is sufficiently well developed to function reasonably well as a penis, it is often felt to be wise to raise the child as a male and to surgically correct any chordee, hypospadias or scrotal cleft that might be present. Tubes and uterus are generally removed if they are present, and hormonal injections of testosterone are given if satisfactory masculinization does not occur at puberty (Wilkins, 1965).

However, the phallus is so rudimentary and poorly developed in many male pseudohermaphrodites that there is unfortunately no hope of constructing an adequate, functioning penis. Wilkins (1965, p. 336) states that "if these patients are raised as males, the abnormality of their external genitals constitutes an insuperable handicap to a satisfactory psychologic adjustment in their gender role." He feels that these patients are ashamed to associate with other boys and tend to develop marked feelings of inferiority. It is also felt by Wilkins (1965) that as these individuals reach adult life they have a tendency to become even more psychologically maladjusted in spite of testosterone therapy. Several of Wilkins' patients who had been raised as males insisted on changing to the female role after they reached adulthood. Often this type of change is felt to carry connotations of homosexuality to the layman whereas it would not if such a change had been implemented during infancy. Because of these difficulties, Wilkins is convinced that it is preferable to raise patients of this type as females and to remove the testes,

which are invariably sterile, thereby preventing the possibility of future virilization. To do this properly, it is felt that the external genitalia should be altered surgically to resemble the female and that the phallus needs to be removed only if it is conspicuous. Wilkins continues:

Separation of labioscrotal fusion may externalize the vaginal orifice if there is a well developed mullerian tract with vagina and uterus. If no vagina or only a small pouch is present, a plastic procedure to construct a vagina will have to be undertaken after adolescence. Estrogens should be given at puberty to develop the breasts. (Wilkins, 1965, p. 336)

It is felt that female pseudohermaphrodites should be raised as females since they have normal female organs and are capable of maturing as normal fertile women (Wilkins, 1965). Wilkins suggests that cortisone therapy should be started as soon as the diagnosis is established and continued throughout life in patients with virilizing adrenal hyperplasia. Also, there is the possibility that the patient may have the salt losing type of adrenal hyperplasia during infancy which would require a sodium retaining hormone in addition to cortisone administration. Money, Hampson, and Hampson state:

If the external genital anatomy of the infant is thoroughly ambiguous and the possibilities of surgical reconstruction are equally promising in either direction, then gonadal and hormonal considerations may be more heavily weighted with regard to sex of assignment. On the basis of gonadal structure alone, however, it is frequently impossible to predict a virilizing or feminizing puberty. In the particular instance of hyperadrenocortical virilism in girls, it is possible to correct the hormonal incongruity by treatment with cortisone. (Money, Hampson, and Hampson, 1955b, p. 288)

It is felt that this treatment should be started as soon as the diagnosis is established and be continued throughout the person's life. Similar conclusions were arrived at in other case studies (Gross and

Meeker, 1955; Wilkins et al., 1955; Hampson, Money, and Hampson, 1956; Bunge et al., 1959; Money, 1961c; Wilkins, 1965; Melicow, 1967).

No hormonal therapy is required of female pseudohermaphrodites of the non-adrenal type as they have no tendency of progressive virilization after birth (Wilkins, 1965).

It appears that the indications for surgical correction are the same in both the salt losing and non-adrenal type of hyperplasia. In order to externalize the vagina, labioscrotal fusion requires surgical correction. This is a relatively simple operation and should be carried out within the first year or two of life. Wilkins (1965, p. 335) states, "If there is no labioscrotal fusion, the phallus may or may not be removed or recessed according to whether or not it is sufficiently enlarged as to be conspicuous or annoying."

In conclusion, the attending physician should carefully consider the fact that in cases of congenital abnormalities it is relatively easy through surgery to construct a functional vagina and remove the gonads that serve a masculinization function (Sabbath, as cited in Sturgis et al., 1962). Sabbath states that:

It is substantially impossible to construct a satisfactory functioning penis by plastic surgery. Therefore, it is usually wise to direct the rearing of such infants with ambiguous sex towards that of a female. In such cases, the grossly apparent anomaly of a clitoris if it is enlarged to the size of a small penis should be altered by amputation as early as practical in life and certainly before the age when children begin to make observations of themselves, their siblings, associates, or parents. (Sabbath, as quoted in Sturgis et al., 1962, p. 135)

Also estrogen hormones can be administered quite easily and effectively throughout the individual's life. In this regard, Masters and Johnson (1961) found that not only is successful intercourse

possible as an adult female with an entirely artificial vagina, but that, surprisingly enough, orgasm too is possible. Money adds that the artificial vagina in the female hermaphrodite not only can function efficiently in sexual intercourse, but

. . . will also permit conception, as contrasted with the sterility typical of male hermaphrodites. Fertility is common in effectively treated female hermaphrodites. The surgically reconstructed vagina may be inadequate for delivery, Caesarian section being needed instead. (Money, 1965b, p. 185)

Sex Assignment: Post-neonatal Period

Most researchers in the area of sexual ambiguity feel that all sex assignment problems should ideally be settled once and for all at the time of birth. Unfortunately this expectation is not always met. It is in the area of postponed sex assignment that the most perplexing and difficult problems arise. The so-called "safe time period" for reassignment of sex is short in duration because as the infant is growing and functioning within his environment he is simultaneously assimilating and accumulating a gender role (Money, 1968b). In this regard, Money, Hampson, and Hampson define the term gender role as:

All these things that a person says or does to disclose himself or herself as having the status of boy or man, girl or woman, respectively. It includes, but is not restricted to sexuality in the sense of eroticism. Gender role is appraised in relation to the following: general mannerisms, deportment and demeanor; play preferences and recreational interests; spontaneous topics or talk in unprompted conversation and casual comment; content of dreams, daydreams and fantasies; replies to oblique inquiries and projective tests; evidence of erotic practices and, finally, the person's own replies to direct inquiry. (Money, Hampson, and Hampson, 1955a, p. 302)

Gender role establishment is not an inborn process but instead becomes established after birth in accordance with the infant's sex of assignment and rearing. Money (1961c) has stated that the process of sex assignment and rearing is the most influential variable in the establishment of gender role within the child. This takes into consideration the five other variables of sex, namely nuclear sex, gonadal structure, hormonal function, internal reproductive organs and external genital morphology.

The significance of gender role establishment in its relationship to assignment and rearing was originally introduced through a study by Money, Hampson, and Hampson (1955a). Their psychological study of 76 cases of hermaphroditism which manifested somatic ambisexual anomalies showed that gender role more nearly followed the assigned sex than any other factor; there were only four exceptions. This conclusion was also substantiated by the same researchers in 1957 in a study based on a population of 105 hermaphroditic patients seen over a five year period at the Johns Hopkins University School of Medicine.

Establishment of a child's gender role is felt to begin around the time that the child is able to communicate verbally, or between 18 months and two years of age. It is also within the latter part of this same time period that considerable impersonation of, and identification with, the parent of the same sex is observed. According to Money (1961c) the gender role is established in most children by the time the child is four years old. Money (1965b, c, d) feels that it is during this period, especially through the acquisition and use of language, that the child becomes aware of himself

as being boy or girl. And, at about the fourth year of life, gender role becomes established within him so that sex reversal would be harmful to the child's self concept and subsequent personality development and would create more problems than it would alleviate. This conclusion was originally based on a study of 11 cases of hermaphrodites in which change of sex took place.

Four of them were changed before nine months of age and subsequently assimilated their new gender role without identifiable signs of psychologic maladaptiveness. The other seven were changed at or after fifteen months, the latest at sixteen years, voluntarily, and the other six before school age. All of these seven had assimilated their new gender role in varying degrees of pervasiveness, but all except one, who was changed at two years and three months, subsequently evidenced at least one indisputable, chronic symptom of psychopathology. Severity of the symptom varied, though in no instance reached psychotic proportions. The incidence of psychologic maladaptiveness was conspicuously less frequent among cases with no history of change of sex. (Money, Hampson, and Hampson, 1955b, p. 289)

There are, however, some researchers (Dewhurst and Gordon, 1963; Berg, Nixon, and MacMahon, 1963) who feel that the sample size investigated by Money, Hampson, and Hampson was too small to justify their conclusions. These researchers feel that sex reassignment after the age of approximately two and a half years does not necessarily have to be psychologically damaging to the person. However, their conclusions were also based on a small sample size. Dewhurst and Gordon's \underline{N} was 20; Nixon and MacMahon's \underline{N} was 1.

Money, Hampson, and Hampson (1955b) point out that it is impossible to determine a fixed age at which gender awareness in all infants becomes permanently established. Instead they suggest that a general period up to 2 1/2 years can be approximated as a safe time period for sex reassignment. This is true in sex reassignment

as well as with other developmental and maturational sequences within the infant due to the unique nature of each child's development.

Money (1961c) further states that just as it is possible for an individual to establish a distinct male or female gender role, there is also the possibility of an individual establishing an ambiguous gender role. He feels that this ambiguity can occur through a defective or erroneous "imprinting" process.

The concept of imprinting is a new one in sexual theory and is defined as:

. . . a kind of learning that requires a highly specific perceptual stimulus, without which it cannot take place and in the presence of which it cannot fail to take place, provided the nervous system is intact and functional. The stimulus can be varied, but only within the boundaries of specifiable perceptual dimensions. Imprinting takes place readily at critical periods of the life history, which differ for species and types of imprint, after which it will not take place at all or only imperfectly. Once an imprint takes place, it is indelible, if not for life then for a particular epoch (period of time) in the life history. (Money, 1961c, p. 477)

Fortunately enough, however, the majority of human beings become imprinted with a gender role and orientation compatible with their reproductive capacities and genital equipment. The suggestion that the imprinting processes may be related to the establishment of gender role was originally presented by Money, Hampson, and Hampson (1955a), and was later substantiated by others (Hampson, 1955; Money, Hampson, and Hampson, 1956, 1957; Money, 1961c; Green and Money, 1961).

The investigator's criticism of Money's concept of imprinting as it applies to the acquisition of gender role revolves around Money's failure to define and elaborate as to the meaning of specific

perceptual stimulus and the boundaries of specifiable perceptual dimensions. Imprinting is a form of learning very closely allied to the instinctive propensities of a particular kind of organism at a particular age (Hilgard and Bower, 1966, p. 3). It is possible that this process is facilitated through an external process such as reinforcement, but at the present time there is no conclusive evidence to this effect. In this regard, Money's gender role acquisition seems to be more of an external process than that of an internal one, and, if so, the process of imprinting may not apply to gender acquisition as Money so suggests. It is felt by Green and Money (1961, p. 288) that deviations of an individual's gender role may represent "mix-printing" in which "a more or less normal response, that of identifying with and impersonating a specific human being becomes associated with the wrong perceptual stimulus." These authors go on to feel that imprinters can be bred among animals and perhaps, therefore, disorders of gender-role within people might be related to the fault of the person's particular environment in which their behavior becomes attached to poor perceptual stimulation (Green and Money, 1961). Green and Money, however, fail to define what constitutes a good or poor imprinter as well as the imprinting process itself in both animals and human situations.

In any case, when a later sexual reassignment is necessary, due to a provisional or inadequate diagnosis made at birth, the all important consideration is the degree to which the gender role has become fixed and incapable of being changed (Money, 1961c). Because maturation rates within individuals differ, there are no fixed

chronological boundaries in the establishment of gender role. Instead, it is felt that there are time zones which should be evaluated in case to determine the extent to which gender role has been fixed (Money, 1961c). It is felt by Money, Hampson, and Hampson, and other researchers, that sex change should be carefully avoided in older children except in rare and carefully appraised instances. Two conditions warrant serious consideration of sexual reassignment: children whose external genitals totally contradict their assigned sex, and older children whose gender role has been established contrary to the assigned sex and thus is desirous of the change (Money, 1961c). In both of these instances, Money feels that psychiatric supervision and follow-up should be available in order to assist the person in adjusting to his or her new sex assignment. Psychiatric supervision refers to some form of supportive therapy which hopefully helps to alleviate the client's anxiety and doubts with regard to his new gender.

The chief objection to be raised against sex change in the older hermaphrodite is that it may disregard the possibility of depriving nonsterile hermaphrodites the chance of fertility in adult life (Money, 1961c; Money, Hampson, and Hampson, 1955b). The authors continue that:

The answer to this objection is that actual child bearing as distinguished from potential biological fertility is not determined by chromosomal, hormonal, and gonadal sex alone. It is also determined by the social encounters and cultural transactions of mating and marrying, which are inextricably bound up with gender role and erotic orientation. Gender role may be established so thoroughly and irreversibly despite chromosomal, gonadal or hormonal contradictions, that it cannot be modified in accordance with a change of sex by edict. Thus a boy, changed to wear dresses once ovaries were discovered, may continue to think, act and dream as the boy he was brought

up to be, eventually falling in love as a boy, only to be considered homosexual and maladjusted by society. Alternatively, after the change, the gender role may be partly modified, but only at the cost of psychologic disorder and symptomatology sufficiently disabling to prevent marriage. In the seeds of its own defeat by ensuring that fertility never culminates in reproduction. (Money, Hampson, and Hampson, 1955b, p. 290)

In summary, the consensus of researchers in the area of sexual ambiguity is that sexual reassignment is best accomplished during infancy, and before 24 to 30 months of age. Under this condition, it is expected that the child will adapt readily to the new change, and will be unable to remember that there had been a sex reassignment. After 24 to 30 months a sex reassignment involves the chance of creating difficulties within the life adjustment of the child. For the most part it is recommended that change be avoided after 30 months (Money, Hampson, and Hampson, 1955b; Bunge et al., 1959; and Money, 1965a, b). The investigator feels it appropriate to reemphasize that sometimes calculated risks in sex reassignment are justified, such as in cases of children whose assigned sex is totally contradicted by their external genitals. Hermaphroditic children who have a unitary psychosexual identity are less qualified candidates for sex reassignment than those who are psychosexually equivocal (Money, 1965a, b, c). In all cases, follow-up and psychiatric supervision is recommended. Another rare exception in which sex reassignment is felt to be justified is in an older child whose gender role has been established contrary to the assigned sex, with the child himself desiring a change. It is not felt to be a necessity that the assigned sex be in agreement with chromosomal or gonadal sex, but rather that the external genitals be surgically

correctible and functional (Money, 1965a, b, c).

The research team at Johns Hopkins particularly feels it is too late to impose a change of sex after the transition from "infancy" to "childhood" which is felt to occur sometime between the ages of 3 1/2 to 4 1/2 years. Successful negotiation of a change of sex assignment may be possible in the exceptional instance of a hermaphroditic child who has decided for himself that a sex assignment error has been made and desires reassignment. The Johns Hopkins group's experience, however, has led them to believe that voluntary requests by hermaphrodites for change of sex are more appropriate during adolescence and are more likely to be made by this age group than in younger hermaphroditic children. Although such requests from adolescents are rare, they are felt to deserve serious evaluation for they are presumed to be a culmination of years of doubt and perplexity (Money, Hampson, and Hampson, 1955b; Money, 1965a, b). This viewpoint is also supported by Bunge et al. (1959).

Arbitrarily imposing a sex reassignment on older children has been argued for by some, based on the premise that these children may be fertile later in life, instead of being infertile in the sex of original assignment (Money, 1961c). Since congenital infertility is the rule in all other varieties of hermaphroditism, this fertility argument can only be applied to cases of female hermaphroditism. Even then the argument can break down, as being fertile is not the same as being reproductive.

Patients who are arbitrarily forced into a reassignment of sex retain the gender role that was already established and henceforth act and feel like homosexuals and do not reproduce. Thus, a hyperadrenocortical female hermaphrodite who has been

reared for years as a boy retains the sexual inclinations and desires of a male, irrespective of being forced into surgical feminization and the assumption of life as a female. (Money, 1961c, p. 478)

Therefore, it is not felt to be sufficient to advocate a sex reassignment simply in order to bring the sex of rearing into conformity with the chromosomal or gonadal sex (Money, 1965a, b, c). A sex reassignment, on the contrary, may purposefully contradict the chromosomal or gonadal sex and be based on the fact that only in the newly reassigned sex will the external genitals be functional and surgically correctable. An example would be a male hermaphrodite who was misassigned as a boy with too small a phallus, and who ought to be changed in order to live as a girl.

Parental Management

Hampson (1959) states that a mother usually asks two questions about her newborn child as she wakes from her anesthetic. These questions are: (1) is my child all right? and (2) is it a boy or a girl?

It is felt to be extremely important that the doctor in charge at the time of birth be frank and honest with the parents and tell them that at the present time there is some doubt as to their child's sexuality and that various tests will have to be performed before the baby can be declared a boy or a girl. In this way the parents can curtail announcements of the birth and avoid embarrassment associated with having to make a second contradictory announcement (Hampson, Money, and Hampson, 1956; Hampson, 1959; Money, 1961c, 1963, 1968b). Money states:

It is desirable for a speedy decision about the sex of assignment and rearing. Even more important than speed is thorough conclusiveness and finality. All debate should be disposed of so the subject need never be opened again. It is in the best interest of the child that henceforth everyone agree about his being a boy, or her being a girl. (Money, 1961c, p. 478)

Hampson (1959, p. 15) feels that it is a grave error on the part of the attending physician to say, "'I think the chances are 99 out of 100 that it is a boy, so you can think of him as a boy until we finish the tests.'" This may do psychological damage that later has to be undone." She further states that parents should not be left with the notion that their child is "half and half" or "two sexed"--which are often common conclusions arrived at by parents who are not medically sophisticated.

A great many parents of hermaphroditic children express apprehensions fostered by folk-lore and myths that surround their child and his particular development (Hampson, Money, and Hampson, 1956). These stories reflect that such children are freaks, social outcasts and will become subjects of a great deal of ridicule and contempt. But the authors state:

It is heartening beyond words for them to hear that the hermaphroditic child can grow up to be as thoroughly healthy, psychologically, as his anatomically normal sibling, and that he need by no means exclude marriage from his expectations of life. (Hampson, Money, and Hampson, 1956, p. 554)

These authors feel that most parents welcome an opportunity to prepare themselves so that they will be able to answer their children's questions. This will mean the acquisition of an adequate vocabulary for discussion with their children.

Many parents are themselves woefully ignorant of respectable terminology for genital structures, as well as of sexual anatomy and physiology! It may come as a surprise not only

to a child, but to the parents also, to learn that a large phallus is actually an unusually developed clitoris, and not a "male organ." (Hampson, Money, and Hampson, 1956, p. 554)

It has been suggested that one show simplified embryologic diagrams of normal prenatal sex differentiation to the parents so as to relieve parental confusion by making it clear that their infant is genitally "unfinished" (Hampson, Money, and Hampson, 1956). The doctor can usually give some reassurance to the parents by telling them that their infant is in good condition and generally healthy and handsome (Hampson, as cited in Bunge et al., 1959; Money, 1963). The doctor, however, must make it very explicit that at the present time the child's genital development is incomplete and until further tests and studies have been conducted the sex will be in doubt. It is far more advantageous to leave the parents in doubt during the interval of indecision than to make a temporary declaration of sex creating the possibility of the parents having to go through the ordeal involved in changing the information about their child that has gotten around (Hampson, as cited in Bunge et al., 1959). The doctor in charge should have the courage to tell the parents that he does not know (Bunge et al., 1959). It is not an easy task for parents to have to face friends and neighbors and tell them that the doctors are not sure as to the sex of the baby, but in the long run it is vastly preferable to the parents than to have to reverse the original decision after four or five weeks due to a hasty decision on the physician's part (Hampson, as cited in Bunge et al., 1959).

If the sex of the infant has already been announced and a change has to be made, the parents should be given practical guidance about legally recording the change on the birth certificate and other

documents as well as a thorough understanding of their infant's medical status (Hampson, Money, and Hampson, 1956). It is felt that parents should also be encouraged to discuss their feelings and how they will handle the corrections of announcements which they will now be sending out to friends and relatives. They presumably will need professional assistance in deciding how they will go about this delicate procedure. Hampson (1955), Hampson, Money, and Hampson (1956), and Money (1963) feel that parents must be armed with sufficient knowledge to be able to answer a wide variety of questions adequately and they thereby will be much better able to face this difficult situation. Along with this knowledge parents must also have total confidence in the correctness of what they are doing plus the confidence that seems to come from rehearsal of how to answer questions. Simple medioscientific nomenclature and explanations can be "of almost magical help to parents dealing with inquiry" (Money, 1963, p. 2351). Money (1963) feels that if two or three key people in the family's environment (such as their minister, priest or rabbi) are given adequate information about the child, they can be specifically requested to inform the curious, as needed, and also request them, in the child's interest, not to indulge in gossip. It is also felt to be important that sufficient information be passed on to other children in the family. They may need to be given simple and understandable explanations about the baby's "unfinished" penis or vagina. It is recommended that this should be done without secrecy or deceit and in such a manner that the other children can be reassured "that sex reassignments are not indiscriminately imposed,

perhaps on them, too. Properly taken into confidence, they can be advised to keep family secrets about these 'private things' and not to talk about them outside" (Money, 1963, p. 2351). This procedure is felt to be helpful and convincing if the children can look at the baby's organs after surgical repair. This also is felt to be one of the best ways to silence relatives and friends, too (Money, 1963).

Hampson (1955) indicates that there is a good deal of evidence pointing to the great difficulty that parents have when they must switch the sex of their child after living with that child for a year or more. She goes on to state that, admittedly, the parents may be helped over this hurdle but only if they re-establish their family in a new community and sever ties with casual friends and neighbors (Hampson, 1955). If this is not done, it is likely that the child will be harassed and disturbed by rumor and gossip in later years. This similar feeling is also shared by Money (1961c) and again by Hampson, Money, and Hampson (1956).

Parental attitudes concerning the sex of the child are felt to be of utmost importance in that parental uncertainty and doubt even under attempted concealment can easily be communicated to the child (Newman and Stroller, 1967). These authors go on to state that if this is so, the child is faced with the unfortunate possibility of considerable damage to his emerging sense of who and what he is.

Parental uncertainty occurs frequently and the physician involved in the case of such an infant must anticipate this parental uncertainty which may remain hidden due to guilt or shame (Newman and Stroller, 1967). Hampson (1955), Money (1961c), and Wilkins (1965)

express similar feelings in that a child's private doubts about his correct sexual identity can be reinforced by uncertainties and doubts which the parents themselves have. Hampson, Money, and Hampson state:

Whether or not there is to be a reassignment of sex, the parents will need to have the opportunity to reveal their private fears and doubts about the child's future. The myths and misunderstandings which torment parents of hermaphroditic children have proved to be remarkably constant. Almost universal is a deep concern about their child's future erotic inclinations. There is a wealth of misconception circulating that homosexual inclinations may likely be perverted. Parent's apprehension concerning the problem of sexual behavior can often be forestalled if they are given an opportunity to speak frankly about it. (Hampson, Money, and Hampson, 1956, p. 554)

What the authors seem to be indicating is the necessity and availability of some form of supportive therapy to those parents wishing and needing assistance. This should be facilitated through the family physician who if qualified can handle the particular problems himself or if in doubt, refer the parents to those medical personnel who can.

Finally as the hermaphroditic child grows up, he needs to feel free enough within the family constellation to be able to express his private misgivings to them and to his doctor. He may have problems accepting his condition, but, like any other handicapped child, he can learn that there are ways and means in which he can face up to his condition in a realistic manner. If the hermaphroditic child is misinformed by evasions or half-truths or if he is frightened by no explanation, he may conclude that his condition is a mysterious misfortune, a shameful disgrace, or a cruel penalty for some legendary evil-doing. The psychologic management of the parents of

hermaphrodites and of the patients themselves is best conducted when specific details are given from a policy of frank and straightforward discussion and explanation (Hampson, Money, and Hampson, 1956).

CHAPTER III

METHODOLOGY

Subjects

The \underline{S}_s were seven Caucasian hermaphroditic children from the state of Oklahoma. These 7 \underline{S}_s were the entire available hermaphroditic population in the state of Oklahoma. They ranged in age from 6 years, 2 months to 18 years, 4 months. The \underline{S}_s were free of any gross intellectual or physical characteristics which might otherwise affect the testing.

The control group consisted of 7 \underline{S}_s ranging in age from 6 years, 2 months to 18 years, 4 months. The \underline{S}_s were free of any gross intellectual or physical characteristics which might otherwise affect the testing. Each \underline{S} in the experimental group was paired with a \underline{S} in the control group on the following variables: age, sex, race, socioeconomic class and contact with the Oklahoma Medical Center.

Procedure

Ten psychological instruments were individually administered to each experimental \underline{S} on two separate occasions with a 4 month period intervening between the first and second administrations. The same 10 tests were individually administered one time to each control \underline{S} . The tests were administered twice to the experimental \underline{S}_s in order to obtain reliability data on these tests for this particular population.

The instruments consisted of: Rorschach Ink Blots (Rorschach,

1921); Draw-A-Person, forms 1 and 2 (Goodenough, 1926); Thematic Apperception Test (Murray, 1943); Wechsler Intelligence Scale for Children (Wechsler, 1949); Children's Apperception Test (Bellak and Bellak, 1949); Wechsler Adult Intelligence Scale (Wechsler, 1955); It Scale for Children (Brown, 1956); Children's Form of the Manifest Anxiety Scale (Castaneda, McCandless and Palermo, 1956); Family Relations Test (Bene and Anthony, 1957); Structured Child Interview (Wright, 1966); Bradley Self Concept Measure (Parsons, Davids, and Peterson, 1968); and Bradley Sentence Completion Test (Davids, 1968). Age differences between \underline{S}_s sometimes determined which specific tests were administered. The Wechsler Intelligence Scale for Children was administered to five \underline{S}_s , the Wechsler Adult Intelligence Scale was given to two \underline{S}_s . The Thematic Apperception Test (pictures 1, 3 BM, 3GF, 4, 5, 7BM, 8BM, 12F, 13G, 14 and 20) was given to five \underline{S}_s , and the Children's Apperception Test was administered to two \underline{S}_s .

Each \underline{S} was interviewed individually for one hour on six separate occasions, with two weeks elapsing between sessions. The first interview occurred after the initial testing and the remaining interviews took place in the subsequent 3 months. The last interview occurred before the second testing. The six interviews took the form of diagnostic play interviews for the 3 \underline{S}_s under the age of 12 years.

The diagnostic play interviews consisted of the investigator's attempting to establish rapport with each \underline{S} , thereby enabling the child to respond freely, but without pressure or undue probing. An attempt was made to provide the child with an opportunity to "play out" his feelings and problems. For the 4 \underline{S}_s older than 12 years,

more adult type therapy interviews were utilized in which the \underline{S}_s were given the opportunity to talk out their difficulties. All interviews began with the statement "can you tell me something about yourself," and included such material as life data information, free association periods, and expression of attitudes and feelings concerning the \underline{S}_s sexually ambiguous condition.

An experienced social worker was utilized in obtaining two case history interviews from each of the \underline{S}'_s parents. These interviews took place in the social worker's office. The first interview was conducted at the beginning of the 4 month period, at which time the first psychological testing also took place. The second parent interview was conducted at the conclusion of the 4 month period, at which time the second psychological testing took place. The information collected contained specific biographical data on both the parents and children, such as socio-economic status, religion, race, educational background, and parental occupation. In addition, an attempt was made to elicit parent attitude and disposition toward the sexually ambiguous child and his particular problem.

Diagnostic Instruments

It Scale for Children is an instrument which measures the nature and extent of young children's preference for objects and activities characteristic of their own or the opposite sex (Brown, 1956). The scale consists of 36 picture cards, 3 x 4 inches, depicting various objects, figures, and activities associated with masculine or feminine roles. Several sample items from the toy picture section are:

doll, soldiers, tractor, purse and racer. The child is asked to make choices for "It," a figure of indeterminate sex. The scale yields a quantifiable rating of sex-role preference, with a range from 0, an exclusively feminine score, through 84, an exclusively masculine score. A score of 42 would represent a relatively intermediate preference between masculine and feminine roles (Brown, 1956). Brown (1956) reported satisfactory reliability for the It scale. Test-retest data (interval approximately one month) yielded a $r = .71$ for boys and $.84$ for girls. He goes on to state (Brown, 1956, p. 7), "reliability of the ITSC seems reasonably adequate and compares favorably with other evaluative instruments that have been used in measuring various psychological characteristics of young children."

Brown (1956) reported on item validity for both boys and girls on the ITSC. He felt that his validation results justify the hypothesis

that the toy objects commonly associated with boys and those commonly associated with girls constitute one source of difference in sex role preference. To the extent that boys prefer the masculine and girls the feminine roles, differences in their choices of play objects connected with such roles should be evident. . . . A greater percentage of girls than boys prefer each of eight female toy objects, while a greater percentage of boys than girls prefer each of eight male toy objects. (Brown, 1956, p. 10)

Family Relations Test is an objective instrument concerned with the psychological assessment of the child's feelings toward the various members of his family and their reciprocal regard for him (Bene and Anthony, 1957). The test explores the following attitude areas:

- (1) Two kinds of positive attitude ranging from mild to strong, the milder items having to do with feelings of friendly approval, and the stronger ones with the more "sexualized" or "sensualized" feelings associated with close physical contact and manipulation.
- (2) Two kinds of negative attitude also ranging from mild to strong, the milder items relating to unfriendliness and disapproval and the stronger ones expressing hate and hostility.
- (3) Attitudes to do with parental over-indulgence covered by such items as: "This is the person in the family mother spoils too much."
- (4) Attitudes to do with parental overprotection, covered by such items as: "Mother worries that this person in the family might catch cold."

The items of these areas, apart from the over-protective and over-indulgent ones, vary in the direction of the feelings they convey according to whether the feeling comes from the child and goes to some other person, or whether the child feels himself the object of someone else's feeling. (Bene and Anthony, 1957, p. 4)

The test material was designed to give the child a concrete representation of his family and consists of 20 figures representing people of both sexes, at various ages, shapes and sizes. Bene and Anthony (1957) feel that the 20 figures are sufficiently stereotyped to represent the members of any child's family, yet ambiguous enough to become, under suggestion, a specific family. In addition to the family members, another important figure that is incorporated into the test is "Mr. Nobody," who serves to accommodate those test items that the child feels does not apply to anyone in his family.

Each of the 20 figures is attached to a box-like base which has a split in the top. The test items are printed on 100 small individual cards. The child is then told that each card contains a message, and that his task is to put the card "into the person" whom the message it conveys fits best (Bene and Anthony, 1957).

There have been few studies measuring the reliability and

validity of this test, but Bene and Anthony (1957) feel that the results obtained seem to justify confidence in this instrument.

None of the usual methods of assessing the reliability of a test is quite suitable for the Family Relations Test. If the test-retest method is used with a short interval the child may be influenced when tested on the second occasion by his memory of the first occasion. If this method is used with a long interval then we must expect changes both in the home environment of the child and in the maturing child himself. This is especially true in the case of clinic children who are in therapy and whose mothers are seen by psychiatric social workers.

Nor is the split-half method suitable for this test, since the items within any area are not sufficiently homogeneous and since the number of choices the child can make with regard to each item varies from case to case. However, an attempt has been made to use a modified form of this method in the following way.

The test consists of 86 items, each of which could be allotted to Nobody, Self, Father, Mother, various numbers of Siblings and Others in the family. Out of this, by a combination of items, three types of scores were used.

Positive feelings, to and from combined	.. 34 items
Negative feelings, to and from combined	.. 34 items
Overprotection and overindulgence combined	.. 18 items

Separate reliability coefficients were obtained for each of these scores for each of the people in the family, regarding each score as if it were the result of a separate test. Within each score two sub-scores were computed, for the odd and for the even numbered items respectively. (This was done only where the score reached or exceeded 6). Thus, for each subject, we have two separate sub-scores in relation to Mother, and so on. The number of subjects who gave 6 or more items to the self, second or third mentioned siblings, and others in the family were too small to warrant computation of a coefficient.

Statistical results are shown in Table 19.

Table 19

Correlations between odd and even numbered items where total number of items per person and area reached or exceeded 6.

	N	r	Corrected r
Positive feelings to and from combined			
Father	48	.66	.79
Mother	76	.65	.79
First mentioned sibling	34	.82	.90
Negative feelings to and from combined			
Father	31	.71	.83
Mother	11	.64	.78
First mentioned sibling	31	.52	.68
Overprotection and overindulgence	17	.67	.80

To correct for halving the length of the test, the Spearman-Brown prophecy formula was used.

Table 19 seems to indicate that the Family Relations Test is reasonably reliable. (Bene and Anthony, 1957, p. 36)

The validity of the Family Relations Test has been investigated from several points of view. Although the number and variety of these investigations is far from sufficient, the results obtained so far seem to justify some reasonable confidence in the test.

Two sets of subjects were used for the validation studies that have been carried out. They both consisted of children who were out-patients in the children's department of a large psychiatric hospital in South East London, and who were mainly resident in this area. Most of them came from working class and lower middle class families. They have been referred for any of the reasons that are usual with child guidance cases. Their I.Q.'s ranged from 67 to 144 with a mean of 98 and a S. D. of 16. As there were not enough young children available for the study of the form for younger children all validity studies were done on the form for older children; the ages of the children ranged from 7 to 15 years with a mean of 11.0 years.

The test results in the first set of subjects were used to compare various aspects of the test with relevant psychiatric and case history material. The test was administered to children, who had been newly admitted as outpatients, on the morning of their first visit to the hospital. The psychologist who did the testing knew nothing about them except their name. About a year later these test results were compared with the case material that had since been obtained by psychiatrists and psychiatric social workers. The second set of subjects consisted of current outpatient cases. The test results of these children were compared with data obtained from their mothers

who had been asked by means of a questionnaire how their children got along with others in their families. (Bene and Anthony, 1957, p. 28)

The validity reported for the comparison between test results and case history material, as well as for the comparison between test results and questionnaire material obtained from mothers, attests to reasonable confidence in this instrument as a clinical tool in the assessment of the child's feelings toward his family members and his perception of their feelings toward himself.

Children's Apperception Test is a projective test applicable for children between the ages of 3 to 10 years. It consists of 10 pictures in which all characters are animals, based on the assumption that children will more readily identify with them than with humans (Bellak and Bellak, 1966). These authors go on to state that the Children's Apperception Test is not a substitute for the Thematic Apperception Test, but rather a complementary tool. That is, the test is designed (Bellak and Bellak, 1966, p. 1) "to facilitate understanding of a child's relationship to his most important figures and drives" whereas the Thematic Apperception Test is better suited for this purpose with older children and adults.

The pictures of the Children's Apperception Test

were designed to elicit responses to feeding problems specifically, and oral problems generally; to investigate problems of sibling rivalry; to illuminate the attitude toward parental figures and the way in which these figures are apperceived; to learn about the child's relationship to the parents as a couple—technically spoken of as the oedipal complex and its culmination in the primal scene; namely, the child's fantasies about seeing the parents in bed together. Related to this, we wish to elicit the child's fantasies about aggression; about acceptance by the adult world, and his fear of being lonely at night with a possible relation to masturbation, toilet behavior and

the parents' response to it. We wish to learn about the child's structure and his dynamic method of reacting to and handling--his problems of growth. (Bellak and Bellak, 1966, p. 1-2)

Bellak and Bellak (1966) feel that their test is primarily concerned with what the child sees and thinks as opposed to how the child sees and thinks which is better tapped by the Rorschach test. The Children's Apperception Test, the authors feel, is relatively culture free and thus can be used equally well with different socio-economic classes as well as with different races. They (Bellak and Bellak, 1966, p. 2) state that the test is presented to the child not as a feat but as a game, "in which he has to tell a story about pictures; he should tell what is going on, what the animals are doing now. At suitable points, the child may be asked what went on in the story before and what will happen later." The pictures are numbered and are administered in a set order.

Freeman (1962) and Bellak and Bellak (1966) feel that a great deal of research still needs to be done on the test's reliability and validity. Even with this criticism, Wirt (1965) states that the Children's Apperception Test is a very useful instrument, but that its value comes mainly from the sensitivity and experience of the clinician using it rather than the particular stimulus material used.

Bradley Sentence Completion Test is a new sentence completion test now in print (1968). This test presents the individual with a series of 50 incomplete open-ended sentences to be completed by him in one or more words. The test is similar to the word association test in that the word or phrase used to complete the sentence follows from and is associated with the given part of the sentence. The

sentence-completion test, Freeman (1962, p. 669) states, "is regarded as superior to word-association because the subject may respond with more than one word, a greater flexibility and variety of response is possible, and more areas of personality and experience may be tapped."

The content of a particular sentence completion test and the nature of the stimulus phrases depend upon the population being tested and the purposes for which the test is intended. Some of the things that the Bradley Sentence-Completion Test taps are satisfactions and annoyances, likes and dislikes, fears, attractions, hopes, motives, needs, and home and outside environmental forces.

Several sample items are the following:

He hates...

What makes me sad...

I'd like to be...

He likes best of all...

I dream of...

I am afraid of...

Other people think he's...

He is scared...

The directions read to each subject are as follows: "Complete these sentences to the best of your ability, try and express your real feelings and do every one, making sure to make a complete sentence."

At present there are no validity or reliability studies available concerning the test.

Structured Child Interview is a projective questionnaire of twelve questions with seven of the questions having more than one part. The subject is asked "to answer each question in his own way." Unless the child is sophisticated enough to be aware of the psychological significance of the questionnaire, he will not grasp the implications of the questions or of his answers (Freeman, 1962). It is thus possible to obtain information as Money (1957) states "under the guise of fiction." The information obtained can relate to the subject's emotional life, his values, his attitudes, his sentiments, and, in addition, the child's feelings toward various members of his family.

Several sample items are the following:

What do you like especially to do with your father?

With your mother?

With your brothers and sisters?

Think of a time you were happy. Tell me about it.

Think of a time you were sad. Tell me about it.

If you could have any three wishes come true, what would
be your first wish?

Your second wish?

Your last wish?

Freeman (1962) states that the value of this type of diagnostic indicator, at present,

does not lie in a numerical score; indeed rating schemes have not yet been devised, since this technique is quite recent and has not been used extensively. The value of the projective questionnaire lies rather, in the fact that the answers are interpreted as revealing certain traits and serve as a basis for psychological interview. (Freeman, 1962, p. 670-671)

The investigator would add to Freeman's statement concerning the test's value as a projective technique that its administration is pleasant and children seem to find the questions easy to answer.

Draw-A-Person Test, Sundberg (1961) states, is a projective instrument which in usage ranks second only to the Rorschach. Kittay (1965, p. 229) feels that this diagnostic instrument is so popular because it is easy to "administer and interpret, economical of time and interesting." MacHover (as cited in Kittay, 1965) feels that the test can best be put to use by the clinician in combination with other psychological instruments and should not be used alone as the only diagnostic indicator.

In this test the subject is provided with an 8 inch by 10 inch sheet of unlined white paper and a pencil. The instructions given are simple and straightforward: "draw a person." When the subject has completed his first drawing he is given another piece of 8 inch by 10 inch unlined white paper and asked to "draw a person of the opposite sex." Scoring of the Draw-A-Person is essentially qualitative. Each figure is analyzed for specific features of the drawing. Some of the factors considered in this regard are

the absolute and relative size of the male and female figures, their position on the page, quality of lines, sequence of parts drawn, stance, front or profile view, position of arms, depiction of clothing, and background and grounding effects. Special interpretations are given for the omission of different bodily parts, disproportions, shading, amount and distribution of details, erasures, symmetry, and other stylistic features. (Anastasi, 1962, p. 581)

Goodenough (1926) lists certain scoring criteria (head present, legs present, arms present, etc.). The S is given one point for each criterion met. The sum of all points earned can be converted into a

mental age score. Not only are the individual drawings analyzed, but intercomparisons of the two drawings are also made to discern the subject's attitudes and feelings toward himself and toward his own as well as the opposite sex (Freeman, 1962, p. 674). Analyses and interpretations of one's drawings are based upon the assumption that they represent the person's conception of his body in the environment. The drawing of the figure representing one's own sex is regarded as a "body image" of oneself. The term body image refers to the person's feelings and attitudes toward his own body.

McCarthy (1944), from a study in which 386 third and fourth grade children were used, reports one week retest reliability of .68 and split-half reliability of .89. Rescoring of the identical drawings by a different scorer in the McCarthy study yielded a scorer reliability of .90, and rescorings by the same scorer correlated .94. Anastasi (1961) reports that the Goodenough Draw-A-Person Test correlates between .41 and .80 with other intelligence tests, principally the Stanford-Binet. Many psychologists who have evaluated the Draw-A-Person Test, such as Anastasi (1961), Freeman (1962), and Kittay (1965), feel that there is still a great deal of research to be done in the areas of reliability and validity. But, according to Kittay (1965, p. 230), in spite of the uncertainties about its reliability and validity, "clinicians appear to be impressed by the extent and congruency of its contribution to the evaluation of personality."

Children's Form of the Manifest Anxiety Scale was adapted from Taylor's Adult Scale of Manifest Anxiety (Castaneda, McCandless, and

Palermo, 1956). The scale contains a total of 42 anxiety items and 11 lie items. The lie items are designed to provide an index of the subject's tendency to falsify his responses to the anxiety items. The lie scale items are similar to those found on the L scale of the MMPI, in that they contain no anxiety-relevant content. The index of the level of anxiety is obtained by summing the number of the 42 anxiety items answered "yes." The lie scale items are not included in the A score, but in a separate L scale score. The test then gives two scores, an A score and a L score.

Several sample items from the A scale are the following:

I blush easily.

I get angry easily.

My feelings get hurt easily.

I have bad dreams.

I am nervous.

Several sample items from the L scale are the following:

I like everyone I know.

I am always kind.

I never get angry.

I never lie.

I am always good.

In the present study the instructions given to each S were modified from the original instructions because of the wide age range. Instead of having each S read the instructions for himself the examiner read them to all S_s, keeping administration consistent throughout. The instructions were: "Put a circle around the word YES if

you think it is true about you. Put a circle around the word NO if you think it is not true about you."

Castaneda, McCandless, and Palermo (1956), from a study with fourth, fifth, and sixth grade children, report one week retest reliability at about .90 for the anxiety scale and at about .70 for the L scale.

Intercorrelations between the anxiety scale and L scale clustered around the zero value. Girls were found to score significantly higher than boys on both scales. Significant differences on the L scale were found to be associated with grade. (Castaneda, McCandless, and Palermo, 1956, p. 323)

Kitano (1960) administered the Children's Manifest Anxiety Scale to adjustment and regular class boys in the fourth, fifth and sixth grades. According to him (Kitano, 1960, p. 71), "The reliability of the anxiety scale was .86. . . . There were no significant mean differences between adjustment class and regular class children on the L scale or in socio-economic status." As for the test's validity, it has been reported that

. . . high anxiety was . . . found to relate negatively to I.Q. and achievement scores and positively to teachers' ratings of maladjustment, discrepancy between self and desired self, tendency to nominate oneself or to be nominated by peers for negative roles in a sociometric situation, and manifestation of physical complaints in the school setting. (Cowen et al., 1965, p. 685)

Penney (1965, p. 697) found "for most groups of children, low anxiety was associated with high reactive curiosity."

Wechsler Adult Intelligence Scale is one of the most widely used adult intelligence tests for ages 16 years and above. The scale consists of 11 subtests. Six of these are grouped into the verbal scale: Information, Comprehension, Arithmetic, Similarities, Digit Span and Vocabulary. Five subtests comprise the Performance

Scale: Digit Symbol, Picture Completion, Block Design, Picture Arrangement and Object Assembly. All 11 tests are combined to make the full scale. Because of the popularity of this diagnostic instrument, further description of its content or standardized instructions for each subtest will not be given.

Reliability coefficients have been computed for each of the 11 subtests, as well as for the verbal, performance, and full scale I. Q.'s within the 18-19, 24-34 and 45-54 year sample. These three groups were selected as being representative of the age range covered by the standardization sample. Anastasi (1961) states,

Full scale I. Q.'s yielded reliability coefficients of .97 in all three age samples. Verbal I. Q.'s had identical reliabilities of .96 in the three groups, and performance I. Q. had reliability of .93 and .94. All three I. Q.'s are thus highly reliable in terms of coefficients of equivalence." (Anastasi, 1961, p. 309)

The individual subtests yielded lower reliabilities, as might be expected, with coefficients ranging from .60's found with Digit Span, Picture Arrangement and Object Assembly, .70's found with Comprehension, .80's found with Information, Arithmetic, Similarities, Picture Completion and Block Design to as high as .96 for Vocabulary. The Digit Symbol Test, Wechsler (1955, p. 12) reports, "is a speeded test and the split-half technique for computing reliability is inappropriate." Consequently, a special study was conducted to estimate the reliability of this subtest which is described in detail in the WAIS Manual (1955) on page 12. The reliability was .92 for the 18-19 year old group.

In consideration of the test's construct validity, Anastasi (1961) states:

In the process of standardizing the WAIS, intercorrelations of verbal and performance scales and of the eleven subtests were computed on the same three age groups on which reliability coefficients had been found, namely, 18-19, 25-34, and 45-54. Verbal and performance scale scores correlated .77, .77 and .81, respectively, in these three groups. Intercorrelations of separate subtests were also very similar in the three age groups, running higher among verbal than among performance subtests. Correlations between verbal and performance subtests, although still lower on the whole, were substantial. For example, in the 25-34 year group, correlations among verbal subtests ranged from .40 to .81, among performance subtests from .44 to .62 and between performance and verbal subtests from .30 to .67. Both individual subtest correlations and correlations between total verbal and performance scale scores suggest that the two scales have much in common and that the allocation of tests to one or the other scale may be somewhat arbitrary. (Anastasi, 1961, p. 310-311)

Wechsler Intelligence Scale for Children is a widely used children's intelligence test for ages 5 through 15 years. The scale is similar in principle and form to the Wechsler Adult Intelligence Scale: verbal subtests, performance subtests, a verbal I. Q., a performance I. Q., and a full scale I. Q.

The subtest types are identical with those of the Wechsler Adult Intelligence Scale with the exception that Digit Span has been made optional and an optional maze test is available. In place of the Digit Symbol Test a Coding Test has been substituted. Because of the popularity of this diagnostic instrument, further description of its content or the standardized instructions for each subtest will not be given.

Split-half reliability coefficients were computed for each subtest of the test, as well as for the verbal, performance and full scale scores. These reliabilities were found for three age groups (7 1/2, 10 1/2, 13 1/2), each group consisting of 200 cases.

The full scale reliability coefficients for the three age levels were .92, .95 and .94, respectively. The corresponding reliabilities for the verbal scale were .88, .96 and .96; for the performance scale, they were .86, .89 and .90. Thus both the full scale and the verbal and performance I. Q.'s appear to be sufficiently reliable for most testing purposes. (Anastasi, 1961, p. 317)

In a study of test-retest reliability of this scale, Gehman and Matyas (1956) reported the following correlations: performance scale I. Q., .74; verbal scale I. Q., .77; full-scale I. Q., .77 for 60 children who were first given the WISC in the fifth grade and then re-examined four years later in the ninth grade.

In consideration of the test's validity, Freeman states that

. . . the intercorrelation coefficients among the individual subtests are, on the whole, not as high as would be expected. At the 7 1/2-year level, these coefficients are concentrated within the .20's and .30's; at the 10 1/2-year level, they are concentrated within the .30's and .40's; while at the 13 1/2-year level, they are distributed within the .20's, .30's, and .40's.

On the other hand each verbal subtest correlates quite significantly with total verbal score, the range for the three age groups being from .44 to .82, with the coefficients fairly evenly distributed. The non-verbal subtests correlate somewhat lower with total performance scores, the range being from .32 to .68, with some concentration in the 50's.

The correlation coefficients between total verbal scores and total performance scores are, respectively, .60, .68, and .56 for these same age groups.

These findings indicate that, on the whole, although each subtest has only a moderate amount of communality with the others taken singly, verbal subtests combined have much more communality with each individual verbal subtest. The same is true of combined performance and separate performance scores.

Finally, the data indicate that all the verbal subtests taken as a whole have considerable communality with all the performance subtests as a whole. (Freeman, 1962, p. 272-273)

Bradley Self Concept Measure is a new self concept measure.

The test is similar in some respects to the Adjective Check List (Gough, 1952) except for the following: this test has fewer adjectives,

a total of 66; the test can be used with young children; the child not only responds to the adjectives in terms of himself but also in terms of his sex in general. This becomes clearer with the instructions given by the examiner: "This test consists of 66 adjectives, tell me whether you feel all males/females (depending on the sex of the S) should be" After ten minutes, the test is administered again with the instructions: "This test consists of 66 adjectives, tell me whether you feel you yourself are"

Several sample adjectives are the following: bad, kind, little, small, lazy, brave, dumb.

The Bradley Self Concept Measure is concerned with the way the individual views himself and others of his own sex. Anastasi (1961) states,

The individual's self description thus becomes of primary importance in its own right, rather than being regarded as a second-best substitute for other behavioral observations. Interest also centers on the extent of self acceptance shown by the individual. Another common feature of all (self-concept) procedures . . . is their applicability to idiosyncratic, intensive investigation of the individual case. (Anastasi, 1961, p. 623)

There were no validity or reliability studies available to the examiner concerning this test. The test seems particularly useful with younger children who find it pleasant and interesting to work with.

Thematic Apperception Test has been used much more extensively than other story construction techniques and has also served as a model for the construction of later tests in this class (Anastasi, 1961). The TAT test consists of 19 black and white picture cards, plus one blank card. The person that is being tested is instructed

that this is a test of imagination, that he is to make up a story, and that there are no right or wrong answers. The cards are shown to the S one at a time. The S is told that each picture shows a scene and is then asked (1) what led up to the event shown in the picture; (2) describe what is happening at the moment, giving the feeling and thoughts of the characters; (3) and tell what the outcome will be. There are no time limits on the test. The TAT is useful in applying the actual dynamics of interpersonal relationships. The very nature of the pictures themselves gives basic data on the testee's relationship to peers, authority figures, and family members of both sexes.

In interpreting the TAT stories Murray recommends (Freeman, 1962, p. 640) that, "the content of the stories be analyzed into (1) the forces emanating from the 'hero' and (2) the forces emanating from the environment." These two divisions are analyzed under the following six categories: (1) the hero, (2) motives, trends, and feelings of the hero, (3) forces in the hero's environment, (4) outcomes, (5) themes and (6) interests and sentiments. Because of the popularity of this diagnostic instrument, further description of its content or scoring will not be given.

TAT reliability has been studied in three ways: (1) extent of agreement among interpreters of the same stories in regard to traits of the persons examined; (2) similarities between stories on repeated examinations of the same persons, (3) split-half method, correlating frequency and intensity of needs expressed in the stories. (Freeman, 1962, p. 642)

Freeman (1962, p. 643) states that "studies of agreement among interpreters, using for the most part rank-order correlation and the

coefficient of contingency, have reported coefficients ranging from approximately +.30 to +.90."

Thomkins (1947) reports test-retest reliability (Freeman, 1962, p. 644) in which he found "a reliability coefficient of +.80 after an interval of two months, for fifteen young women; +.60 after an interval of six months, using a different group of fifteen comparable subjects; and .50 after ten months for a third group."

Using split-half method to measure reliability (Freeman, 1962, p. 644), "Sanford (1943) reported reliability coefficients of .48 and .46 McClelland (1949), on the other hand, reports a reliability correlation of .70." The reasons for the great degree of variability with this technique may be attributable to the fact that, according to Freeman (1962, p. 644), "not all TAT pictures are expected to elicit the same needs and press; each is intended to have its own major stimulus values, and the variables in the theme of one picture are not necessarily additive to those of the others."

In examining the validity of the TAT, C. J. Adcock states in his review of the test (Buros, 1965, p. 246), "the data available on reliability do not raise any high expectations with regard to validity. So far as statistical data are concerned, there has been little advance in the last few years." Adcock goes on to report in this regard that Hafner and Kaplan (1960) found no significant relationship between the TAT's overt and covert scales and Rorschach results. Dreger (1960) found no relation between productivity as measured by the Rorschach and TAT. In contrast to these results, Freeman (1962) reports validity studies which are more optimistic

in nature. Freeman reports that

Satisfactory results were obtained when stories of diagnosed groups, of known characteristics, were analyzed in detail to determine if significant differences existed among them. The results showed that such differences exist among the following classifications, consisting of individuals who were relatively clear cases in each instance: conversion, hysteria, anxiety hysteria, obsessive-compulsive neurosis, brain disease and head-injury cases. (Freeman, 1962, p. 646)

Even though reliability and validity studies of the TAT do not satisfy certain psychometric standards, clinical psychologists have found this instrument a useful tool in the understanding of the individual's personality structure, particularly when used in conjunction with other diagnostic instruments.

Rorschach Ink Blot Test is considered to be the best known and most widely used projective instrument today. Because of the popularity of this diagnostic instrument, description of its content and scoring procedure will not be given.

The cards are presented to the subject one at a time in a prescribed order. The instructions used in the present study were taken from Klopfer and Davidson (1962, p. 28): "People see all sorts of things in these inkblots; now tell me what you see, what it might be for you, what it makes you think of."

The examiner did not impose any time limits nor any fixed number of responses for each card. Beck's scoring system was used.

Jensen (1965) indicates the following reliability findings: Scoring reliability is very good and has been reported as ranging from .64 to .91; Split-half reliability have also yielded high reliability from .60 to .95; Test-retest reliability ranges from about .10 to about .90, depending largely upon the test-retest interval

and the particular score. Parallel forms

reliability has been determined by use of the Behn-Rorschach, a set of similar blots which seem to meet all the psychometric criteria for qualifying as an equivalent form of the Rorschach The two forms seem to correlate as highly with each other as each correlates with itself. The correlations for various scores range from about zero to .86, with a mean around .60. (Jensen, 1965, p. 237)

Reliability of Interpretation, Jensen states:

is, of course, the most important matter of all Contrary to the usual claim of Rorschachers ~~that~~ this global interpretation is more reliable or more valid than any of the elements on which it is based, such as the scores and the various derived combinations and indices, a systematic search of the literature has not turned up a single instance where the overall interpretation was more reliable than the separate elements entering into it. (Jensen, 1965, p. 237)

Jensen, in reviewing the validity of the Rorschach, quotes Guilford's (1959) review of the status of the Rorschach up to 1959 in which he states,

Validities although quite varied are generally near zero, this statement regarding validity applies to use of the instrument in discriminating pathological from normal individuals, for diagnosis of more particular pathologies such as anxiety, for indicating degree of maladjustment in the general population, and for predicting academic and vocational success. (Jensen, 1965, p. 237)

Again, as with the TAT, the Rorschach's usefulness lies not in reliability or validity explorations, but rather in the hands of the skilled clinician for its practical usefulness in personality evaluation.

CHAPTER IV

RESULTS

The findings have been analyzed with regard to relevant objective test data, case history interviews obtained by the social worker and therapy interviews conducted by the investigator.

Diagnostic Test Data

Table 1 presents the means and t-test scores for the controls and experimentals on measures of intellectual functioning. For those comparisons, as well as for all others, a matched pair t-test was used with 6 df. There were no significant differences between the experimentals and controls on measures of intelligence.

Table 1. Means and t-test scores for controls and experimentals on measures of intellectual functioning

Variable	Experimental	Control	t-test
Full Scale IQ	105.14	106.57	.17
Verbal IQ	103.14	99.29	.49
Performance IQ	106.43	113.57	.78
Draw-A-Person Mental Age	7.95	9.79	.15

Table 2 presents the means and t-test scores for the controls and experimentals on some of the Rorschach data. There were no

Table 2. Means and t-test scores for controls and experimentals on selected Rorschach data

Variable	Experimental	Control	t-test
Number of total responses	15.0	20.57	1.93
Number of human responses	2.86	4.29	1.17
Number of anatomy responses	1.29	1.43	.23
F + % (reality testing)	75.62	76.66	.12
Number of actual and symbolic sexual responses	1.57	2.57	.35

significant differences between the experimental and control groups on any of the Rorschach data but the controls gave more total responses and more human responses than did the experimentals.

Table 3 presents the means and t-test scores for the controls and experimentals on measures derived from the Family Relations Test. There were no significant differences between the experimental and control groups on any of the Family Relations data. Even though there were no significant differences between the groups, the controls had more outgoing negative feelings toward mother and more incoming negative feelings from mother.

Table 4 presents the means and t-test scores for the controls and experimentals on the remaining personality measures. There were no significant differences between the experimental and control groups on any of the remaining personality measures. However, the controls scored higher on the (L scale) of the Children's Manifest Anxiety Scale. On the other hand, the experimentals scored higher

Table 3. Mean and t-test scores for controls and experimentals on measures derived from the Family Relations Test

Variable	Experimental	Control	t-test
Outgoing positive feelings toward father	3.00	2.71	.17
Outgoing positive feelings toward mother	4.89	4.89	0.00
Outgoing positive feelings toward siblings	7.29	6.57	.26
Outgoing negative feelings toward father	3.71	3.00	.38
Outgoing negative feelings toward mother	1.28	2.86	1.59
Outgoing negative feelings toward siblings	7.29	6.00	.46
Incoming positive feelings from father	2.43	3.43	.88
Incoming positive feelings from mother	4.57	2.86	.99
Incoming positive feelings from siblings	6.43	3.86	1.27
Incoming negative feelings from father	.86	2.00	.83
Incoming negative feelings from mother	1.57	3.29	1.52
Incoming negative feelings from siblings	7.00	4.14	1.40
Feelings of overprotection and overindulgence from father	1.14	.71	.45
Feelings of overprotection and overindulgence from mother	.43	.57	.25
Feelings of overprotection and overindulgence directed towards self	3.14	3.71	.36

Table 4. Means and t-test scores for controls and experimentals on remaining personality measures

Variable	Experimental	Control	t-test
Bradley Self Concept Test	53.14	49.29	1.11
Children's Manifest Anxiety Scale (A Scale)	19.1	24.1	.16
Children's Manifest Anxiety Scale (L Scale)	2.57	4.29	2.05
IT Scale for Children	62.14	41.14	1.22
Draw-A-Person (point scale male)	19.71	9.79	1.76
Draw-A-Person (point scale female)	18.86	9.54	1.94

on the Draw-A-Person Point Scale, both male and female.

Summary

There were no significant differences between the experimental and control groups on any of the test data. A discussion of the experimental group's test data can be found in Chapter V.

Case Histories

All parents of the hermaphroditic population were cooperative, enabling the social worker to obtain pertinent biographical data on both the children and families. In two cases only one parent was interviewed due to divorce and, in two cases, one parent was interviewed once due to distance from the Oklahoma Medical Center and employment obligations. In all cases, however, the mother of the

hermaphroditic child was interviewed.

The major in-depth family interviews which are presented as the body of this part of the results were acquired through the assistance of Katherine Hudson, RSW, Clinical Social Worker.

First case report

General. Mrs. C's primary concern is with B's taking her medicine regularly and continuously. She understands that the medication will be necessary indefinitely and that B should not try to get along without it, as she does periodically, with adverse results. Mrs. C also worries about B's somewhat cavalier attitude toward return appointments at the hospital. Unrelated to B's medical problem in mother's mind, but also of concern, is B's acting out sexual behavior and other willful, impulsive, self defeating actions. Mrs. C also reports being embarrassed sometimes over B's deep, coarse voice.

Family. B, the 18 year old patient, her mother, and mother's fourth husband make up the present family group. They have been living in Ft. Smith, Arkansas, for the past two years. Prior to that, the family home was in Sallisaw, Oklahoma. Mr. C is a union carpenter, and the mother, Mrs. C, works in a furniture factory and operates a cafe and bar in the factory district. B has been working in another furniture factory which burned and is being rebuilt, with reopening expected in the spring of 1968.

Mrs. C's first two children were by her first husband who was killed in Oklahoma City while resisting arrest. The children were a boy, then 5, and a girl, 3. After a year she married Mr. C, by whom

she had a boy, then B, then another girl. This marriage ended in divorce following B's hospitalization and surgery at age 5 1/2 because Mr. C was unsympathetic and unwilling to assume responsibility for B's medical care. Mrs. C worked continuously from that time on and refers to herself as "a working mother." She also received Social Security for the two oldest children.

The oldest boy is now in the state prison at McAlester serving a 20 year term for robbery. He also served time at the state reformatory at Granite, after having been sent to the boys' training school at Helena at the age of 16. During his prison sentences, he has attempted suicide and is from time to time kept in the psychiatric ward. Mother sometimes thinks of him as mentally ill and also believes that he has deliberately chosen a criminal career in which he is hopelessly enmeshed. She writes to him and provides such luxuries as are permitted but has no expectation that he will ever be rehabilitated.

The older half-sister married first at 13. Mrs. C did not seek to have the marriage annulled because she thought the girl might get in no worse trouble if separated from her husband. Mrs. C's marriage, to the second Mr. C, broke up over his having given the girl permission to marry and forge his name to the request for a marriage license. After having two children the girl obtained a divorce but two lawsuits were required to wrest custody of the children from the husband's family. She is at present married to a somewhat older man who mother considers a good husband. He had custody of his two children, a 10 year old and a deformed, retarded infant, at the time

of the marriage. The girl was devoted to this baby and cared for it conscientiously until it died.

B's brother has lived most of his life with his paternal grandmother. He is now a senior in high school and plans to go to college next year. He is a steady, ambitious youngster who chooses his friends carefully and who never has been in trouble.

The younger sister was given up for adoption as an infant. Mrs. C seems to have made this arrangement herself and has kept in touch with the child and her adoptive parents, although she says she has tried not to interfere in any way. Mrs. C says the child has been reared to be religious. Mrs. C's reason for giving up this child is the fact that she knew B would need lots of medical care and attention and that she did not feel she could provide for both girls under the circumstances.

Mrs. C says that no one on either side of the family has ever had a condition similar to B's. The family was not too concerned about the fact that her clitoris was enlarged and looked like a little penis when she was born. They considered her a girl and tried to dress and treat her as a girl, although she preferred boys clothes and activities from the time she could express preferences. There were continual struggles over clothing until mother realized she could not win and thus let B go her own way. Whenever Mrs. C dressed her in feminine clothing, B would wait for Mrs. C to turn her back then change into something of her brother's and be off to play with the little boys. She insisted on having a boy's haircut and when she got older would put oil on her hair to make it look like boy's hair.

By age 5, the clitoris was enlarged to a size that required attention and mother took her to a pediatrician in Ft. Smith, Arkansas, who in turn referred her to a "kidney specialist." B was hospitalized at Sparks Hospital for a month during which time studies were made. B was then operated on and kept in the hospital for another month.

Mrs. C was with B as often as she was allowed and felt bewildered and frightened by the seriousness of the problem which had not seemed serious before. She thought that B would die--if not immediately, then in the not too distant future. B "suffered terribly" following surgery and mother was unable to understand the explanations that were given her about the condition. She thought the child had cancer and that it would run a fatal course. The explanation she gave to B and to family and friends was that B had a tumor pressing against her kidney and, for this reason, had needed surgery.

Cortisone dosage was started after B was referred to Children's Memorial Hospital, Oklahoma City, following discharge from Sparks Hospital where her medical condition has been followed ever since. There have been breaks in treatment and difficulties over obtaining medication and keeping appointments, sometimes due to B's rebellion or indifference.

B enjoyed school, made lots of friends and was good at sports. She continued to dress as a boy and got boy's haircuts until she was 11 years old when she suddenly became interested in looking like a girl. B made friends, both male and female, but her best friends during latency were boys with whom she had boy-to-boy relationships.

Mrs. C believes that during this period B thought of herself as a boy.

Mrs. C does not consider B hard to control or feel that B presented any serious behavioral problems until the last two years. After B began dating at around 12, she followed mother's instructions about getting home on time and letting mother know where she was. She continued to get along well in school and was popular with her classmates. She was a star on the girl's baseball team and received good grades.

At age 14, B married a serviceman who was due to go overseas. Mrs. C does not think she was in love with the boy and believes she was more interested in the allotment check than in him. In keeping with Mrs. C's theory about the futility of opposing early marriage, she paid for B's surgery--needed to permit intercourse--and otherwise facilitated the marriage. B quit school but continued to live at home after her husband went overseas.

Two years ago B became involved with another boy while still married and lost interest in everyone else. This boy dominated her, took her money, her car and ran around with other girls. Though "mistreated in every way" "she worshipped him." This boy later killed a man and was sent to a mental hospital for six months instead of a penal institution.

B no longer cared for her husband and when he came home from overseas, still in love with her, they were divorced. The affair with the other boy went on in spite of mother's threats and pleading. He would take B's pay check or allotment check, when she was getting

these, with her permission. Mother confronted the boy several times, hit him and offered to fight him. She told him and others that she would kill him if he married B. Whether due to her threats or not, he married someone else two months ago and B has not seen him since, as far as Mrs. C knows. Mrs. C, however, still believes that B loves him.

Another boy--"from a nice family"--was interested in B and came to visit her while she was in the Oklahoma Medical Center. Mrs. C doubted whether B cared about him. However, B married this boy during the summer of 1968.

B stopped taking her medication after her last visit to Children's Memorial Hospital. Because, through some mix-up, the prescription did not state refill, the druggist refused to give her another supply. Ordinarily she takes it if she has the medication on hand. Mother can tell when B is not taking the medicine because the facial hair becomes noticeable and her voice seems deeper. Regardless of whether she takes the medication, she dresses like other girls, goes to the beauty shop once a week, and rolls her hair at night.

She and Mrs. C's husband do not get along and mother has decided they are jealous over who is getting the most of mother's attention. B has expressed her resentment of Mr. C by stealing things of his such as a watch and a ring and pawning them. She had a habit of taking what she wanted without asking permission but had never carried it this far before. Mrs. C believes that B either will not marry again or will not stay married because she wants to live with mother. B has moved out briefly but always comes back. Mrs. C says

that if she had to choose between her husband and B, she could easily give up the husband. (She has left two husbands previously in conflicts over the children.)

B has no interest in housework and does not help out at home, but is a good worker on jobs, gets along well with employers and fellow workers. Mrs. C thinks that B is self-centered, but knows how to take care of herself and will never get into serious difficulties.

Impression. Mrs. C's self-image is of a self-sufficient, hard working, sacrificing mother, who has had some bad luck but has managed rather well in spite of it. Four of her five children have turned out well (not in trouble with the law) and she is capable of earning a good living and of meeting the crises that come along. Mrs. C enjoys factory work; the cafe-and-bar operation is a sideline that she also likes.

Mrs. C is very devoted to B as a defective child whose life has been and may still be in danger. At times she implies that she thinks of B as a retarded child and at other times she appears to regard her as extremely competent and admirable. She expressed no criticism of B's past behavior, except when she allowed herself to be victimized by the boy friend.

Second case report

General. Mrs. C accompanied her daughter to the Medical Center on this date as L was to become an in-patient. Mrs. C appears to be a reliable informant and good historian. She was very verbal and rapport was easily established. L was not present at the interview

as she was in the process of being admitted. Mrs. C is an obese, 34-year-old woman who was poorly groomed with an unpleasant body odor about her.

Family. L, the 15-year-old patient, is the second of eight children both to Mr. and Mrs. C who are 40 years and 34 years of age respectively. The pregnancy, labor, delivery, and neonatal period of L were not remarkable; however, at birth the patient was noted to have an enlarged clitoris. Development seemed normal to Mrs. C up to the age of four when accelerated growth of the clitoris occurred along with increased masculinity and pubic hair in male distribution. Two children, both with birth defects, died in 1966. Both Mr. and Mrs. C come from the lower class economically and socially, and Mrs. C related that her husband had been reared in eastern Oklahoma under very deprived conditions. Mr. C's father had been a gambler. He did not provide the necessities for his family who, because of financial depravity, were forced to live in a dugout. Mr. C remembers sleeping on a dirt floor most of his childhood. He completed the 8th grade but has very few marketable skills.

Mrs. C was born and reared in Arkansas. She finished the 9th grade in school. She related that she had met her husband in a cotton patch when he had come to Arkansas to pick cotton and a year later married him. Most of their married life has been spent in eastern Oklahoma, but there have been short periods of time when they went to California for employment purposes.

Mr. C has always had a marginal income. At the present time he is working as a laborer on a construction job earning \$1.75 per hour.

There have been many periods of time when Mr. C has been unemployed or partially employed because of bad weather or unemployed altogether. During the periods of partial employment or total unemployment, they subsist on unemployment benefits or the decreased weekly income, plus surplus food commodities. Until three years ago the family lived in a one room house. About this time the paternal grandparents gave this family one acre of land adjoining their own home on which Mr. C built his family a larger home. This house is 24' x 24', and divided into two rooms. It is not modern and they carry water from the paternal grandparents' home. They have electricity for T.V. and lighting, butane gas for cooking, but have no indoor bathroom facilities. One room provides cooking and eating space, while the larger room provides sleeping quarters for the entire family of eight persons. Mrs. C related that there are four double beds plus a large baby bed. She seemed quite defensive in describing the house and remarked that there seemed to be no privacy. However, she attempts to give privacy to individual members of her family.

In discussing the family habits, recreation--things about which Mrs. C was quite verbal--it became quite evident that she gave these things much thought. She mentioned that they all enjoyed T.V. but that she tries to keep her children from looking at things which are not good for them, such as "dirty movies." She mentioned the fact that she tries to encourage them to look at the newscasts and scientific and educational programs.

This family lives 10 miles from Sallisaw, Oklahoma, where all

school age children attend school. The bus which transports the children stops right in front of the house. L, who will soon be 16 years of age, will be in the 10th grade next year, as well as her brother P, who is now 17. L has been on the state honor roll during the past two years. Her grades, according to her mother, are all A's and B's and science is her best subject. Mrs. C mentioned that L reads both rapidly and profusely. L is said to have a good singing voice and is in the school choir. Mrs. C also encourages L in art because she feels L is very capable in this area.

When participation in community affairs was discussed Mrs. C said that she thought of her family as being "anti-social" in that they did not mix with the people in the community. She added that she supposed they were "clannish" as they only visited relatives. Mrs. C felt that she would not be at ease with persons in the community who were of a higher socio-economic class than herself. She thus avoids interaction with other women in the community because of her deprivation in these areas. The family does not attend church; however, she did mention that one of Mr. C's uncles was a preacher and that groups of the faith did meet in relatives' homes where her husband, who plays the guitar, would often lead the singing. Mrs. C also said that many times her husband would play the guitar and the entire family would join in and sing. Neither Mrs. C nor her husband have visited the school where her children attend but feel that their children like school a great deal and have aspirations to complete their high school education.

We discussed the fact that L reads profusely and explored the

type of literature that is available in the home. The family subscribes to the Readers Digest. All of the family members who are able to read enjoy reading this periodical. Also, books are often checked out of the school library with science being the favorite subject of all members of the family.

One recreation mentioned by Mrs. C was that occasionally the whole family would go fishing together. In fact, she said that all members of the family enjoy hunting and fishing. This activity also provides a part of the family food. It was asked if L had friends with whom she went places. The answer was negative; however, she said that L did write to a girl friend in Sallisaw during the summer. Mrs. C stated that as a family they do not often go into town.

The 17-year-old son has friends from Sallisaw who come out each Friday night. The group will often fish and sleep out all night.

Neither of the teenagers have ever dated. The 17-year-old boy has stated that he hoped to wait much later for marriage and rearing a family, as he wants to be able to provide more for his family than his own parents have been able to do for them.

We discussed L's feelings toward her bisexuality. Mrs. C and L have discussed what they should tell friends, the school, and the family when she comes to the Medical Center as follows: "I have a disease of the adrenal gland, and it is not catching." No one has ever questioned the family further. Mrs. C believes the 17-year-old brother may know something about the abnormality of his sister because he has stated to his mother that it's most important that L get her medicine or she might develop masculine tendencies. Mrs. C

said that they had not shared the medical information with any family members of Mr. C's family but that one of her sisters who lives in Arkansas is aware of the fact that C, who died in 1966, was bisexual.

Mrs. C feels that L is accepted as a full female. Her friends suspect nothing and the family accepts her as a perfectly normal girl.

We explored Mrs. C's feelings about her children, three of the eight having been born with abnormalities. Mrs. C's third child, B, had a heart defect. L, the second child and the sixth child, C, were bisexual. Both B and C died in 1966. Mrs. C said she could best explain her feelings by trying to relate to me an article which she had written to the Readers Digest this year, explaining what it meant to be the mother of three children who were defective. Mrs. C said that she had enough faith in her God to believe that there was a reason why she was chosen to be the mother of three defective children and that she hoped to proceed in such a way that the ones who remained living could develop to their best potential. She expressed great appreciation for the medical profession and the help that the doctors have given to her and her children. Mrs. C continued by saying that of the three defective children she felt it was more difficult to accept B's cardiac problem than it had been, to this point, to accept the two girls who had the problem of bisexuality. Mrs. C felt this was true because B was more verbal about his defect and thus it was brought out in the open more. She remembers how he prayed for a new body and had hoped that the open heart surgery would give him the opportunity to be active like other children.

When we discussed the fact that she, at 34 years of age, had had eight children, we asked her feelings toward the use of family planning. She admitted that she had practiced some form of birth control since her first pregnancy but had not been successful in preventing pregnancy. Mrs. C has been advised and had the services of the medical profession in the use of contraceptives.

L seemingly has accepted the diagnosis and treatment of her abnormality. She is just now becoming concerned about what the future holds for her. Last year she talked with her mother and asked whether or not she would be able to have children. Her mother advised her that she probably would not be able to bear children, but that it was always possible to adopt children. Mrs. C added that they have always treated her bisexuality as an illness stressing that it is necessary to always follow the doctors orders. For this reason, the medication is always taken without question. L, as mentioned above, has always been accepted by her family as a girl. She has been taught to keep house and cook. She enjoys taking care of the baby and the female role is always stressed as the one she will be carrying out.

Impression. L, at 15 years, is the second of six living children living with their parents in a two room house in eastern Oklahoma. The father is a marginal wage earner and, at times, is unemployed; therefore, the family subsists on very little cash income. The father does supplement surplus commodities by hunting and fishing. Their house is not modern and bathing and shampooing of hair is carried out in the nearby stream during the warm months of the

year. The family participates in no community affairs and their relationships are exclusively with the paternal relatives who live nearby. Culturally, the children are quite deprived but the child rearing practices seem to be good. (Mrs. C is proud of her children and encourages their feelings of adequacy.) The personal relationships and emotional climate in the home seem to be warm and positive.

The children attend school in Sallisaw which is 10 miles away. They are transported by bus. L is said to make good grades in school--mostly A's--and to participate in school activities during the school hours. However, the children do not participate in extra-curricular affairs at school and L has no girl friends with whom she associates.

This patient's abnormality--considered as an illness by family and friends--is explained as an adrenalin gland deficiency for which she must take medication. The true diagnosis has not been shared with family or friends in the community nor is the school aware of it. Other than the parents, only a maternal aunt, living out of the state, knows the true diagnosis. L has begun to question and wonder about future life, marriage, child bearing, etc. She is treated by all members of the family group as a complete female person. Mrs. C encourages her children and tries to help them develop aspirations to finish high school. There seems to be unexpected strength in this mother to guide her children and to help them accept their economic deprivation without striking out against society or developing feelings of hopelessness which is sometimes prevalent in the poverty groups.

L is being encouraged to learn homemaking skills as well as aptitudes such as singing and drawing. She is on the state honor role and is encouraged to do well in school. Even though they are economically deprived, the mother has stressed to her children that reading good books would be beneficial for them. This family seemed motivated to carry out the medical recommendations required of them.

Third case report

General. Mr. and Mrs. U were friendly and eager to cooperate in this study. Mrs. U is a pretty, rather vivacious, outgoing person who thinks and speaks much more rapidly than her husband. He is somewhat stiff and shy but determined and methodical in the discussion of his daughter and her medical problem.

Family. Mr. U is a lineman for a public utility company and Mrs. U is a housewife. There are three children: J, the oldest, 15 years, and two brothers, 12 and 11 years of age. J is the responsible, serious child in the family, who can be depended upon to keep her head and use good judgment, whereas the boys are more adventurous and impulsive. Mr. U always refers to J as a "young lady" and corrected me once when I (the social worker) made a reference to her as their youngster. He seems to have especially impressed his behavioral expectations upon J. Mrs. U appears more relaxed but worries that J may be too mature for her age.

The whole family was very upset last December when the older boy was accidentally shot in the thigh by the maternal grandmother. An artery was severed and he nearly died. A question arose as to whether the leg would have to be amputated. He recovered without a

disability but the whole family still feels the shock of this event. Mrs. U felt that J was calm and helpful throughout the entire event. She even attended school but was so concerned about her brother that she might as well have stayed at home that week. The family has lived in Muskogee since April, 1967, and were in the process of moving (due to a job transfer of Mr. U) when J was first hospitalized here. They had lived in Pawhuska previously.

I (social worker) was not able to get an agreed upon time when Mr. and Mrs. U first felt that something was wrong with J. They discussed the subject with each other in my presence but could not settle on a definite time when their first suspicions of J's anomaly occurred. Mrs. U remembered asking their family doctor in Pawhuska about J's deepening voice around the age of 12, but he said girls' voices change in similar fashion to boys' voices and told them not to worry. She had noticed bulges in the groin area but the parents disagreed in the interview as to whether they thought these were hernias.

In April of 1967, J had a sore throat. Mrs. U took her to another doctor in the absence of their regular one, and when this physician examined her, Mrs. U expressed concern because J had not begun menstruation. The doctor then said something like "She's really a boy." Mrs. U remembers feeling as if a bucket of cold water had been thrown over her, but her first reaction was that she must get J taken care of at once. Arrangements were made for her to come to the University Hospital in Oklahoma City the next day for studies. Readmission two months later was for surgery with J and

Dr. C working through the decision of surgery, the date of readmission, etc.

There is considerable confusion present in the parents' insistence that they and the doctor have been perfectly frank with J, while at the same time they say she was told she had a hysterectomy with the removal of her uterus. It is the understanding of the parents that the testes were removed, the clitoris made smaller, hernias not related to the mixed sexuality were repaired, and that it was found that she had no uterus. Close relatives have been told that she had to have a hysterectomy because she was producing too much male hormone.

Mr. U says that like all young ladies J expected to marry and have children. Recently J has remarked that if they can transplant hearts maybe by the time she is old enough to have children they will know how to transplant a uterus. If not, she felt she could always adopt children.

Mrs. U has remembered lately that J had two severe electrical shocks at age 10 and 11. After the first one the doctor said the shock might upset her hormone balance later on.

J was not overly feminine in her play activities as a young child, but on the other hand she did not have exclusively boy-type interests either. J played with dolls and enjoyed owning them but did not spend a lot of time with them. She had girl friends in elementary school but also enjoyed playing with her brothers and the boys in the neighborhood.

J has always taken her schoolwork seriously and is an above

average student. She was never a joiner and had to be encouraged to enter into extracurricular activities at school. J has taken clarinet lessons and has played in the band since junior high school. She and two other students placed first in a trio in the state band contest last year. J's music teacher has urged her to go out for choir because she has a good contralto voice but she prefers playing the clarinet.

J has many friends, but few close ones. Mrs. U says she is careful about making close friends, but is nice to everyone because she does not want to hurt anyone's feelings. She has shown no interest in boys and seems to take teasing about "getting a boy friend" without becoming upset.

J is her maternal grandparents' favorite grandchild and they always seem to want to buy her things. Last fall they took her to a dress store expecting her to select four or five outfits for school. J found only one that she liked and said she preferred the dresses she makes for herself. She sews beautifully, according to mother, and is a good cook. She does not like cleaning house but, as mother states, few teenage girls do.

J is interested in mechanics and has received two strong electrical shocks from playing with electrical equipment. She can also change a flat tire as well as any boy her age. J plays baseball and enjoys going to football games but does not like the car races which the rest of the family attend.

Her plan of becoming a veterinarian goes back to the first grade, and has been a consistent ambition. Her favorite school

activity is the Latin Club and she won a trip to Lansing, Michigan this coming August to a national meeting of the Junior Classical League.

Impressions. Although parents have attempted to treat J's physical problem matter-of-factly and to be open in their discussion with her, they have many unresolved feelings and some confusion as to facts. Although I (the social worker) have not seen J, I assume that she has been an overly constricted child and at this age has made little progress in adolescent sexual identity. The differences in the parents' attitudes, such as father's rigidity in interfering with the working out of a heterosexual adjustment, could easily add to J's psychic problems.

Fourth case report

General. Mr. and Mrs. F state that their greatest over-all problem has been lack of knowledge or poor communication on the part of many of the doctors they have gone to, the resulting treatment errors that have occurred, their own confusion, and the unnecessary stresses they feel they have had to bear with little help. Mr. and Mrs. F are highly motivated for participation in the study because they want information about children with these problems made widely available to the medical profession and other parents.

The primary problem has been the life and death balance of the cortisone dosage and salt replacement for the two children. The condition of sexual ambiguity did not become known to them until A's birth, and has not been a problem in their minds so far as R is concerned. Both Mr. and Mrs. F reported that there has been no family

history of similar endocrine problems.

Family. Mr. F has worked for the Pittsburgh Plate Glass Company since before R was born, beginning in Cheyenne, Wyoming. Mr. F was transferred to Denver, Colorado, when R was 3. The family lived there five years, then returned to Cheyenne until a year ago when they were transferred to Oklahoma City. Mr. F feels that the job is financially rewarding but reports many pressures that are wearing and anxiety producing.

Mrs. F is the manager of the household and the day-to-day lives of the children. Mr. F says she does this very competently, which relieves him of worry about the family during his work day. There are five children--T 16, G 12, R 10, A 7, and B 3. The two older children and the baby are unaffected by the glandular defect.

T is described as being thoughtful and considerate of the younger children. G is a star athlete who consistently brings home trophies and is popular with his age group. He is, however, a self-centered aggressive boy who cares little for the feelings of others. In particular, he tends to ignore the other children in the family or to feud with them when they oppose him. Currently he dislikes A because she "tattles" on him. The parents are concerned about G and Mrs. F wonders whether his behavior is related to the attention he missed out on from her at a crucial age because of R's overwhelming needs. B is the spoiled, adored baby of the family. The children vie for his favor and fight over who he will sleep with. Recently Mr. F said "there should be more B's to go around."

R lost weight dramatically in the newborn nursery and the

pediatrician could not diagnose the difficulty. Intravenous feeding was used but by 11 days he was dehydrated and at the point of death. The pediatrician (the only one in town) first said he had an enlarged heart, then later denied he had said this. Mr. and Mrs. F decided to take R to the Children's Hospital in Denver. He was transported by ambulance and given oxygen and intravenous fluids en route. The pediatrician told them R was going to die and that seeking additional medical care was useless. He did have convulsions for two days but with cortisone injections and massive salt replacement R began to rally. He remained in the hospital for 30 days during which time he had cortisone implants as well as the injections.

After they went home there continued to be differences of medical opinion with the pediatrician taking him off of medications or changing the dosage so that there were repeated crises and trips back to Denver. There were financial strains as well--the cortisone at times cost \$200 a month and father, as a trainee for the company, was earning \$290 a month.

R had difficulty in adjusting to his formula because of the amount of salt which had to be added. As R progressed to table foods the addition of salt was easier. His sense of taste for salt is weak and he not only craves salt but can tolerate adding salt to food until it is white from the salt. For years R has eaten potato chips and other salty food, as other children eat sweets.

His parents refer to R as a sickly child. His poor start and the continued drain on his strength from the chemical imbalances, as well as the cortisone itself, made him susceptible to infections

and it was hard for him to recover from ordinary illnesses. He was quiet and good, rather timid and had a sweet disposition. As R has grown older he has developed a happy-go-lucky manner with a jovial, witty bent. He is well-behaved, generous and helpful at home. He does, however, feel his physical inferiority, short energy span, and inability to play at the sports his older brother stars in. His occasional wistful remarks over physical disability are one of the hardest emotional impacts for Mr. F to handle. His response to such expressions is to point out R's good qualities that are better than athletic prowess. Because R had no anatomical anomalies in sex organs, the sexual aspect of the problem is minimized by the parents, although they do not know what to expect in adolescence nor whether he will be sterile. In the adjustment of medication dosages there has been the danger of premature maturity but this has been avoided so far.

R's final diagnosis made at the University of Oklahoma Medical Center was that of salt-losing congenital adrenal hyperplasia.

R and A are pals, having been drawn close because of shared treatments, trips to doctors and hospitals, precautions they have to take, and their roles as "sickly" children.

When R was three and mother eight months pregnant with A, the family moved to Denver. Even though the pregnancy was normal, both Mr. and Mrs. F were afraid the new baby might have the same problem as R but were unprepared for the sexual ambiguity. They were told the child was a girl and mother had already sent out the birth announcements when they were advised that tests had to be run to

determine the sex. Mrs. F's first reaction was fear of the effect of this announcement on the child later in life, if the sex were found to be male.

Their anxiety during the three days that were required for the several tests was acute and is vividly remembered. Because of the knowledge of the doctors they had in Denver and their previous experience with R, the replacement therapy was immediately started. A did not have the nutrition and fluid balance problems of R and so got a better start. On the other hand she had sex organ anomalies and has required a testosterone suppressant that had to be adjusted as well as the cortisone and salt adjustments. A has never required as much salt as R, although she uses and craves salt high above the normal. Mr. and Mrs. F are aware that she is brighter than R and accept the fact that R is below average in intelligence. A does better than R in school, achieving very good grades. Her general health has been somewhat better than his although she has lower resistance than the ordinary child.

Because of the fact that these two children have frequently been dependent on each other for playmates and their play has been dominated by R, their toy and game interests have been primarily that of boys. Although Mrs. F was a tomboy, she frets over A's lack of interest in dolls and father says she pushes too hard in this regard. A likes paper dolls, perfume, makeup, and feminine clothes. Mrs. F is convinced that A is female in her orientation, but wishes she would like to dress and play the mother role with dolls. Mr. F feels that his wife overstresses A's femininity and tries to push

her into making girl-type choices.

They were advised in Denver to wait until A was at least six years old before having corrective surgery. Now they understand that the surgery could and should have been done at or before age two. Their introduction to medical care in Oklahoma City was traumatic in that the first four doctors they took A to immediately said that she was a boy and that a great mistake had been made in rearing her as a girl. This aroused all their earlier anxiety and doubts. Part of the reason for this opinion was that the pharmacist in Denver from whom they were getting the children's prescriptions had made an error. A was getting only half the dosage she needed of the testosterone suppressant and her clitoris had enlarged till it looked like a penis.

Another concern even after they found Dr. M and Dr. S (with whom they are very pleased) was the effect of pelvic examinations and surgery on genitalia in a girl so young. Mrs. F has handled this by telling A that she has had such examinations, surgery, and stitches in connection with child birth and that mothers and older girls have these procedures from time to time. The intent has not been to minimize the discomfort and embarrassment but to align it with a feminine identification, with the exception that, in A's situation, it happened to her much younger. A has accepted this fairly well, although she questioned her mother when she repeated her statements to Dr. S in A's presence.

The sexual ambiguity has been kept secret within the family as well as without. Only the maternal grandmother knows there was any

questions over A's sex. The affected children have not been told nor have the siblings. One result of this is that when questions and doubts about medical care or errors in treatment occur they have only each other to talk to. When they have confidence in their doctors and the communication is good, they can talk to the doctors but, even then, time is a factor.

Mrs. F is more prone to become discouraged or depressed and Mr. F keenly feels the strain of raising her spirits while keeping his own up. If Mr. F is having business troubles at the same time, he feels he cannot share them with mother so he carries a triple load. Both parents agree with this assessment.

Mr. F talks about the beneficial effect on character from standing up to stresses such as they have had. He believes they are more mature and more self-confident because they have withstood the crises and the strains and have done a reasonably good job. Mr. F also feels that these children were given to both he and Mrs. F because they would take good care of them and that this "was determined from above." They do not feel that their marriage has been either strengthened or weakened by the troubles they have encountered over the children.

Mrs. F is more matter of fact and emphasizes the normality of their family life in spite of the problems of these two children. Mrs. F brought up the genetics involved in producing the two children and discussed the statistics and probabilities that face their descendants with an air of objectivity. They reiterated their belief that the only real problems they have had are due to lack of

knowledge or mistakes on the part of some of the doctors they have encountered. Mr. F expresses mild anger at what he considers the irresponsibility of the "medical industry" in not knowing more about such children and at individual doctors for not keeping themselves better informed. Advice and guidance about what could be anticipated and the available alternative courses of action would have made a great difference in their lives. They wish parents of such children could have an opportunity to talk with other parents or adult patients for the information and emotional support this could provide.

Impressions. Mr. and Mrs. F talked easily and comfortably about the children and their tribulations. While there were some disagreements over facts such as names of particular doctors or the sequence of some events, their opinions were similar and they presented a united front. It was felt by the social worker that the parents' use of denial was within reasonable limits and serves them well in the circumstances.

Their presentation of normal, wholesome family life was convincing and there was humor and warmth in the descriptions and examples they gave. The sexual aspects of the children's medical problems was played down and their concern appeared indirectly through the rather fierce identification of the father with the boy and the mother with the girl.

Both are apprehensive about these children's adolescence in view of the fact that no one has helped them to anticipate developmental stages or prepared them for obstacles that might be encountered. They do not expect this kind of help to be forthcoming in the years

ahead and yet they feel that others know from experience what might be anticipated.

Over-all, Mr. and Mrs. F resembled parents of chronically ill children who have an uncertain prognosis and recurring crises requiring tedious and/or dramatic treatment, such as glomerulonephritis or severe heart conditions.

Fifth case report

Case history #5 had to be taken by the investigator as both parents preferred not to be interviewed by a social worker because of negative past experiences with them.

General. Mrs. C's primary concern is that R take her medicine regularly. Mrs. C understands that the medication will be necessary indefinitely if R is to live a normal life. Both parents seem to understand R's problems quite well, particularly father who is a medical doctor at the University of Oklahoma Medical Center. It was Dr. C who first explained R's medical condition to mother and by so doing alleviated many of her fears and doubts. Mrs. C stated that she is very thankful to father for this. Mrs. C feels that she now understands R's condition adequately. None of the other siblings in the family know the exact nature of R's condition; neither does R. The only awareness that the children have of R's condition is that she takes her medicine daily. Both Dr. and Mrs. C feel that R's "growing up" will be as normal as that of other children and anticipate no difficulties either medically or psychologically.

Family. Dr. and Mrs. C have lived in Oklahoma City since Dr. C began his residency in radiology at the University of Oklahoma

Medical Center two years ago. They are originally from Tulsa, Oklahoma. There are two siblings in the family besides R age 6--B age 11, and M age 6. Neither B nor M have R's condition. Mrs. C describes the three children as being very happy and normal. The children are their own best friends and play activities seem to be primarily with each other. In this regard, Mrs. C describes R as a tomboy who not only likes to "hang" around her two brothers but has similar interests. Thus R seems to prefer masculine activities such as ball playing, tag, cowboy and Indians, etc. According to Mrs. C, R dislikes dolls, playing house and "what little girls like to do." It is difficult for Mrs. C to understand R's play preferences because she recalls that when she was R's age, she enjoyed such things as dolls, playing house, etc. R does not have many girl friends. When she does have girls over to the house to play, she does not like to play feminine-type games. Other activities that R enjoys are coloring, looking through books and working puzzles.

Dr. and Mrs. C felt R did well scholastically in kindergarten but that the quality of her work decreased in first grade. They attributed this change to R's poor concentration, messiness of her written assignments, and the fact that she hurries through her daily work. R's parents described her handwriting as "terrible." R is not a discipline problem in school, however, and seems to enjoy school, particularly reading. She prefers playing with boys and appears to get along with them better than with the girls.

Mrs. C describes R as being very helpful around the house. She likes to help cook, set the table, help with the dishes, etc.

Mrs. C feels that R is particularly fond of her father and enjoys playing and being with him. One concern that both Dr. and Mrs. C have about R is that she still wets her bed nightly and feels very bad about doing so. R, however, does not have any problems during the day with wetting and has expressed many times to her parents the wish that she was able to end her nightly bed wetting. Dr. C added that R goes to the bathroom quite frequently during the day, usually urinating small amounts each time. Her eating habits are good but she does not have a big appetite. R does not seem to care for sweets such as candy or soda pop. She prefers such things as pickles, cottage cheese, and milk. She does not crave salty foods as might be expected considering her condition.

In discussing R's condition, Dr. C did most of the talking and explaining. Father stated there were no complications during pregnancy and that labor was induced. The bag of waters was ruptured and prolapse of the umbilical cord occurred. Emergency "C" section was performed. Both Mrs. C and the infant did well. At birth, R had ambiguous external genitalia, notably a large phallus and labia scrotal fusion. As R's sex was in doubt at birth, no sex was assigned. Instead, Dr. and Mrs. C gave R a temporary name and sex for her birth certificate which, at the time, happened to be male. They named R after Dr. C before final sex was determined but referred to the infant as "baby" rather than by name. R suffered dehydration at birth, was immediately started on cortisone and has had no reaction since the beginning of medication. At the age of three, R had a clitorectomy and a slitting of the labia scrotal fold. Her condition

at this time was diagnosed as salt losing adrenal hyperplasia. This initial operation was not satisfactory and six to eight months later the tunneling was adequately completed at Johns Hopkins. At this time R's clitoris was fully amputated. Dr. C also stated that at the present time R's bone age is slightly retarded for her chronological age and that she is physically small.

Both Dr. and Mrs. C feel that they have accepted R's condition quite well most likely because father is a doctor, because medical management has gone along fairly smoothly, and because R's condition was diagnosed early. Both Dr. and Mrs. C feel that they won't explain R's full condition to her until she gets older, approximately 18 years.

Impression. It was the interviewer's impression that both parents were very much on guard, particularly father who had originally expressed a great deal of resistance to being interviewed by a social worker. The interview lacked spontaneity and the only information seemingly offered was direct answers to the interviewer's questions. Mrs. C seemed the more sensitive of the two parents and at various times during the interview the interviewer felt that she was becoming upset by the discussion and wanted to cry. Dr. C, on the other hand, seemed rather cold, hesitant, and controlled. During the interviews all of the children were requested by the parents to remain outside and not to come into the home until the interviews had terminated. The family seemed very close as a unit in which parents and children appeared to have a good relationship with each other as did the parents themselves. The parents seemed devoted to

the children, but along with this devotion there seemed to be a strong feeling of secrecy surrounding R's condition.

Sixth and seventh case report

Case report 6 and 7 is combined as both L and R are from the same family.

General. Mrs. S is so concerned about L's acting out behavior at this point that all other problems are of no importance. L was released from Girl's Town, Tecumseh, Oklahoma, the state training school for delinquent girls, for the second time on January 12, 1968. She quickly reverted to her previous behavior pattern, slipping away from home and staying with D, a boy now 21 years old, with whom she has been involved for the past two years. L has been gone from home for a week now, although Mrs. S is convinced that she and D slipped back into the house on two occasions and stole first some money, then some clothes, groceries, a radio and mother's drivers license. The Midwest City police have a pickup order but have not located them. Mrs. S believes the police are not trying very hard.

Family. L is the only one of Mrs. S's seven children with whom she has had any disciplinary problems. The rest of the siblings are all girls except the youngest, a four-year-old boy. The three oldest girls are out of the home, married, and have children. In the home are: L, 18; I, 17; and J, 4. R, who is six years old, is living with the maternal grandmother nearby. The first five children were by Mrs. S's first husband who died when L was three years old. After eight years, Mrs. S remarried and had the two younger children by the second husband. The marriage lasted five years; the husband

became involved with another woman the last two years of this time. He married this other woman after the divorce from Mrs. S.

L and R, who have different fathers, are the members of this generation affected by sexual ambiguity. L has not menstruated but has no outward evidence of male organs. Her condition was not discovered until her first stay at Girl's Town. The institution arranged for a work-up at Children's Memorial Hospital, Oklahoma City, where L later had corrective surgery and the initiation of a hormone regime. Mrs. S has no idea of the psychological effect of L's condition on L because communication between the two of them is nonexistent.

The fact that R was affected with sexual ambiguity was discovered at age three, when Mrs. S noticed inguinal bulging while bathing her. After consulting with the maternal grandmother, who thought she had hernias, mother brought R to Children's Hospital where the condition was diagnosed. R has been under supervision while at the hospital but has not been corrected as yet. R thinks she has hernias. Mrs. S is a little worried because R's swelling seems to be increasing rapidly at the present time.

Mrs. S's older sister never menstruated and has had inguinal swelling and discomfort from this. She sought medical care for a number of years but the condition was not accurately diagnosed and treated surgically until she was 47 years old. During surgery she was found to have rudimentary female organs and enlarged testes. When Mrs. S and her sister were growing up, the family assumed also that the inguinal bulges were hernias.

Mrs. S reports that her younger sister menstruated but was never able to become pregnant. The maternal grandmother's family had several aunts who never menstruated and it is now thought that they had mixed sexuality.

Mrs. S grew up in the Oklahoma City area. After her first marriage to a construction worker, whose jobs required moving from one location to another, they moved to Arizona where they stayed 15 years. Father and his brother lived on the locations while mother stayed at the family home in Globe after the children started school. Fourteen years ago, father and his brother died from carbon monoxide poisoning in the camper they were living in.

Mrs. S brought the five children back to Oklahoma City in order to be near her mother and older sister and went to work as a waitress to supplement the Social Security payments she received for the children. She describes working long hours but arranged the hours so she could be with her children before and after school. Mrs. S's mother helped in looking after the children when the need arose and so did the older girls who took responsibility for the younger children. Mrs. S drove herself to make as much money as she could so that people would not feel sorry for "the poor widow woman's children" and also so they could dress as well as the other children at school.

After eight years, Mrs. S married another construction worker. They lived in Sand Springs for 3 1/2 years then moved to Arkansas for a year and a half. It was in Arkansas where this husband "took up" with another woman, the wife of the couple who were their best

friends. Mother eventually obtained a divorce then returned to Oklahoma City.

The children seemed to approve of the remarriage and were on good terms with the second husband. The marriage meant that mother could be at home with them and they were much better off financially. They sided with mother over the divorce, however, and had no adverse reaction, that mother is aware of, over the loss of the stepfather.

Since that time mother has worked as a cook in one of the restaurants in Midwest City, either on the night shift or the early morning shift. She receives \$75 a month child support for the two younger children and Social Security on the others at home.

Mrs. S's right leg is a mass of ulcers from septicemia she had two months ago. Her feet swell badly from standing in her work as cook, but she does not complain about her physical condition.

From the time L was a toddler she was different from the other children. She was stubborn and defiant and was never particularly interested in school. L was "good" about helping with housework and was quiet and reasonable as long as she was directly under supervision. When she was 15 she became uncontrollable, was truant from school, and seemed to make a game out of slipping away when mother thought she had her under surveillance. L was allowed to come back to the aunt's home in Midwest City from Arkansas in an effort to find a place where she would be happier. She began going with D (the only boy she has been involved with) and, when all efforts to control her running away or truancy failed, she was sent to Girl's Town. She was there for a year, then given trial leave and was hospitalized at

Children's Hospital for two months. After six months she returned to the aunt's home where the same behavior, that of writing bogus checks, recommenced. She then returned to Tecumseh in July, 1967, for another six months. If L is picked up now she will undoubtedly be returned to Girl's Town again. Mother cannot understand why L refuses all efforts of help and why she behaves in a way that is sure to get her into detention. Mrs. S blames the boy and his mother for encouraging L's acting out, but thinks L is aware of what she is doing to herself.

When L left last time, she did not take her hormone pills with her. L is supposed to take these 22 days out of the month and becomes highly nervous when she does not take them.

Mrs. S had little to say about R except that she is no problem and is doing all right in kindergarten. She is living at the grandmother's house, ostensibly, because she is in school only a half day. She presumably is also company for the grandmother and helps lighten the load on mother. Mother is with J during the day and the 18-year-old daughter looks after him at night.

Impressions. Mrs. S has the resiliency and the fatalism of the working class mother. She has endured many stresses and misfortunes, without self-pity or loss of self-respect. She is tied to her mother and older sister, who provide emotional support as well as material help when needed. She also feels the same responsibility toward them.

The familial condition of mixed sexuality is a fact to be accepted and is not of major importance. Her girls are girls and

she is not particularly curious or anxious about the effect the condition may have on them. She is impressed by the progress in medical knowledge that makes it possible to diagnose and treat such anomalies. The family's use of the term "morphodite" is unself-conscious, but R is being allowed to believe she has hernias that will, in time, be corrected surgically.

As Mrs. SM, the grandmother of both L and R, has had very close contact with both children, a brief report of her feelings is included.

R is described as bright and a live wire who nevertheless minds well, because that is the way Mrs. SM brings up children. R sometimes is noisy and gets on her stepgrandfather's nerves, but both the old people enjoy her and enjoy her company. Mrs. SM is a little concerned because children do not learn anything in kindergarten so she is teaching R the alphabet and counting and other "book work" which R learns quickly and with pleasure.

Mrs. SM feels that R is just like any other girl and is psychologically unaffected by her condition. She is pleased that doctors now know how to take care of these conditions and is confident that R will be "fixed up" and have no resulting problems.

Mrs. SM is fond of L and minimizes her acting out behavior, although she says she was always hard to manage. She blames L's mother for some of the difficulties, saying she would have let her marry D when she first wanted to since nothing else was going to satisfy her. She has a poor opinion of D because he will not work and told L that she should be prepared to support him. L is a good

worker and Mrs. SM envisions L having to earn the money to keep both of them going.

Since the last social work history on L was completed before her return to Girl's Town on July 15, 1967, the investigator feels it appropriate to include a brief post social summary by Mrs. Amelia Ries, social worker at Girl's Town:

After her return to Girl's Town, July 15, 1967, it was felt that L made progress although she continued to be immature, dependent and demanding. However, she seemed to have developed a capacity for self-evaluation and some insight into her feelings. Since the mother, Mrs. S, began to take more interest in L and to attempt to provide understanding and affection, it was decided to place L on trial leave with her mother on January 12, 1968. It was suggested that consideration be given to the possibility of marriage with her boy friend of many years, D, as he seemed to provide L with steady support and satisfied her dependency needs.

During her stay at Girl's Town, L reportedly had very few problems associated with acceptance and understanding of her inherited malformation. She was very responsible in taking her hormone medication.

After she returned to her mother's home on January 12, 1968, the Field Youth Counselor attempted to contact both L and her mother, but received no answer to her messages. On January 23, 1968, L's sister, R, called to report that L had left with D, after stealing \$25.00 from her mother. Attempts to locate L were futile and she remained AWOL until late in March. At this time she was picked up

for shoplifting in ElCerrito, California, and placed in Juvenile Hall where she was described as "uncooperative." On April 8, 1968, she was flown to Oklahoma City and returned to Girl's Town.

L was interviewed on April 4, 1968, the day she was admitted to Girl's Town. She gave information that she ran away from home on January 17, 1968, and reached Richmond, California, on January 20, 1968, by bus. She went to the home of her boy friend's mother, Mrs. S, in Richmond. Her boy friend, D, age 21, came to Richmond and L reported that they were married January 27, 1968, in San Rafael, California, on San Pablo Street, by a Justice of the Peace. However, she said they could not find a record later and the Justice of the Peace must have been a "phony." She stated that they were referred to him by a friend of D's. At any rate, they went to San Francisco and lived together as man and wife, until L was caught shoplifting. She has stated that she does not know why she took a pair of men's pants from the store.

L was very angry that it was necessary for her to return to Girl's Town and said that she had spent a week in the Juvenile Hall at Martines, California, prior to being sent back to Oklahoma.

She cried as she talked about leaving D and said he had never been in any kind of trouble and was an accomplished carpenter and brick layer. He had a paper route in Oklahoma City and had allowed a friend to work it for him while he was in California. During his stay in California he worked in a filling station. L said that she would be 18 years of age in November and that her only plans were to go to D when she reached that age.

She complained bitterly about her mother and blamed her mother for everything that had happened to her and said that her mother had told her four times she would sign the papers for her to marry D but when the time came she had refused. She said her mother never came to see her when she was in Girl's Town before and that she herself did not want to see her now.

After L was given trial leave she enrolled in the tenth grade at Choctaw High School but never attended. She never liked school and could never make passing grades in academic work and for that reason she asked to be placed in the laundry schedule all day during her stay here.

Although L was at first very resentful about her return to Girl's Town, her attitude has progressively improved. She is responsible about doing her work in the Social Service Department and is cheerful and pleasant to be around most of the time. It has been observed that L's behavior during her stay at Girl's Town has been markedly different from her behavior "on the outside." She is responsible while institutionalized and then demonstrates marked irresponsibility in the community. L is a child who has very strong unmet dependency needs and when she receives emotional support as she does at Girl's Town, her behavior becomes much more mature. The person who has been able to give her the greatest support outside the Institution is her boy friend, D. Although in some ways he is not a desirable companion for her, she is unable to tolerate any critical discussion of him and reacts aggressively. Another outstanding characteristic of L's is her marked need for physical

contact with others. She likes to clasp hands or otherwise touch persons who are talking to her.

With reference to L's present adjustment toward her genetic problem, she seems to be increasingly aware of the fact that it will deprive her of motherhood. She has stated that "I would give my right arm if I could have children." She recognizes that she might be able to adopt a child but states that this would not be the same.

L's goal for the future is to marry D as soon as she is released from Girl's Town. She is not at all interested in continuing her education but readily accepts the idea that she may need to be self-supporting at some time in the future. She would like to do laundry work and has had some experience in "do-it-yourself" laundries.

L will be 18 on November 24, 1968, and at this time will gain the legal status of an adult. We do not know at the present time whether L will be considered ready for release before that time. However, L is hoping that she may be able to leave Girl's Town by the end of the summer and has discussed this idea repeatedly in individual and group therapy sessions.

Therapy Interviews

Case 1--18-year-old female

Rapport with subject. B was very cooperative throughout most of the interview sessions. She was pleasant and able to converse easily with the investigator. The only time during their sessions together that B seemed ill at ease and reluctant to talk was when the investigator initially asked her to explain her medical condition.

Interests. B did not seem to have a great variety of interests. She stated that she was not interested in cultural activities such as reading, classical music or educational pursuits, but preferred athletic activity such as basketball, softball, and fishing. B also stated an interest in driving around in her car, "hanging around" her mother's cafe, playing the pinball machine, going out on occasion with "her married man," dancing, watching television (particularly westerns and detective stories), and just talking to either her mother or girl friends. However, there was no indication that B had any hobbies.

Dislikes. B told the investigator that "the one real thing that I dislike is when people make fun of me and don't treat me right. It hurts me on the inside but I try not to let anyone know."

Description of self and other family members. B said, "Well, I am about 5 feet 1 1/2 inches tall, weigh about 113 pounds, have dark brown hair, brown eyes, a dark complexion, fair personality but I have a deep voice and a hot temper. I am also pretty much of a loner, like to drink occasionally, dance, go to the movies, and just raise hell." The only person in her family that B talked about was her mother, to whom she is very close. She feels her mother really cares about her and understands her. But B dislikes her stepfather a great deal and wishes he was not part of the family.

Earliest memory. B sat and thought for a moment and then said, "My earliest memory was when I was around five years old. I was in the hospital and had an operation to remove a tumor on my kidneys. I had it made then. I got all kinds of things while in the hospital:

funnybooks, toy yellow duck, and a piggy bank cat. I remember also when I got out of the hospital my parents gave me a big sow which I later sold for fifty dollars and each one of her litter for ten dollars apiece."

Dreams. B stated, "Occasionally I dream of snakes coming at me but I am fortunate enough to avoid being bitten by them. I am scared of snakes and even a big picture of one can scare me." B could not think of any other dreams that she had had but just emphasized the recurrent nature of her dream about snakes. She stated that "Not only am I scared of snakes, but black cats also. If one crosses my path I will turn around and go the other way."

Three wishes. When the investigator asked B if she could have any three wishes come true, what they would be? Her wishes were to have her voice changed, to marry R, and to have a car of her own. B said, "If I had an unlimited sum of money I would first help out my mother by giving her whatever she wants. I would then pay off all our bills and buy myself a new car. I next would put some money in the bank, quit work and then go on a vacation to the Riviera. I would also give a lot of money to the children in the poor areas around home. Finally I would buy my nephew, who is my pride and joy, anything he wants."

Animal. To the investigator's question as to what kind of animal she would like to be if she had her choice, B replied, "I would like to be a horse because it's pretty. However, I wouldn't want to be a dog because they get kicked around too much."

Typical day. "My day goes something like this. I get up and

have to be at work at 7:30 a.m. at W's furniture factory. I am a sander and filler, and finish work at 4:15. I then go home, clean up and go into town to my mother's cafe. I usually spend about an hour or two at the cafe talking to her and playing the pinball machine for money. I then go home to watch television and go to bed."

Social life. B stated that she had been married for about a year but that the relationship ended in a divorce. She felt that she really never loved her first husband but married him more for "convenience and obligation than for anything else." Even when B was married she was seeing another man. She still continues to see R at the present time although he is now married. Since B's divorce she has not dated much except to see this one man whom she states, "I have always loved." She does not think she will get married again unless it is to R, the married man. She describes herself as a loner. "I usually don't run around with no one but stick pretty much to myself. It's a lonely life."

Religion. B stated that she is a Baptist and goes to church on occasion. "I believe in the second coming of Christ when the world will become a better place to live. People really don't take religion seriously. They shouldn't go to church unless they really believe in God and can live their beliefs."

Philosophy of life. "Some of life isn't worth it. I read in the Bible that there will be another world better than this which will come after this. This world will have no sorrow but just happiness all day long. The world now is not a happy place. There is too much killing, stealing, and running around. People should treat

each other like they would like to be treated and not use each other for selfish means."

School and future plans. B quit school at the end of the ninth grade when she was of legal age and went to work at W's furniture factory. She stated that she never liked school and was not planning to go back and finish. B feels that her future does not look very bright as she has been seeing a married man and "might get shot if caught." She expressed very tender feelings toward this man, stating that he cares for her but uses and mistreats her. Secondly, B felt that she would probably be working at W's furniture factory for "a long time to come." She stated the desire to have a family, consisting of one boy and one girl. "I would like for my boy to be good in school and get a good education and my girl to finish high school and go on to beauty or business college. I also want her to marry somebody who will treat her right. I would expect my husband to be home every night and not running around and drinking. He should be able to pay the bills and to love me." Finally, B stated her desire to live out in the country because of her dislike for city life.

Subject's explanation of medical condition. Initially B seemed uncomfortable in talking about her medical condition but in later sessions seemed less defensive and better able to communicate her feelings about it. "I've got a condition where unless I take my medicine regularly I don't feel well. The pills help my glands to produce the right hormones. In this regard, the medicine has helped me look more girlish and stopped a lot of hair growth that I had

before. I also have periods when I'm taking my medicine which I did not previously have." The investigator then asked B if she were the doctor, and the investigator were the patient, what advice would she give concerning the condition. B replied, "I would tell you that it's no big thing and that everybody in the world has something wrong with them one way or another. I would tell you to be yourself and if anybody would ask you about why you were different tell them it isn't any of their business. I would also advise you to go to a voice trainer to see if you could get your voice to be higher. Finally I would tell you not to tell many people about your condition because they will talk and if the wrong people find out they can make life awful for you." B then went on to tell the investigator about her intercourse activity saying that "before I had the operation I couldn't have intercourse satisfactorily but after the operation I could. I got married shortly after the operation but the marriage only lasted about one year and then I got divorced. After my operation, intercourse felt very good and I could experience a climax."

In what way would you like to be different? B felt that she would not like to be different in any way except that she would like her voice to be higher. B feels that her parents would also like to have her voice changed "so it could sound more girlish and less deep sounding." B told the investigator that "It was about when I was 7 or 8 years old that I first noticed that something was different about my voice. It was deeper than the rest of the kids."

Impression. B seemed to be concerned and very self-conscious about her sexual identity and acceptance as a female. She stated

more than once how various people had made fun of her by calling her names. In this regard B stated, "I daydream a great deal about going to another city and making it big and then coming back to this town and showing the rest of the kids up. They look down on me and think they are much better than me. I try to show most people that my condition doesn't really bother me but deep down inside it really hurts." B seemed quite masculine to the investigator in appearance, bodily physique, dress, voice and gesture. The difficulty in projecting her female sexual identity seemed also to be hindered by her masculine interests and activities. B's general outlook on life tended toward pessimism in which she felt a need at times to over defend against an unfriendly and hostile outside world.

Case 2--15-year-old female

Rapport with subject. The investigator found L to be intelligent but anxious and difficult to establish rapport with, as she seemed defensive in our meeting together. L seemed to feel that a large part of her uncomfortableness in our interactions was due to her previous mistrust of doctors, whom she blamed for the death of her younger brother and sister. "The doctors said that they would both be all right but they died." After L told the investigator about her feelings in this regard, she cried, excused herself from the room for a brief period of time, and returned later, apparently feeling better. L told the investigator that she also felt more at ease if she could communicate with others through writing rather than a face to face conversation. The stress that L felt about our meetings together was exemplified from a paragraph in a letter she

wrote to me: "I don't see any way that the tests could be made easier, except to get them over with fast. I guess I'm like a guy under fire. I can stand a small barrage, but when the heavy artillery comes up, I crack. It's an awful way to be, but I can't help it."

Interests. L stated, "I guess I have quite a few interests. First of all, I am interested in doing well in school, particularly in my two favorite subjects--algebra and science. I also enjoy singing in the chorus at school, the only extracurricular activity I have time for." L also expressed an interest in reading. "I read such magazines regularly as Saturday Evening Post, Life, Look, and Reader's Digest, and have also read such books as Tom Sawyer and Huckleberry Finn. I would have to say that adventure stories are my favorite to read." L then went on to tell the investigator how she enjoys camping out and hiking. As she was describing these activities to the investigator, it was one of the few times that she smiled during our conversation together. L stated, "We have a mountain near our house and I like to climb to the top of it. It is not only good exercise but beautiful once you get to the top. I also like being alone a great deal because then I can think privately without having to entertain anybody or be entertained. When I am alone, I think about all sorts of things such as school, friends of mine and my family, etc." During one of these periods of thought, L sent me a letter in which the following reflects her sensitivity to nature: "It is truly beautiful here, now, for spring has just brought a promise of new life. There are tiny, tiny, tiny, dark-purple flowers all

over the grass, called forget-me-nots. There are big yellow ones, little light purple ones, and medium sized white ones that look just like miniature lillies of the valley.

The grass is just coming up through last year's old stubble, and the trees have brand new green leaves, just big enough to see. I'd send you some pressed ones, but it's really not fair to them, for you simply cannot imagine how lovely they are unless you see them."

L also expressed how she enjoys knitting and sewing. "I make a lot of my own clothes and am pretty good at it." L does not spend much time watching television as she has numerous household chores to do daily. "But when I do watch television I will watch almost anything except westerns. I hate westerns." The investigator felt that L seemed most comfortable and spontaneous in discussing her interests rather than any other aspect about herself.

In a letter to the investigator L enclosed a poem that she had written entitled "Spring Light." This is a creative work that emphasized to the investigator L's sensitivity to the world about her.

Spring Light

The water flowing by my side reflects the sun above,
And the crocuses playing in the grass sang a song of love.
And so when the night is closing down and everything is still,
I stand and watch the starlight outside my windowsill.
The moonlight sparkles on the dew that's spread across the grass
And reflects back the beam of light struck on a piece of glass.
That's when I think of times long gone and things that I have
done
And how I played when I was a child in the rays of the setting
sun.

Dislikes. L stated that one of her primary dislikes was the intrusion of her privacy. "I like to be alone and it bothers me when people interfere and disturb me." A second dislike was the medical profession in general "because the doctors did not tell us the truth and my brother and sister died." And finally, "I don't like people asking me about my medical condition because there is nothing really wrong. I am just like everybody else." One fear that seemed to the investigator to be constantly with L, was the fear that due to her medical situation, she would die like her brother and sister.

Description of self and other family members. L seemed to have difficulty in describing herself. At first she said, "I don't know," then thought for about five minutes and replied, "I am a fifteen-year-old girl who is short, rather heavy and has long auburn hair. I am polite, usually happy, outgoing, and reliable. I like school, particularly algebra and science. I also enjoy reading, hiking, camping out, sewing, knitting, and singing. That's about it for describing me." Her reluctance to talk about her family seemed to have been primarily due to the pain she still felt about the death of her brother and sister.

Earliest memory. L thought for a moment and then said, "The first thing that I can remember was the first paint set my Dad bought me when we lived in our first house on Brooklyn Street in California. I must have been three or four years old at the time." L could not remember anything more about this memory but that it was a happy time in her life.

Dreams. L stated, "I don't dream much," and she seemed very reluctant to discuss this topic with the investigator. When the investigator expressed this feeling to L, she said, "They are private and I don't want to talk about them." Later L stated that she dreamed a great deal about her sister who had died but refused to discuss it.

Three wishes. When asked what her wishes would be, were she given three? L replied that her first wish was "that me and all of my family could be in really good health." Her second wish was "that everyone could be better people," and her third "that I could eat fruit." L stated that if she could have an unlimited sum of money to use, she would first travel and sight-see in Canada. Secondly, she would use a great part of her wealth to help charitable organizations because "it could be used to help people instead of lying around in a useless fashion." L emphasized "that money that lays around and is not used for others is useless."

Animal. To the investigator's question as to what kind of animal she would like to be if she had her choice she replied, "I would never want to be an animal because animals don't think clearly but just follow their instinct. I think it's stupid to want to be an animal."

Typical day. L described her typical day this way: "I usually get up early in the morning about 5:00 or 5:30 a.m., help with some morning chores, and then get ready for school. School is fifteen miles away and it takes the bus 1 1/2 hours to get there with all the stops it has to make. School begins at 8:30 and is out at 3:00.

I usually come home right after school and help around the house till dinner. After dinner I study, sometimes watch a little television, and then go to bed around 10:00."

Social life. L states, "I have no boy friends I guess except for R, who is tall, dumb, and never knows what to say. We don't date because he is more of a friend and lives too far away. He has never been over to my house and most of our talking is done at school."

Religion. L stated that she is a Free-Will Baptist and goes to church "whenever possible. I believe in God and feel that all people are better off when they also believe in God. Going to church gives me a good feeling but I can't describe it to you. I just feel better."

Philosophy of life. L stated, "The only purpose any person has in life is to see how much he or she can help other people." In this regard L felt that her future career of nursing would fulfill this purpose in her life.

School and future plans. L is a good student and seems to work hard to maintain her high grades. She states that her two favorite school subjects were algebra and science. However, L expressed that she has to work hard in algebra class to keep her grades up to a B level. She wants to graduate from high school, go on to college, and then attend nursing training at the Oklahoma Medical Center. L stated, "I would like to become a nurse because they have the opportunity to help everybody, and it seems like it would be fun." It seemed unusual that in L's discussion of her future plans there was no mention of a male figure. In this regard she stated, "I never

really thought about it."

Subject's explanation of medical condition. L stated, "I have salt losing, adrenal hyperplasia, which means my adrenal glands don't function correctly. Thus I have to take cortisone regularly or I will get sick, vomit often, and lose my appetite. However, if I take my medicine regularly I can live pretty much of a normal life. The only advice that I would give someone with my condition is to take their medicine regularly."

In what way would you like to be different?. L felt that "the only way I'd like to be different would be to achieve all my goals in life and also that I could sing fairly well." L felt that her parents would probably answer this question concerning herself in the following manner. "They would both want me to be free of this ailment and also to be a harder worker around the house." L considers her family a close unit where communication is "good" between members and responsibility is taken by all.

Impression. L's defensiveness during our meetings made it difficult to acquire more information about her. There were very few times in our meetings together when L seemed relaxed and spontaneous. She seemed to have a great deal of anxiety and hostility within herself concerning her condition and her feelings about the medical profession in general. The investigator felt, however, that L was a very sensitive person, not only to other people but to the world about her. Life has been hard economically and emotionally for L and her family--even so, she expresses the strong desire to complete her educational and professional goals.

Case 3--15-year-old female

Rapport with subject. The investigator found it easy to establish rapport with J as she seemed comfortable and relaxed in our meetings together. She was pleasant and able to converse easily with the investigator. In our initial sessions together, the investigator seemed more the initiator of the conversation. In later sessions, however, the reverse became apparent as J became more outgoing and spontaneous.

Interests. J stated that her main interest is science. She enjoys it and likes the science courses offered in school. J especially liked biology and seemed eager for the opportunity to take chemistry and physics in the following school years. She enjoys reading a great deal, especially mysteries and science fiction stories, but stated that she "hates" love stories. When the investigator inquired as to why she said, "those types of stories are boring and just not exciting." J did not elaborate, instead mentioned her enjoyment of music, especially symphonies. She dislikes "rock and roll" and opera, but expressed positive feelings toward athletics, such as watching football and playing baseball--she did not like basketball because "I never played it."

J stated that her primary hobbies are music and sewing. She showed the investigator a jump suit she had made and commented that when she had been a 4-H member she had placed eighth in the state of Oklahoma in a sewing contest.

J feels that most of her leisure time is spent around the house either helping her mother or playing with her brothers. She stated

that she did not enjoy going window shopping in town. "I guess I particularly like to stay at home and read, watch television, and listen to records." J seems to particularly enjoy watching science fiction and spy adventures on television. Some of her favorite programs are Man From Uncle, Mission Impossible, Star Trek, and Mannix. In this regard J said, "If I was going to marry, I would like my husband to be like Mannix because 'he is sharp, mysterious, and one never knows what he is going to do.'"

Dislikes. "I really don't have many dislikes," she said, "but some that I do have are car racing, boys, city living, long car trips, vegetables, ruffles and frills on my clothes, lipstick, make-up, high heels, carrying a purse, bullies, people who dislike animals, and skeptical people."

Description of self and other family members. J seemed to have difficulty in describing herself. At first she said, "I don't know how to," then sat and looked out in space. "Oh! I can't, that's too difficult to do." After thinking about the question for a while J finally said, "I am a fifteen-year-old girl, who is fairly tall and thin. I am about a C+ or B student in school and like music, outdoor sports and animals." J seemed to find describing herself difficult, and seemed uneasy in trying to do so.

J's description of her family members began by focusing on her mother, after which she described her father and two brothers. "Mother is a woman with a lot of common sense who is able to keep her head at all times. She doesn't get emotional much but still more so than Father. Father also has a lot of common sense. He

sometimes says things differently than I do but we mean the same thing." J felt that both parents were extremely unselfish and giving to all of the children. In describing her brothers J said, "They both like cars, baseball, and model buildings. T likes girls but D doesn't. D is more of a loner, while T enjoys a 'crowd.'" J is close to both of her brothers but feels especially close to T.

"When I play with T we usually play such things as chess or checkers. However, when I play with D we either watch television together or play football. T often joins us when we play football." J seems to feel that both of her brothers are good natured but, on occasion, she gets into fights with them. This fighting usually occurs over the selection of a television program. J stated, "If T starts to fight with me I can just hold him down and that usually ends it, but when D gets angry he is more of a battler, that's because he is older and stronger."

Earliest memory. J seemed to have a lot of difficulty remembering her early childhood. She felt that her earliest memory was when she was around four years of age. At that time J remembered being at her Uncle W's house along with seven or eight other children, all lined up waiting for a turn to ride on Uncle W's horse. J could not remember anything more about the incident but that it was a happy time in her life.

Dreams. J stated that she did not dream a great deal but when she did it was usually of cartoon characters such as Porky Pig and Mickey Mouse. She felt that the most frightening dream she had was of Frankenstein in which a witch had the power to create human beings

through using parts of other people's bodies. In the dream the witch wanted J's toes but, as she states, "I hid them under my blanket so she could not take them." J went on to state that even today she "feels safer" with her toes covered up when she is in bed at night.

Three wishes. When the investigator asked J if she could have any three wishes come true, what would they be? J replied that her first wish was to be a veterinarian and her second, to live in a mansion with a large den and fireplace. Her third wish was to be an excellent clarinet player.

J said, "If I could travel anywhere I wished, I guess I would first like to go on a safari in Africa. That is because I like animals, and would enjoy seeing them in their natural habitat. I would take along my camera to take many pictures, but would only use a gun if needed for self protection. Next I would go to Alaska, then Italy and finally Spain. I think I would prefer to travel alone, then I could be my own boss and do whatever I wanted without having to worry about other people's plans."

J said, "If I had an unlimited sum of money I would first do something for my mother and father such as pay off the house, buy them a new car, and then send them on a vacation to Hawaii. Secondly, I would do something for my brothers such as paying for their tuition at Oklahoma Military Academy. And last I would use the money to enjoy life by buying myself a new car and by generally living it up."

Animal. To the investigator's question as to what kind of animal she would like to be if she had her choice, J replied, "If I

could be any animal in the world I would like to be a cat and belong to a wealthy family. That is because cats are mysterious and have a mind of their own. They don't do everything that people tell them to do and, also, they are pretty animals."

Typical day. J said that her typical day follows this schedule: "I get up at 5:30 a.m. and begin to get ready for school. I usually don't eat breakfast and leave the house at 6:15 to catch the school bus. The bus ride is ten miles long and I arrive at school at 8:00. My first class, Latin, begins at 8:20, Biology begins at 9:40, Band at 10:40, English to 12:15 and then lunch till 12:45. After lunch, I have two other classes, American History and Geometry, and then school is out at 3:25 p.m. I usually come home right after school and arrive at about 4:15. At home I mostly goof off and watch television till dinner. After dinner I help with the dishes and then study for a while. I then watch television till about 9:00 or 9:30 and then go to bed."

Social life. J states that she has no boy friends and is not interested in dating even though many of her girl friends are. "Other girls worry about dating and dieting, but not me," she said.

Religion. J stated that she is a Methodist and goes to church quite regularly. She feels that history and the Bible "go hand in hand" as one is an integral part of the other. J also believes in heaven and hell and the supernatural, wherein events happen which science cannot explain, such as spiritual life after death. Some religions seem crazy to her because "I don't understand them; but then, they probably feel that way about mine." However, she feels

that we must respect other people's beliefs even though they are different from ours.

Philosophy of life. J stated that her philosophy of life was to acquire a good education. She felt that this was the key to everything. She also said everybody should abide by the golden rule, that is live and let live.

School and future plans. J wants to finish high school, hopefully doing well academically, so that she can qualify to study Veterinarian Medicine at Oklahoma State University. J told the investigator that this training would take her eight years beyond high school with a great deal of science courses required. She stated that when she completed her degree for Veterinarian Medicine she would then like to go into private practice in a small town in Oklahoma. J then went on to describe the house that she would like to live in once her private practice got started. This house would be situated on the edge of a town extending over 20 acres. The house would be as large as a mansion with a den that would be J's favorite room. (She needed something, she explained, to represent her vast wealth and importance which she would like to attain.) In the den, as J describes it, there would be a huge fireplace, a big desk, lots of book shelves, and a picture of a sailing ship over the fireplace. The house would be furnished in Early American with big white columns in front of it.

It seemed unusual that as J discussed her future plans, aspirations, and hopes there was no mention of a male figure. In this regard she stated that she would prefer not to be married and that

she did not care for men very much. If she did get married, which she feels unlikely, the man would have to be very handsome and extremely intelligent.

Subject's explanation of medical condition. J stated, "I am not quite sure about all the details but what I understand is that I have a hormone imbalance. In other words, I have too many male hormones instead of vice versa. Because of this, I had to have the operation in the hospital so the correction could be made." The investigator then asked J if she were the doctor, and the investigator were the patient, what advice would she give concerning the condition. J replied, "I don't know," then thought for a moment and said, "Well, maybe I would say something like this: be sure and take your medicine regularly and you will be able to live a normal life. Don't let the condition bother you, it was just one of those unfortunate things that couldn't be helped. Everything will be okay."

In what way would you like to be different?. J felt that she would not like to be different in any way except to be more intelligent. J feels, however, that her parents would like her to be more girlish by "wearing clothes that have more bows and ruffles on them."

Impression. The investigator found J intelligent, sensitive, outgoing, and spontaneous. She seemed to be aware of her medical condition and of some of the resulting consequences. However, the investigator felt that J still has some strong reservations about being with people in a social situation, particularly males of her own age group. At the present, J's interests and aspirations seem to be rather masculine in nature; however, this may be more of a cultural phenomenon than a crisis in identity.

Case 4--seven-year-old female

Rapport with subject. The investigator found A intelligent, friendly, and easy to establish rapport with. Our meetings were relaxed and she seemed comfortable. In the initial sessions together, the investigator seemed more the initiator of the conversation and play activities. The reverse became apparent in later sessions, however, as A became more spontaneous and outgoing.

Interests. A stated that she liked to do many things. "I like to go swimming, color, play Monopoly, go for a ride in the car with my father, ride my bike, play outside, jump rope, tag, hopscotch, play checkers, volleyball, dodgeball, play with my Easy Bake Oven and blender, help my mother in the kitchen, take care of my brother B, and go to the store with my brother R." A then went on to tell the investigator how proud she was over the chocolate chip cookies that she had baked and about her plan to make a vanilla pie in her Easy Bake Oven. Next, A told the investigator about some of the dislikes she had: "I dislike doing the dishes, baby sitting for B when I have other things I would like to do, cleaning off the table after dinner, sweeping the floor, and cleaning up my room."

Fears. A said, "I am sometimes afraid of the dark, especially after I see a scary program on television or hear a strange noise at night."

Description of self and other family members. A replied, "I'm a seven-year-old girl who is in the second grade at 'S' school. I'm not cute. I am happy most of the time and like to play with R, my brother."

"My daddy and mommy are nice and I love them very much. My daddy can be so funny doing imitations when we take drives in the car. I like to help Mommy sometimes around the kitchen." Of all her brothers and sisters, A seemed to be closest to her brother R. She not only expressed a lot of positive affection toward him, but stated that she enjoys playing and being with him. Her brother G, A feels, is difficult to get along with because they often argue and fight. "G always wants his way." A also seems to be close to B, the youngest member of the household. She seems to give him lots of attention and enjoys reading and playing with him. As A states, "I enjoy acting like Mommy and taking care of B."

Earliest memory. A thought for a moment and replied, "I don't remember very much about it, but I remember the snow and cold in Wyoming where we used to live. We used to go sledding in the snow. I liked it in Wyoming but I also like it here in Oklahoma."

Dreams. A spoke briefly about her dreams but did not elaborate in depth. "I have dreamed recently about Christmas and Santa Claus. I don't remember too much, but Santa Claus was putting my gifts under the tree. He brought me a blender and an Easy Bake Oven, just what I wished for."

Three wishes. When the investigator asked A if she could have three wishes come true, what they would be? She replied that her first wish would be "to have a whole bunch of money so that I could buy a mansion to live in." Her second wish was "to have some gold," and her third was "to have some diamonds."

Animal. To the investigator's question as to what kind of

animal she would like to be if she had her choice, she replied, "One of Santa Claus' reindeer because it would be fun to ride around the whole world with Santa Claus."

Typical day. A said that her typical day follows this schedule: "I get up early in the morning, go to the bathroom, wash, sometimes make my bed, eat breakfast, and go to school. After school I come home and play. I usually play with R or some of my girlfriends until dinner. After dinner I like to watch television and then I go to bed."

Play activities. A's play activities throughout our sessions together were both creative and diverse. She played with such materials as crayons, clay, checkers, chess, playing cards, blocks and dolls. A particularly liked to draw. She drew a variety of pictures for the investigator: a scene at an amusement park, a portrait of the investigator, a picture of a rooster based on a story that A had been told in school, Santa Claus and his reindeer, and a modern art design.

In early sessions with the investigator much of A's play activity was solitary in nature, but, as our contact increased, her activity centered around the two of us playing together. When A did engage in solitary play, a great amount of it was concentrated in the drawing area. She talked to the investigator as she drew, often describing the picture that she was making. For example, when she was drawing a scene at the amusement park she told the investigator that "A giant roller coaster is taking you through the whole amusement park so you can see everything below: a lion, tigers, the circus and

a hot dog stand." A then told the investigator a story about the picture. "This man wanted to sell some hot dogs but no one would come around and buy any because the circus didn't have any good acts, so nobody came to see it. Then suddenly the circus got better and the man sold all of his hot dogs and made lots of money. He became so happy that he threw all of his money up into the air because he was a millionaire."

A's activity with the investigator was varied. Sometimes we played checkers and chess and other times we were engaged in such activities as playing with blocks. A seemed to particularly enjoy playing checkers. The outcome of our games was always close with A winning occasionally. Her judgment and strategy seemed quite mature as she rarely made the same mistake twice. This was also true in her ability to play chess and cards. A card game that A was particularly good at was one in which all 52 cards were placed face down so the numbers were not visible. The person then selects two cards, turning them over to see if the numbers match. If they do, they receive a point and remove the two cards from the rest of the deck. If not, they place them back down and the other person takes a turn. A's memory for card placement was considerably accurate, and very often she was victorious or finished a close second.

As A and the investigator were involved in various play activities, A would often spontaneously tell the investigator about herself. She would often mention her past activities with both her girl and boy friends, her brothers, her parents, and how things were going for her in school, her catechism class, the television programs she

liked to watch, etc.

Religion. A stated that she was a Catholic and attends church and catechism class regularly. "My catechism class has 14 children in it and a nun teaches us," she said, "And we have a weekly reader, and also coloring scenes from the Bible. I like catechism class and going to church."

Philosophy of life. "I think you should be nice to people and not try to be mean or hurt them. You should go to church regularly and believe in God." A then went on to tell the investigator how all of the children in her second grade class at school brought food in to give to the custodians for a Christmas present. A said, "That made me feel so good to see that our class had helped somebody."

School and future plans. A attends second grade. She seems to like school a great deal and does well academically. A stated, "I particularly like art because I like to draw and color. I also like reading and arithmetic because they are fun and easy to do." A stated, however, that she dislikes singing. "I don't like to sing and often forget the songs that they teach us and I also don't like to write stories because I am a bad speller." A told the investigator that when she grows up she would like to be a mother and a nurse. However, she did not state any particular reason why nursing appealed to her as a future occupation.

Subject's explanation of medical condition. A was not aware of her medical condition and knew nothing about it. All that she experienced was regularly taking her medicine and on occasion going for a medical checkup at the University Hospital. She knows that

she had an operation but does not know any of the details concerning it. Both parents feel that until A gets older, they will not discuss her medical condition with her.

In what way would you like to be different? A thought for a moment and then replied, "To be able to jump rope higher and swim better. I would also like to be funnier so that I could make people laugh." A also expressed that both of her parents would like for her to grow up and be more mature, quit watching so much television, keep her room cleaner, and quit fighting with her brothers.

Impressions. A seemed to be a very warm, spontaneous, and friendly seven-year-old girl whose interests and play activities seemed appropriate for her age. A great deal of A's play was involved with the use of higher cognitive processes which could be exemplified in such games as chess, checkers, and the various card games that we played together. A's ability in these particular activities seemed quite mature for a girl of seven years. On the one hand, A seemed to be the seven-year-old child she was, believing still in Santa Claus and fairy tales; but, on the other hand, an older and more mature girl whose cognitive abilities seemed to surpass her chronological age.

Case 5--six-year-old female

Rapport with subject. The investigator found R to be a very warm, outgoing, and friendly six-year-old girl. She always seemed cheerful and eager to get involved in play activity and/or conversation. R was usually quite spontaneous in her actions and seemed to

look upon the investigator more as a friend than researcher.

Interests. R told the investigator that she was interested in many things. "I like to sew buttons on pajamas, read comic books, like to watch television, especially the cartoons, Space Ghost, Superman, and all the westerns. I also like to play with dolls--well, sometimes--help my mother cook, go to school, and play with my brothers, M and B."

R then went on to tell the investigator some of her dislikes, which were "to go outside in bad weather, make my bed in the morning before I go to school and sometimes eat all of my food." The investigator asked whether there was any food she disliked. "Not really," she said, "but sometimes I can't finish my scrambled eggs and pancakes."

Fears. "Sometimes I am afraid of the dark," she said, like after watching a scary movie on television. "I am also scared of monsters and giants and big animals like lions and tigers."

Description of self and other family members. R replied, "I'm a girl and I'm six years old. I'm short, have dark hair and kind of cute. I'm happy most of the time. That's all."

"My daddy and mommy are both nice and I love them. They take care of me and take me places. My brothers are also nice. I like to play with them, watch television with them, and go to school with them."

Earliest memory. "Let me see," R said. "Oh! My last birthday party when I was six. It was lots of fun and I got many birthday presents." R did not elaborate further but said that her earliest

memory was of a happy time in her life.

Dreams. R thought for a moment and then replied, "I often dream of big monsters who are chasing me, trying to catch me to eat. I dreamed the other night about Christmas and of all the presents that I got. I saw Santa Claus and his reindeer."

Three wishes. When the investigator asked R if she could have any three wishes come true, what would they be? R replied that her first wish would be to go to the State Fair for her birthday; her second, that she could be "grown up" and be a nurse; her third, that she looked like her mother when she grew up.

Animal. R said, "I think I would like to be a dog because they are friendly, everyone likes them and they are fun to play with."

Typical day. R said that her typical day follows this schedule: "I get up in the morning, eat breakfast, make my bed and go to school. At school I learn how to read, write, and do arithmetic. I like to color at school but don't like arithmetic or writing. After school, I come home and play with my brothers, eat dinner, watch television and go to bed."

Play activities. R's play throughout our sessions together was both creative and diverse. She played with such materials as clay, crayons, blocks, puppets, records, dolls, cars, checkers, and soldiers. R particularly liked to draw and drew a variety of pictures for the investigator such as a Halloween scene, a picture of "Mommy and Daddy," Santa Claus, her own house, a spiderman, and a picture of a boy that she found in the Jack and Jill magazine.

In early sessions with the investigator much of R's play

activity was solo in nature but as our contact increased with each other her activity centered around the two of us playing together. When R did engage in solitary play, a great amount of it was concentrated in the drawing area. She talked to the investigator as she drew, often describing the pictures that she was making. In one, a Halloween scene, she told the investigator that the ghost in the picture was happy, that the skeleton was celebrating his birthday, and that the ghost and skeleton were good friends with each other and lived in the same house. "Every Halloween they both would leave their house and go outside to scare all of the children."

R's activity with the investigator was varied. Part of one session could be spent building a large house, or playing hide and seek. When R got tired of this activity she switched to coloring or playing with clay, ending the hour with a game of checkers or Parcheesi. She was very competitive in these games and enjoyed beating the investigator. In activities, such as cowboys and Indians or war games, R would designate herself as the "good guy." Battles would rage, victories would be few, but R would always win and the despondent investigator would just have to lick his wounds or bemoan his loss.

In our later sessions together, R would often bring to the playroom a toy, record, or book that she wished to share with the investigator. Once she brought a Mr. Magoo coloring book and we spent half a session coloring together.

She would occasionally ask the investigator to explain a game or to show her how to put a particular puzzle together. After this

she would try it herself, usually completing the task successfully.

R was quick to catch on and was eager to learn new activities.

Religion. R's parents belong to the Baptist church where R occasionally attends Sunday School. R said that she believes in God, but did not elaborate any further about church activity or her particular beliefs.

Philosophy of life. R thought for a moment and said, "To be a good girl and nice to everyone."

School and future plans. R attends first grade. She seems to like school a great deal and particularly enjoys such activities as recess, playing with the blocks and toys, and looking through picture books. R stated, however, that she dislikes getting up early and learning how to do arithmetic and writing. R told the investigator that when she grows up she would like to be a nurse and help sick people. "I would also like to work in the same hospital as my father." She also stated, "I guess I would get married and have children."

Subject's explanation of medical condition. R was not aware of her medical condition and knew nothing about it. All that she experienced was regularly taking her medicine. "Mommy says that I must take my medicine regularly so I do." Both parents feel that until R gets older they will not discuss her medical condition with her.

In what one way would you like to be different?. R's reply to this question was, "I would like to be a nurse and grown up." R's interest in nursing seems, in part, to be related to her father's

occupation as he is a medical doctor. In this regard R stated, "I like to go with Daddy to the hospital. I want to work there some day with Daddy and be his nurse." R expressed the feeling that both her parents would like her "to be more grown up."

Impressions. R seemed to be a very warm, spontaneous and friendly six-year-old girl whose interests and play activities seemed age appropriate.

Case 6--17-year-old female

Rapport with subject. L was anxious and difficult to establish rapport with as she seemed quite defensive in our meetings together. L seemed to feel that a large part of her uncomfortableness in our interactions was due to her previous mistrust and unresolved anger toward authority figures. Rapport between the investigator and subject increased with ensuing sessions together, but still did not approach a desired level of openness. Another contributing factor could be that L was first seen by the investigator while she was in attendance at Girls' Town.

Interests. L stated that her favorite interest was dating D and helping him with his paper route. "I also like to swim, play ping pong, tennis, volleyball and roller skating. I also like some of the classes up here at Girls' Town such as the ones where I make pillowcases and towels." L said she also liked being on the social service details in which she enjoys working in the laundry and/or delivering the mail. The investigator felt that L enjoyed being with D so much because he is one of the few persons in her life that she trusted and felt comfortable with. Everyone else, L stated,

"never understood me and mistreated me." L stated that she has no hobbies and is not interested in much except for her boyfriend.

Dislikes. As L discussed her dislikes the investigator felt strong resentment and anger coming from her. "First of all I dislike being locked up in this place up here (Girls' Town). There are too many cronies up here." Cronies is L's word for lesbian. "These cronies make me sick. Lucky for them none of them have approached me yet or I would hit them. Really all they do is kiss and hold hands. I also don't like getting up at 5:00 a.m. every morning and working." During our conversation L would often cuss, particularly as she got more angry. L then went on to tell the investigator how much she disliked her family, particularly her mother whom she referred to as a "no good bitch." "I also didn't like school or most of the kids there. They thought they were better than me but they weren't. I used to fight with the girls a lot when they called me names. I showed them though."

Description of self and other family members. L described herself as a big girl who was quick tempered and got into trouble easily. "I don't take crap from anybody." This attitude seemed to cover up a hurt, lonely and depressed self. L did not feel that she was pretty or well liked by others of her own age group. "I am a loner and my only real friend is D. He loves me and I love him." L described her mother as short, redheaded, nice, and easy to get along with. In later interviews L's attitude toward her mother changed. "She doesn't understand me, mistreats me and sent me up here to Girls' Town in the first place. She doesn't want me to date

D but just stay home and babysit while she goes out and gets drunk and brings men home." L's mother has been married twice; her first husband died and her second got a divorce.

"R is my 23-year-old married sister and is big and fat. I don't like her because she is snotty and always trying to butt in between me and D. She doesn't like D and keeps telling me to drop him."

"P, my half sister, is 21 years old and married. We get along all right. She keeps telling me that I am the black sheep in the family because I was here at Girls' Town, but when I went home I found out that she wasn't so good either. She had an illegitimate baby. This was before she got married."

"A is my 19-year-old married sister. I like her real well because she is happy-go-lucky. She doesn't care what people think about her and accepts me better than anybody else. We are more than sisters--like close friends."

"My 18-year-old sister is not married. She doesn't like boys. I like her quite a bit and we are pretty close. She is real quiet and shy; however, when she gets mad she can really fight."

"R is six years old and happy-go-lucky like A. I get along with her pretty well, and I am going to make sure that she doesn't end up here at Girls' Town like me."

"J is four years old and already knows how to cuss. He is okay but can often be a pest."

Earliest memory. L had difficulty in trying to remember an early memory. She sat for a while looking down at her feet and

finally said, "I can't remember anything happy. Once when I was young, about six years, I can remember my mother drunk, that's all."

L could not elaborate about this particular memory or any other one.

Dreams. L stated: "Most of my dreams seem to be about death and it worries me. One dream that seems to recur often is me and this other girl from Girls' Town are walking across a long bridge and suddenly we stopped in the middle of the bridge and looked down at the water. At the bottom of the river we saw D, and he was dead. Every time I have this dream it scares me." L then related another dream that she often has: "I hear Mama crying and the Girls' Town Superintendent is telling her that her daughter is dead. I then could see that everyone in the dormitory was covered up with a white sheet as though they were all dead." A third dream that L related was a dream about her father. "These angels came to me and said, 'Would you like to talk to Daddy?' and I said 'Yes.' He then came down and talked to me. He came down out of the clouds in a Navy uniform, hugged me and left. I cried when he left. I dream in color very often such as this dream was."

Three wishes. When the investigator asked L if she could have any three wishes come true what they would be? She replied that her first wish was to be married to D and live in California. L's second wish was to be wealthy and to live in a beautiful home, and her third wish was to be "skinny and pretty."

Animal. To the investigator's question as to what kind of animal L would like to be if she had her choice, she replied "a big cat because they're sly, strong, and pretty."

Typical day. L replied "a typical day for me at Girls' Town is up at 5:00 a.m. every morning. As soon as I get up, I have to make my bed, then shower, dust, sweep, and mop up the floors. After that we (the girls) wait for the bell for breakfast. After breakfast, I sometimes go to group therapy or to school. Lunch is at noon. After lunch I usually work in the laundry till dinner. We (the girls) don't have much free time in the evening and go to bed early. The rules up here are too strict. Can't smoke, wear makeup or have your boyfriend visit you." There was a great deal of anger in L's voice as she described life at Girls' Town.

Social life. L stated her social life was entirely with D, the only boy she has ever dated and the one she wants to marry. Most of their time is spent together alone as they have very few friends that they associate with. They usually do not go anywhere because of their financial means, but just either spend the time in D's car or in L's home, which is a trailer.

Religion. L's grandparents and mother belong to one of the Pentecostal Church groups but L has not been attending church on a regular basis. L told the investigator that she believes in God but other than that "I go to church when I feel like it."

Philosophy of life. L thought for a moment and then replied, "I feel that the key to life is happiness, and faith in God, yourself and other people. Money isn't that important but you need it to eat and live,"--a definite contrast to L's life, up to this time. Much of L's condition seems to stem from a poor home situation, little motivation for success and socio-economic deprivation.

School and future plans. L quit school at legal age, not completing the tenth grade successfully. She told the investigator that she never liked school, was not interested in what it had to offer, and was not planning to return to finish her degree. L does not know at the present time what kind of job she would like to secure in the future and, furthermore, does not seem to care. She stated, "I can always work in a laundry or a drive-in hamburger place, so I'm not worried." Her future plans seem to revolve around marrying D, her current boy friend, and then moving to California to live and work. D, at the present time, has a paper route which is his only means of self support. He also quit school at legal age and is hoping to marry L and then move to California.

Explanation of her medical condition. L said, "I don't really know except that the doctors took out my female organs. If I had to do it again I wouldn't because I think I could have had kids if they hadn't operated on me. Now I will have to adopt kids." It is the investigator's feeling from his discussions with L that she knows little information about her medical condition and/or the consequences surrounding proper and improper management of it.

In what way would you like to be different?. "I would like to change my appearance," L said, "so I could be skinny and pretty and also wish I had never gotten into trouble and sent to Girls' Town. I also wish I could have children."

Impression. It is the investigator's impression that L is very lonely, depressed, and an angry girl who feels the world is a mistrustful place where the only person you can really depend on is

yourself. L's lower socio-economic status, poor familial relationships, and poor self concept are prime contributors to the many difficulties she now faces and will face in her future.

Case 7--six-year-old female

Rapport with subject. The investigator found R to be a very warm, outgoing, and friendly six-year-old girl. She always seemed cheerful and eager to get involved in play activity and/or conversation. R was usually quite spontaneous in her actions and seemed to look upon the investigator more as a friend than researcher.

Interests. R said, "I like to play house, climb trees, color, play with my little brother J, ride my tricycle, and play with my dolls and dishes. I like best of all to play house. When I'm not playing, I also like to watch television." R then stated that her favorite television programs are Bonanza "because it's a cowboy show," I Dream of Jeannie "because she is so pretty," and the cartoons "because they are so funny."

Fears. R told the investigator that there are many things of which she is not afraid. However, two things that frighten her are "dark places and big dogs." R said, "You have to be careful of big dogs because if they bite you they can give you rabies."

Description of self and other family members. When asked to describe herself, R replied, "I'm a girl." The investigator then said, "Can you tell me something more about yourself?" R thought for a moment and then said, "I'm also cute," and laughed loudly.

R's parents are divorced and R is living with her grandparents, Mr. and Mrs. S. R seems to have mixed feelings about both

grandparents. On the one hand, she seems close and warm to them but on the other she states, "They bug me and I can't wait to get away from them." It seemed that most of R's conflict with grandmother came over grandmother's attempt to make R into a "Little Lady" and R's attempt to keep herself a "tomboy." The conflict with grandfather, however, occurs because R wants to play with him, but his age and health prevent him from doing so. R seems closest to her younger brother, J, who is usually her only playmate and companion. She stated, "He is my favorite friend because he is fun to play with." R seems to dislike her older half sister, L, who has the same physical anomaly that she has. When R expressed her feeling about L she seemed to also be reflecting feelings from other members of her family. "L is mean, bad, runs around with a no good boyfriend, and I hope she stays away from here forever." R said very little about her mother, just that she was "nice." She told the investigator that "My parents are divorced. I miss my father very much and haven't seen him for a long time."

Earliest memory. R said, "I can remember when we lived in Arkansas. I liked Arkansas better than Oklahoma. I don't remember how old I was but I was younger than I am now." R told the investigator that she was thinking hard but could not remember very much about her stay in Arkansas.

Dreams. R thought for a moment and then replied, "I dreamed the other night that my mother got raped by a huge monster. It was so scary that I couldn't go back to sleep. I also dreamed of monsters chasing me."

Three wishes. When the investigator asked R "If she could have any three wishes come true, what would they be?" she replied that her first wish was for Santa Claus to bring her lots of toys including a doctor's kit. Her second wish was for a play oven and stove, and her third wish was to go back and live in Arkansas instead of Oklahoma. R then said, "If I had two more wishes I would wish for a million dollars and a million pieces of candy." To the investigator's question as to what R would do with an unlimited amount of money she replied, "If I had all the money I wanted, I would buy myself lots of pretty clothes, candy, an airplane, and a truck, and if I could go anywhere I wished, I would go back to Arkansas to live--I like it better there than Oklahoma."

Animal. To the investigator's question as to what kind of animal she would like to be if she had her choice, R replied, "A lion because they are big and strong."

Typical day. R said that her typical day follows this schedule: "I get up early in the morning, wash my face, eat breakfast, and go to school. I stay at school till lunch time then I come home. I play at home for the rest of the day and then eat dinner and go to bed. On Sundays I go to church." R went on to tell the investigator how she sometimes "hates" to get up early in the morning because she is "so sleepy."

Play activities. R, who lives with her grandparents, does not have many friends in her vicinity to play with. Thus most of her play is by herself and with the many imaginary characters that she creates. In this regard, R can play many parts: mother, father,

baby, sister, teacher, etc.

In my first meeting with R, she told me how much she wanted to show me her playhouse but that at the present time it was "all messed up. When I get it fixed up it looks pretty nice and then I'll show it to you." R then took me on a tour of her grandparents' place pointing out and explaining the various things we came in contact with such as her cat named Cicero, the storm cellar where the family goes in case of tornadoes, her tricycle, and the chicken coup where grandfather keeps and raises chickens.

During our sessions together, R would particularly enjoy showing off for the investigator by performing such stunts as cartwheels, back bends, hand stands, and somersaults. After finishing a stunt, she would occasionally turn and say to the investigator, "I bet you can't do them"--this was usually true. Other play activities that R seemed to enjoy were coloring, cowboys and Indians, dolls, hide-and-go-seek, riding her tricycle, playing ball, climbing trees, and playing house. Her favorite activity, however, seemed to be playing house, during which time the investigator was usually designated as either R's baby or R's husband. R was very creative and imaginative in her play, acting out many different kinds of stories. She particularly enjoyed playing the dominant female role in which she was both producer and director.

Religion. R's grandparents belong to one of the Pentecostal Church groups where R attends Sunday School regularly. She told the investigator that she believes in God and that one day soon "God was going to come back to earth on a black cloud and punish the bad

people and praise the good people." R then looked up at me and said, "You better be good."

Philosophy of life. R said, "Let me see, I think you should be good and go to church. You shouldn't be bad because if you are you will get a whipping."

School and future plans. R attends kindergarten for half a day. She seems to like school a great deal and particularly enjoys the activities of coloring and painting, listening to stories, and looking through picture books on her own time. R stated, however, that she dislikes learning how to write and that she does not like it when the teacher scolds her for misbehaving. She was not sure what she wanted to be when she grew up but stated, "I think I would like to be a nurse, get married and have many children."

Subject's explanation of medical condition. R stated, "I don't know for sure but I have had two lumps in my tummy since I was a baby. My grandmother told me it was just a rupture--that's all I know." R then pointed to the lumps in her stomach and said, "Sometimes they hurt me when I jump or run. My grandma told me that the doctors would take care of the lumps someday."

In what way would you like to be different?. R's reply to this question was "I would like to be a queen." In R's later elaboration of the answer, she meant that she would like to be "prettier, older, and married." R also expressed the feeling that both her mother and grandparents wished that "I would grow up and not be such a brat." The investigator felt that R's living arrangement with her grandparents was very difficult for both parties due to such a large age

difference. In this regard, there seemed to be many times when R's energy and activity level became very irritable to both grandparents.

Impression. R seemed to look forward to our hour together once every two weeks and would usually be at the door waiting for me when I arrived. She would initiate the conversation by focusing it on herself. An example of this occurred in our third session together when, as I approached the door to R's house, she came running out and said, "Look at the new dress I have on that Grandma made me." The investigator felt that not only did R want to be noticed but that she wanted to be complimented by someone she cared about who in turn cared about her.

R had an extraordinary amount of energy which seemed to come forth in our sessions together. She always seemed "in motion" and the investigator usually found himself exhausted at the end of the hour. Our time together usually involved such active play as tag, skipping, running races, hide-and-go-seek, jumping contests, and jump rope. Less active play involved playing house, coloring, playing with clay, and just sitting down on the floor talking to each other. One typical scene from our playing house together went as follows: R, "I will be mother and you will be my little boy. Now pretend that you are asleep and I will wake you when breakfast is ready." Then R would pretend that she was rocking me to sleep, singing to herself softly at the same time. Next R said, "Time to get up and eat your breakfast. When breakfast is over it's time for your nap. Little kids don't snore so don't you do it. Now that your nap is over I am going to take you for a walk before lunch."

R would get annoyed if the investigator did not play his role adequately. The investigator felt that even with R's lack of appropriate aged playmates and present living arrangements, she was a warm, friendly, outgoing six-year-old girl whose play activity seemed normal for her age.

CHAPTER V

DISCUSSION

The material in this chapter will be presented in three sections. The first part will be a discussion of the diagnostic test material of the experimental group, the second a discussion of their family histories, and the third a discussion of the investigator's interviews with the children of the experimental group.

Diagnostic Test MaterialIntellectual functioning

Wechsler Intelligence Scales. On the Full Scale IQ, the range of scores varied from 83 to 126 with a mean of 105.1. Two \underline{S}_s scored in the superior, one scored in the bright normal, three scored in the average, and one scored in the dull normal range. On the Verbal Scale there was a range from 80 to 115, with a mean of 103.14. Three \underline{S}_s scored in the bright normal, three in the average and one in the dull normal range. Within the verbal area there were no individual subtests in which the performance of these children was particularly outstanding or deficient. On the Performance Scale the range varied from 80 to 133 with a mean of 106.41. One \underline{S} scored in the very superior, one in the superior, one at the bright normal, three at the average, and one at the dull normal range. Within the performance area there were no individual subtests in which the performance of these children was particularly outstanding or deficient.

In each case the child who scored at the dull normal range was from a culturally deprived area in which there had been no exposure to many of the test items. For the most part, the experimental group scored higher on the verbal tests, whereas the control group generally scored higher on the performance tests. The control group excelled over the experimental group when both the verbal and performance results were combined into a full scale IQ score.

Draw-A-Person. The over-all mental age scores of the experimental group were below their chronological ages and below the over-all mental age scores of the control group. This seemed to be a result of the younger children in the experimental group who scored at or above their chronological age, whereas the older children scored below their chronological age.

The first drawing in every instance was a male figure followed by a female representation. In general, the experimental group's male representation was at a higher mental age level than that of the female representation. In two of the older children's drawings, only the head of the male and female figures were represented; the bodies were absent. In another drawing by an older child both figures seemed asexual in nature. In all three of these cases the child had experienced, within the last few years, a medical operation for sexual correction. Body rejection or a lack of clarity in male/female representation could have occurred in their drawings as a result of this medical operation.

A typical characteristic of the drawings of the experimental group was an intricately drawn head, whereas the body, arms, and

legs were simplified and fundamentally represented. The rejection or distortion of their own body and its parts could be due to conscious or unconscious negative feelings relating to their physical anomaly. In this regard, doubt as to adequate sexual role and identity could be a result of inadequate feelings about one's body, which would contribute to feelings of inadequate sexual identity.

It Scale for Children. On this test, all but one of the experimental \underline{S}_s seemed to prefer objects and activities characteristic of the masculine role. Three of the \underline{S}_s had an exclusively masculine score of 84 points. The reverse held true for the control subjects in which four out of the seven preferred feminine objects and activities. All of the experimental \underline{S}_s except one perceived "It," a figure of indeterminate sex, as being masculine in appearance. This could account for the skewed distribution toward masculinity. A second hypothesis could be that five of the seven experimental subjects had recently undergone corrective surgery and thus internalization of sex role and identity had not yet taken place.

Family Relations Test. On this test, four of the experimental \underline{S}_s expressed more outgoing positive feelings toward their siblings, whereas two of the subjects expressed more outgoing positive feelings toward their father and one expressed such feelings toward her mother.

Five of the experimental \underline{S}_s expressed more outgoing negative feelings toward their siblings, whereas two of the \underline{S}_s expressed more outgoing negative feelings toward their father and none expressed such feelings toward their mother.

Four of the experimental \underline{S}_s felt that they received more incoming positive feelings from their siblings, whereas two of the \underline{S}_s felt more incoming positive feelings from their mother and one of the \underline{S}_s felt this from her father.

Five of the experimental \underline{S}_s felt that they received more incoming negative feelings from their siblings whereas one of the \underline{S}_s felt more incoming negative feelings from mother and one expressed such feelings as coming from her father.

Two of the experimental \underline{S}_s felt that father was more overprotective and overindulgent, whereas two of the \underline{S}_s felt mother was more so. Three \underline{S}_s expressed indifference in the matter.

It appears from this test that most of the experimental \underline{S}_s have ambiguous feelings coming from and going toward their siblings. This may be due to just the individual family constellation and its self functioning, or it may reflect some definite feelings that the siblings have with regard to the subject and he to them.

The siblings and \underline{S}_s may be viewed as having rapport and experiencing a close and warm relationship. On the other hand, a feeling of resentment and lack of acceptance could be present due to the sexual anomaly of the \underline{S}_s which may alienate them from their siblings.

Children's Form of the Manifest Anxiety Scale. On this test, the experimental group's range on the A Scale was between 14 and 27 whereas on the L Scale the range was between 0 and 6. On both scales, the experimental group scored below the control group; however, there was no significant difference. The experimental group scored highest on the following four anxiety items: "I notice my

heart beats very fast sometimes," "At times I feel like shouting," "My hands feel sweaty," and "I worry about doing the right things." On the L scale the experimental group seemed to have the most difficulty telling the truth on the following three questions: "I never get angry," "I never say things I shouldn't," and "I like everyone I know."

Due to the nature of the \underline{S}_s anomaly, the investigator had expected the opposite relationship to exist. It would appear that the experimental subjects would be more anxious and apt to lie due to their medical condition but this did not prove to be the case.

Structured Child Interview and the Bradley Sentence Completion Test. Some of the questions and material obtained from these two diagnostic instruments were used by the investigator in his individual therapy sessions with each experimental \underline{S} . These instruments were particularly useful in helping the \underline{S} feel at ease and more comfortable within the initial testing and therapy meetings. This seemed to be so because of the familiarity and open endedness of the questions. There were no right or wrong replies as the answers given by each subject were accepted. All of the children seemed to find these instruments easy and enjoyable to answer. The Structured Child Interview is found in Appendix A, and The Bradley Sentence Completion Test is found in Appendix B.

Bradley Self Concept Measure. On this test, the scores for the experimental group ranged from 46 to 60 with a mean of 53.14. The control group scores ranged from 39 to 56 with a mean of 49.29. The differences between the two groups were not significant. Due to the

nature of the subject's anomaly, the investigator had expected the reverse relationship to exist between the control and experimental groups. It would appear that the experimental subjects would have less adequate self concepts because of their medical situations but this was not the case. In five out of seven cases the experimental \underline{S}_s scored higher than the control \underline{S}_s on the self concept measure. The Bradley Self Concept Measure is found in Appendix C.

Rorschach Ink Blot Test. There were no significant differences between the experimental and control groups on any of the selected Rorschach data as presented in Table 2. However, there were some differences between the two groups on this data which may have proven significant with a larger sample. One difference was that the experimental group gave fewer human responses than the control group. This was particularly evident with the older children of both groups. Fewer human responses within the experimental group may be an indication of greater anxiety and insecurity that they experience in close human relationships. Because of this, the tendency is not to get close and involved with others but rather to keep them at a safe distance. The investigator had expected this relationship between the two groups, considering the medical anomaly of the experimental \underline{S}_s , in which lack of self assurance about sex role and identity would prevent close contact with others.

The control group had more anatomical responses although the difference between the two groups was very slight. The investigator, however, would have expected the opposite relationship, as the experimental group's medical condition seemed to focus on the

subject's total functioning as a "sexual" being as well as on a specific sexual area of the body.

The reality testing for both groups was within normal limits with very little difference between the two.

The controls gave more actual and symbolic sexual responses than the experimental group. The difference between the two groups was slight, however, and the investigator had expected a reverse relationship. It was felt by the investigator that due to the medical condition of the experimental \underline{S}_s their unconscious and conscious concerns about their sexual role and identity would manifest itself in actual and symbolic sexual responses on the Rorschach.

The control \underline{S}_s gave more total responses to the Rorschach cards than did the experimental \underline{S}_s . The difference between the two groups on this variable was the most pronounced of the selected Rorschach data. One hypothesis for this distinction could be that the experimentals were more constricted in their ability to deal with the unstructured tasks of the Rorschach. Also, the one to one relationship with the investigator may have created excessive anxiety within the subject, thus limiting the number of their total responses.

Children's Apperception Test. This diagnostic instrument was administered to two of the experimental \underline{S}_s . There were no gross distortions in the children's perception of the stories as compared to the typical themes that are given in the test manual for each of the ten pictures.

The two children who were administered the test were $\underline{R.S.}$ and $\underline{R.C.}$, both six years of age. There seemed to be certain prevalent

themes throughout R.S.'s stories. One was a concern as to whether there would be enough food to go around to all members of the family. This concern on R.S.'s part could be related to the poor economic status of her family. At the present time they are having to receive subsistence from the Welfare Department to meet the basic needs of food, clothing, and shelter. A second theme was the creation of a conflict situation in which mother and child stood in continual opposition to father. In this regard, mother, the "good parent," seemed to take the role of the protector against a powerful, aggressive and possibly punitive father figure who symbolized the "bad parent." This father figure was unpredictable, however, as he could be a protecting agent at times, whereas at other times he was not capable of defending the family against the destructive environmental forces. A third theme throughout R.S.'s stories was the perpetual shadow of death; at times she and her family were narrowly able to escape it but at other times they were not. Themes two and three may be related to R.S.'s unstable family situation in which mother and father are divorced. At the present time, mother's social activities of heavy drinking and promiscuous relationships with many men may be too overwhelming to R.S. Thus, this situation seems to only add to the child's insecurity and need for stability and security within the family constellation.

The other child, R.C., also seemed to have recurrent themes throughout her stories. One such theme was R.C.'s focus on eating. Some of the stories in which eating was a major theme were rather passive in nature, i.e. card 1, in which mother chicken and her

babies were eating food at mealtime. Other eating themes were more aggressive in nature, i.e. card 7, in which a tiger was trying to capture a monkey in order to eat it. A second theme involved a strong father figure who was viewed as a powerful authoritarian and disciplinarian within the family. Mother, on the other hand, seems to represent the opposite position, that of a rather passive person. However, she takes good care of the needs of the children and everyone seems happy. After the investigator's contact with this particular family, he was inclined to be in agreement with R.C.'s perception of both mother and father.

Thematic Apperception Test. This diagnostic instrument (pictures 1, 3BM, 4, 5, 7BM, 8BM, 12F, 13G, 14, and 20) was administered to five of the experimental S_s. A brief summary of each of the five S_s protocols will be given.

The first S, A.F., gave very brief stories for each card presented. This seemed to be related more to her age and shyness during the first testing than to any other factor. As a result of the brevity of her stories, interpretations beyond simple content were very difficult. Throughout A.F.'s accounts there did not seem to be any gross misperceptions of card content. Regardless of how her stories originated and progressed, the endings were one of either success, accomplishment, and/or happiness; there were no unhappy or disastrous endings. She seemed to visualize her parents as people who were concerned about her welfare and in turn she was able to be dependent upon them for support and help when needed.

The second S, L.C., also told short stories for the TAT cards

presented to her. The succinctness of her stories, however, did not seem related to age but to the difficulty she had in establishing rapport with the investigator. Many of the endings throughout L.C.'s stories were philosophical in nature. This type of ending could be a defense in which she detached herself from getting involved on a personal level with people. Instead, the effect got externalized in a rather global, intellectualized manner which prevented her personal feelings from coming through. An example was the ending for her story to card 3GF in which she stated: "However, the heartbreak will heal, because without healing, there would be no future for man; he would become diseased in body and soul and die." L.C.'s difficulty in getting personally involved in the TAT stories was also carried over to the therapy interviews with the investigator. This type of involvement in which personal closeness existed seemed to create anxiety within her which was difficult for her to reconcile.

The third S, B.C., throughout many of her stories had difficulty maintaining consistency as she would fluctuate from one explanation to another. This inconsistency as to theme may be one way in which B.C. projects her own unhappiness and tries to seek a happy resolution. Even though her stories change settings, her unhappiness cannot be overcome and despair still lingers. There seemed to be an element throughout her stories in which there was a fear of parental punishment for misbehaving. B.C. also expressed a concern about punishment from outside authority figures for certain antisocial acts. In these acts the person was usually found guilty and sentenced to jail. B.C.'s stories were often sad through loneliness, despair,

hopelessness, monetary problems, problems with the law, and/or poor personal life. Much of B.C.'s unhappiness could also be related to a disruptive home life in which her mother has been married four times and her relationship to her present stepfather is incompatible. This may contribute to her feelings of insecurity.

The themes throughout the TAT stories of the fourth S, L.F., were typified by hostility, violence, occasional death, and sexual assault. Much of this material seemed to represent L.F.'s home environment and present detention at Girls' Town, a home for delinquent girls. The scenes in which sexual involvement occurred were usually intense with heightened emotional overtones. Final resolution to her stories was usually unhappy. The men in L.F.'s stories were often viewed as the aggressor and the women, as the result, were usually victimized. In this regard, the woman was generally emotionally or physically hurt and the man frequently punished for his aggression.

The themes throughout the TAT stories of the fifth S, P.U., were varied in nature. In a few of her stories, she described some type of fictional character who was engaged in acting out a particular plot. One such plot was based around the story of Peter Pan, another was Perry Mason successfully solving a murder, and a third was Edgar Alan Poe's story of the "Tell Tale Heart." These types of stories could be an indication of the vividness of P.U.'s fantasy life in which she identifies and visualizes activity through the actions of these characters. It may also be a defense in which involvement through fantasy life means detachment from personal

involvement in reality. Another theme that is emphasized in P.U.'s stories is thoughts of accomplishment and success in which her goal is for recognition and achievement over and beyond the ordinary. A third theme seems to be a father-son closeness in which some kind of tragic event brings the two together and emphasizes their positive relationship and love for each other.

Family Histories

The parents interviewed for this study were most cooperative, not only in disclosing information about their child's physical anomaly but also in discussing the familial relationship itself. The degree of cooperation and information obtained varied from one family to another. Even with the discrepancies there were still certain trends that seemed to generate throughout most if not all of the interviews.

One such trend was that each of the families had three or more children, with subsequent children having been born following the birth of the hermaphroditic child. In no case did the birth of a hermaphroditic child prevent the parents from conceiving another child. Some parents felt reluctance in having another child for fear of repetition of the anomaly, while others felt that the anomaly had been just an act of "fate" or "chance" with recurrence not likely to repeat itself. In all of the families, with the exception of two, only one hermaphroditic child was born. In the other two families, two sexually ambiguous children were born. In the families where this particular phenomena occurred, the mother conceived another

child following the birth of her second hermaphroditic child. Other physiological anomalies, however, were present among some of the other siblings in the families with two hermaphrodites as well as among a third family in this study. One of the families in which there were two hermaphroditic children reported that this same condition had occurred in past generations. In this particular family, a genetic factor seemed to be the major contributor to the sexual ambiguity.

A second general theme was that all of the families, with the exception of one (Dr. C's family), felt that they needed greater medical understanding and guidance with regard to the anomaly as well as with proper management of the condition once it had been diagnosed. In this regard, trust and confidence in their family pediatrician and/or obstetrician seemed to be essential for initial sexual assignment of the child and, if needed, referral for future correction, treatment and guidance. It was a consensus of opinion among all of the parents that it would have been easier emotionally if sex change in the child had occurred at birth and/or as early as possible in the child's development. This was substantiated by one family in which sexual correction had taken place before the child reached the age of two years. This family felt internalization of sex role and identity occurred more naturally and with less anxiety to all concerned because of early correction. Where proposed and/or actual sex change occurred in the child after the age of 2 1/2 or 3 years, it was felt by most of the parents that this did or would have created emotional difficulty in their adequately adjusting to the new

child's role and identity. In other cases where proposed sex change was a possibility both parents either said "no" or expressed considerable reluctance as to the proposed possibility. Of the parents interviewed all seemed to feel very content with the present sex of their hermaphroditic child which was female in gender.

All families tended to keep the sexual anomaly issue closed and limited to their immediate family. The only other people aware of the particular anomaly were the medical personnel involved in treatment of the child and, on occasion, a close relative who was often relied upon for social as well as emotional reinforcement. In three cases, none of the S_s were aware of their problem as it had not been discussed with them because of their young age. In these cases, the same unawareness existed with the other siblings because of age. For the investigator to conduct this study, a guarantee as to privacy and protection of identification was given to each family.

It appeared that socio-economic factors made little difference in the parents' general concern for their child and its adequate adjustment to the environment. Whether parents were well educated or not, financially independent or subsisting on welfare, living in an urban or rural section of Oklahoma, their needs, questions and feelings in dealing with this medical problem seemed to be similar in kind; the only differences were in degree.

Because of the current infrequency of incidence and variations in condition, accessible and comprehensible medical information for the layman who desires it seems almost unavailable. Due to this unfortunate circumstance most of the parents in this study felt

"uneducated" as to their child's condition and did not know where to turn for proper medical assistance. In general, they did not seem to know what to expect and how to handle the child's future needs and feelings.

Therapy Interviews

The hermaphroditic children interviewed by the investigator were generally cooperative and willing to share their feelings concerning their medical condition as well as feelings about themselves and their families.

Most of the children seemed to have a great variety of interests which varied with the age of the child and the background from which she came. In all cases the interests of the older children and the interests and play activities of the younger children seemed age appropriate. There was, however, a tendency on the part of the older children to prefer activities which were more masculine rather than feminine in nature.

Few heterosexual relationships were mentioned by the S_s. This pertains to actual experiences as well as dreams and fantasies. One of the older S_s had been married unhappily for a brief period of time and was at present divorced. One other S was contemplating marriage to the only boy she had ever dated. For the most part, boys were not looked upon as sexual objects, but as friends with whom one could play, talk, and joke, but not get involved with on a dating basis. The S_s feelings could possibly be related to their medical situation itself in which feminine sexual identity and role had not

been sufficiently internalized thereby making it difficult to relate to others in a heterosexual setting. The age of the S_g may also have been a factor as some of the younger children may not have reached the stage in their psycho-sexual development in which heterosexual relationships were desirable.

All of the children except two were attending school with future plans of acquiring higher education and pursuing their particular vocational interests. Four of the children stated that they would like to make nursing their career. This selection could have been based on a desire to be connected with the medical profession due to much positive contact with it. Another factor may be related to a desire to assist other individuals who have similar or other physiological anomalies thereby giving them comparable help which they had received as patients. By doing this they are also feeling needed and useful in trying to circumvent the pain in others that they themselves have had or still are having.

As a group there was nothing unusual in their typical daily routine. Most of the children attended school during the week and either church or Sunday School on a regular or irregular basis. Of the two children who were not attending school, one was employed at a furniture factory and the other was in residence at Girls' Town due to delinquent behavior.

The children seemed to be self-conscious and reluctant in describing themselves to the investigator. This may be a reflection of their particular medical anomaly in which embarrassment over their physical ambiguity prevented openness on their part. It could also

be related to the difficulty that children may have in talking about themselves. Descriptions, when given, were usually physical and external rather than focusing on inner feelings and thoughts about themselves. It was generally easier for them to talk about other members of their families than it was for them to discuss themselves.

The older children seemed to be more aware of their medical condition than were the younger children. In this regard the younger children were only aware that they needed to take medication regularly and did not seem cognizant of their physical anomaly. In one case in which the child had not had the operation, she was sometimes aware of pain and swelling in the abdominal area and expressed a hope of future correction.

With regard to dreams experienced by the subjects, the content varied, although most of the children reported frightening dreams in which they and others were being chased by monsters. Some of the children also had dreams in which the fear of death either to themselves or a loved one was expressed.

The philosophy of life expressed by the subjects, on the other hand, was quite optimistic. They tended to place emphasis on religious values, the desire to help other people, and the ambition to live the golden rule.

When asked how they would like to be different, most of the children referred either directly or indirectly to their medical condition. This seemed to be particularly true of the older children. In this regard, one child replied that she would like the quality of her voice changed so that it would not be so deep. Another child

felt that her parents would wish for her to be more girlish, and a third child responded with the hope that some day she would be able to bear children.

The children wished for a variety of things with some making reference to their medical condition. Others wished for material things such as vast wealth, jewels, many toys, diamonds, etc. Only one child expressed a wish for somebody else or for society in general. This focus by the majority of children on themselves may again be related to their medical condition in which wishing for things for themselves may be used as compensation for their medical and health difficulties. It may, however, just be an age factor which is affecting their wish selection.

Most of the children, when asked to relate their earliest memory, described one that was a happy event in their lives. Only one child mentioned anything concerned with her medical condition.

When relating their dislikes, the older children generally seemed to have an aversion to people who did not respect them and their rights as individuals. The investigator had the feeling that all of them had at some time or another experienced criticism or had been made fun of because of certain manifestations of their medical anomaly. The younger children who had not had negative past experiences similar to those of the older ones did not express such concerns.

CHAPTER VI

SUMMARY

The present study dealt with an in-depth personality and intellectual evaluation of a group of hermaphroditic children residing in the state of Oklahoma. The impact of this anomaly on the families of these children was studied extensively through the following techniques: psychological tests, parental interviews by a social worker, and diagnostic play interviews conducted by the investigator. It was the purpose of this study to examine the psychological impact of sexual ambiguity on the child and his parents.

Subjects for this study were seven Caucasian hermaphroditic children who ranged in age from 6 years, 2 months to 18 years, 4 months. Each subject in the experimental group was paired with a subject in a control group for purposes of comparison on test data. They were matched on the following variables: age, sex, race, socioeconomic class and contact with the Oklahoma Medical Center.

A matched pair *t* test was used to compare the experimental and control groups on the various test data. There were no significant differences between the two groups on any of the tests given. This may be attributed to the small sample size.

The following are summary statements which appeared to be apparent from this study. It must be kept in mind, however, that a limited sample was utilized which could have effected these trends.

1. The play activities and interests of the children appeared

to be age appropriate in relation to their socio-economic background. There was, however, a tendency on the part of the older children to prefer activities which were more masculine than feminine in nature.

2. Few close heterosexual relationships were mentioned by the subjects.

3. Four of the children stated that they would like to make nursing a career.

4. The three older children seemed more aware of their medical condition than the younger subjects and were aware that they were different in some ways from the normal population.

5. The three older subjects seemed more affected by the anomaly than the younger ones and were more sensitive to it and to relationships with others.

6. As a group there seemed to be nothing unusual in their typical daily routine except for the medication which had to be taken regularly.

7. The children seemed to be self-conscious and reluctant in describing themselves to the investigator, particularly as it pertained to their medical anomaly.

8. An optimistic philosophy of life was expressed by the subjects in which emphasis was placed upon religious values, a desire to help others, and an ambition to live the golden rule.

9. In the children's explanations of how they would like to be different, reference was made to their medical condition.

10. In no case did the birth of a hermaphroditic child into a family inhibit future conceptions and subsequent births.

11. All families but one felt that they needed greater medical understanding and guidance with regard to the anomaly as well as with proper management of the condition once it had been diagnosed.

12. It was felt by four groups of parents that desirable sex change should occur in the child as early as possible, preferably before three years of age.

13. All families tended to keep the sexual anomaly issue closed and limited to their immediate family.

14. It appeared that socio-economic factors made little difference in the parents' general concern for their child and its adequate adjustment to the environment.

15. Accessible and comprehensible medical information about hermaphroditism is almost unavailable to those desiring it because of the current infrequency of incidence and variations in condition.

Suggestions for Further Studies

On the basis of the present investigation it is suggested that the following studies may be beneficial in studying the hermaphroditic child.

1. Further studies similar to the present one need to be done utilizing a larger hermaphroditic population and comparing it with a comparable control group. This would insure more conclusive data which would allow more concrete analysis to be conducted.

2. Longitudinal investigations could enhance the nature of this study as relative progress of development is an important thing to check and this could be one way of doing it.

3. A similar study could be conducted testing a hermaphroditic sample before and after sexual correction noting differences pre-operationally and post-operationally.

4. Further studies could be done focusing on the impact that this anomaly has upon the family.

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APPENDIXES

Appendix AStructured Child Interview

Name: _____ Examiner: _____

Date: _____

Age: _____

1. Favorite things you like to do.
2. What would you rather not do if you could get out of it?
3. Think of your favorite friend. What do you do together? Why do you like him (her)?
4. Think of a person you don't like. What things about him (her) don't you like?
5. What do you like especially to do with your father?
--with your mother?
--with your brothers and sisters?
6. If you could, what would you get out of doing (or don't like to do) with your father?
--with your mother?
--with your sisters and brothers?
7. What do you like best about school?
--least?
8. Think of a time you were happy. Tell me about it.
--sad
--angry
--afraid. What was it like? What did you do?
9. If you were stranded on a desert island with only one person and you could choose that person, who would that person be and why?
--Who would be your second choice and why?
--Who would your third choice be, and why?
10. If you could have any three wishes come true, what would be your first wish?
--Your second wish?
--Your last wish?
11. In what one way would you like to be different?
12. In what way would your mother most like to have you be different?
--Your father?

Appendix BBradley Sentence Completion Test

Name _____

Date _____

1. If I were bigger
2. She would like
3. If I could only
4. She hates
5. Oh, how I wish
6. She used to love
7. What makes me sad
8. Someday
9. I miss so much
10. I want to go
11. When she is alone
12. I want to see
13. Once
14. I would like to be
15. I love
16. Girls
17. My friends think
18. She likes best of all
19. I want to know
20. When she gets older, she's
21. My mother and father
22. I feel like
23. He gets mad because

24. I dream of
25. My mother does not
26. When she wakes up at night
27. God is
28. Boys
29. I am afraid of
30. Other boys and girls
31. What makes her mad
32. My father isn't
33. She is jealous of
34. I look like
35. She thinks most about
36. I am proud of
37. Other people think she is
38. She is sorry
39. I try
40. She gets fun out of
41. I feel unhappy sometimes because
42. When I get home, I am going to
43. When someone in her family is sick
44. If another person hit me, I would
45. At mealtime
46. She is scared
47. She likes to be
48. When I play games
49. If I don't get what I want at home
50. When she hurts

Appendix CBradley Self Concept Measure

Subject's Name: _____

Age: _____

Sex: M _____ F _____

Grade: _____

<u>Word</u>	<u>Grade</u>	<u>Definition*</u>		<u>Soc. Evaluation</u>		<u>Self Concept</u>	
		<u>Right</u>	<u>Wrong</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
kind	2						
big	2						
little	2						
girlish	2						
weak	2						
bad	2						
happy	2						
babyish	2						
funny	3						
fat	3						
wild	3						
clean	3						
forgetful	3						
small	3						
silly	3						
fair	3						
great	3						
strong	4						
lazy	4						
cute	4						
afraid	4						

S's Name _____

<u>Word</u>	<u>Grade</u>	<u>Definition*</u>		<u>Soc. Evaluation</u>		<u>Self Concept</u>	
		<u>Right</u>	<u>Wrong</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
bossy	4						
quick	4						
brave	4						
mean	4						
careful	4						
loud	4						
lucky	4						
ashamed	5						
polite	5						
selfish	5						
honest	5						
healthy	5						
lonely	5						
important	5						
helpful	5						
angry	5						
dumb	5						
quiet	5						
tough	6						
avored	6						
clever	6						
lively	6						
cruel	6						
serious	6						

S's Name _____

<u>Word</u>	<u>Grade</u>	<u>Definition*</u>		<u>Soc. Evaluation</u>		<u>Self Concept</u>	
		<u>Right</u>	<u>Wrong</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
jealous	6						
naughty	6						
handsome	7						
ordinary	7						
reckless	7						
nervous	7						
obedient	7						
popular	7						
stubborn	7						
original	7						
terrible	7						
impatient	7						
intelligent	8						
curious	8						
disagreeable	8						
mature	8						
discouraged	8						
capable	8						
responsible	8						
clumsy	8						

VITA

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